IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and CIPLA LTD., Plaintiffs, v. APOTEX INC and APOTEX CORP., Defendants.	C.A. No. 14-1453-LPS REDACTED PUBLIC VERSION

PROPOSED JOINT PRETRIAL ORDER

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Redacted: November 10, 2016

CIP2017
Argentum Pharmaceuticals LLC v. Cipla Ltd.
IPR2017-00807

On November 22, 2016, counsel for Plaintiffs[1] and Apotex[2] will participate in a pretrial conference before this Court pursuant to Rule 16 of the Federal Rules of Civil Procedure, Local Rule 16.3, and this Court's June 04, 2015 Oral Order (D.I. 28). Pursuant to Local Rule 16.3, Plaintiffs and Apotex hereby submit this proposed Joint Pretrial Order governing the bench trial of Civil Action No. 14-1453-LPS for the Court's approval. Trial is scheduled to begin on December 12, 2016.

Plaintiffs are represented by: Mark Fox Evens (mevens@skgf.com), Uma N. Everett (ueverett@skgf.com), Dennies Varughese (dvarughe@skgf.com), Rami Bardenstein (rbardenstein@skgf.com), Adam C. LaRock (alarock@skgf.com), Joshua I. Miller (jmiller@skgf.com), Josephine J. Kim (joskim@skgf.com), Stephanie Nguyen (snguyen@skgf.com) of Sterne, Kessler, Goldstein & Fox PLLC, 1100 New York Ave., N.W., Washington, DC 20005-3934, and Frederick L. Cottrell, III (Cottrell@rlf.com) and Selena Molina (molina@rlf.com) of Richards, Layton, Finger, 920 North King Street, Wilmington, DE 19801.

Apotex is represented by George C. Lombardi (glombard@winston.com), Samuel S. Park (spark@winston.com), Kevin E. Warner (kwarner@winston.com), and Ryan B. Hauer (rhauer@winston.com) of Winston & Strawn LLP, 35 W. Wacker Dr., Chicago, IL 60601, Charles B. Klein (cklein@winston.com) and Ilan Wurman (iwurman@winston.com) of Winston & Strawn LLP, 1700 K Street N.W., Washington, D.C., 2006, and Dominick T. Gattuso (dgattuso@proctorheyman.com) of Proctor Heyman Enerio LLP, 300 Delaware Ave., Suite 200, Wilmington, DE 19801.

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[1] "Plaintiffs" when used hereinafter with reference to C.A. No. 14-1453-LPS, shall mean the Plaintiffs in that action, namely Meda Pharmaceuticals Inc. and Cipla Ltd.

[2] "Apotex" when used hereinafter with reference to C.A. No. 14-1453-LPS shall mean Apotex Inc. and Apotex Corp.

This Order will control the subsequent course of this action, unless modified by the Court to prevent manifest injustice.

I. Nature of the Case – Civil Action No. 14-1453-LPS

A. Nature of the Action

1. Plaintiffs brought this action for patent infringement against Apotex pursuant to the Hatch-Waxman Act, codified as amended at 21 U.S.C. § 355(j) and 35 U.S.C. § 271(e). Plaintiff Meda makes and sells the drug product Dymista®—approved by the Food and Drug Administration for the relief of symptoms of seasonal allergic rhinitis—in the United States.

B. Plaintiffs' Complaints

2. On December 2, 2014, Plaintiffs brought the instant action against Apotex (D.I. 1) for infringing two patents—U.S. Patent Nos. 8,163,723 ("the '723 patent") and 8,168,620 ("the '620 patent")—based on Apotex's filing of Abbreviated New Drug Application ("ANDA") No. 207712 and accompanying certification pursuant to 21 U.S.C. § 355(j)(2)(A)(vii)(IV) ("Paragraph IV certification") that it intended to manufacture, sell or offer for sale its generic version of Dymista® ("Generic Product") prior to the expiration of those patents. In their Complaint, Plaintiffs alleged that Apotex infringed, contributed to, aided and abetted, and/or induced infringement of the '723 patent and the '620 patent pursuant to 35 U.S.C. § 271(e)(2)(A) by submitting its ANDA and accompanying Paragraph IV certification. Plaintiffs further alleged that Apotex would infringe, contribute to or induce infringement under 35 U.S.C. § 271(a)-(c) if Apotex were to sell, offer for sale, manufacture, or import the products described in ANDA No. 207712.

3. On February 26, 2016, Plaintiffs filed a First Amended Complaint ("Amended Complaint") against Apotex (D.I. 90) that asserted a claim for infringement of newly issued U.S.

Patent No. 9,259,428 ("the '428 patent") based on Apotex's pending ANDA No. 207712. In their Amended Complaint, Plaintiffs repeated all allegations from their original Complaint and also alleged that Apotex infringed, contributed to, aided and abetted, and/or induced infringement of the '428 patent pursuant to 35 U.S.C. § 271(e)(2)(A) by submitting its ANDA. Plaintiffs further alleged that Apotex would infringe, contribute to or induce infringement under 35 U.S.C. § 271(a)-(c) if Apotex were to sell, offer for sale, manufacture, or import the products described in ANDA No. 207712.

4. Plaintiffs are asserting claims 4, 29, and 42-44 of the '620 patent and claims 10, 11, 13, 15, 16, 23, 24, 26, and 29-30 of the '428 patent.

C. Apotex's Answers and Counterclaims

5. Apotex filed its Answer and Counterclaims to Plaintiffs' original Complaint on December 23, 2014 (D.I. 8) and to Plaintiffs' Amended Complaint on March 9, 2016 (D.I. 93). Apotex's Answer and Counterclaims to the original Complaint and to the Amended Complaint, taken together, assert defenses that each of the asserted patents—the '723 patent, '620 patent, and '428 patent—are invalid and not infringed, and that Plaintiffs' allegations failed to state a claim upon which relief can be granted. Apotex also alleged counterclaims for a declaration of noninfringement and invalidity of the '723 patent, the '620 patent, and the '428 patent.

D. Plaintiffs' Answers to Apotex's Counterclaims

6. On January 16, 2015, Plaintiffs filed their Answer to Apotex's Counterclaims to the Complaint (D.I. 12) and, on April 4, 2016, filed their Answer to Apotex's Answer and Counterclaims to the Amended Complaint (D.I. 93), denying that Apotex was entitled to any relief as asserted in its Counterclaims or otherwise.

E. Pending Motions

7. There are no pending motions in this action.

F. Stipulation to Infringement

8. The parties have stipulated that Apotex's Generic Product, described by ANDA No. 207712, literally infringes claims 4, 29, and 42-44 of the '620 patent; and claims 10, 11, 13, 15, 16, 23, 24, 26, and 29-30 of the '428 patent. (D.I. 104.)

G. Relief Sought by Plaintiffs

9. Plaintiffs request the following relief from the Court: a judgment that the asserted claims of the '620 and '428 patents are valid and enforceable; a judgment and order pursuant to 35 U.S.C. § 271(e)(4)(A) providing that the effective date of any FDA approval of Apotex's ANDA No. 207712 not be earlier than the latest of the expiration dates of the '620 and '428 patents, inclusive of any extension(s) and additional period(s) of exclusivity; a permanent injunction enjoining Apotex and its officers, agents, servants, and employees, and those persons in active concert or participation with any of them, from making, using, selling, or offering to sell in the United States, or importing into the United States, Apotex's Generic Product for which approval is sought in ANDA No. 207712; a declaration under 28 U.S.C. § 2201 that if Apotex, their officers, agents, servants, employees, licensees, representatives, and attorneys, and all other persons acting or attempting to act in active concert or participation with them or acting on their behalf, engage in the commercial manufacture, use, offer for sale, sale and/or importation of Apotex's Generic Product prior to patent expiry, it will constitute an act of direct and/or indirect infringement of the '620 and '428 patents; a finding that this is an exceptional case, and an award of attorneys' fees in this action pursuant to 35 U.S.C. § 285; an award of costs and expenses in this action; and any further and other relief as this Court determines to be just and proper.

H. Relief Sought by Defendants

10. Defendants request the following relief from the Court: Dismissing Plaintiffs' Complaints with prejudice; declaring that the manufacture, use, offer for sale, sale, and/or importation of Defendants' Generic Product does not and will not induce infringement of any valid claim of the Patents-in-Suit; declaring that the manufacture, use, offer for sale, sale, and/or importation of Defendants' Generic Products does not and will not contribute to the infringement of any valid claim of the Patents-in-Suit; declaring that the asserted claims of the Dymista Patents are invalid; declaring that this is an exceptional case under 35 U.S.C. § 285 and/or other applicable statute or rules and awarding Defendants their attorneys' fees, costs, and expenses; and; awarding to Defendants such further relief as to this Court may deem necessary, just and proper.

II. Jurisdiction

11. Civil Action No. 14-1453-LPS is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 271, *et seq.* This Court has subject matter jurisdiction over these actions under 28 U.S.C. §§ 1331, 1338(a), 2201, and 2202. Venue is proper under 28 U.S.C. §§ 1391(c) and 1400(b). Jurisdiction and venue are not disputed.

III. Facts

A. Uncontested Facts

12. The parties' statement of uncontested facts is set forth in Exhibit 1.

13. These uncontested facts require no proof at trial and are part of the evidentiary record in the case.

B. Contested Facts

14. Plaintiffs' statement of issues of fact that they contend remain to be litigated is attached as Exhibit 2.

15. Apotex's statement of issues of fact that it contends remain to be litigated is attached as Exhibit 3.

16. Should the Court determine that any issue identified in a party's statement of contested issues of fact to be litigated is more properly considered an issue of law, it should be so considered.

IV. Issues of Law

17. Plaintiffs' statement of issues of law that they contend remain to be litigated is attached as Exhibit 4.

18. Apotex's statement of issues of law that it contends remain to be litigated is attached as Exhibit 5.

19. Should the Court determine that any issue identified in a party's statement of issues of law that it contends remain to be litigated is more properly considered an issue of fact, it should be so considered.

V. Witnesses

20. Presentation of evidence will follow the burden of proof. Nothing in this paragraph precludes the right of a party to offer rebuttal testimony as appropriate.

21. The parties agree that expert witnesses need not be sequestered. The parties agree that fact witnesses shall be sequestered.

22. Unless otherwise agreed between the parties, the parties will identify the witnesses they expect to call for direct examination, and the order in which they expect to call

said witnesses, by **6:00 p.m.[3] two calendar days before**[4] the direct examination is expected to take place.

23. Beginning two nights before the start of trial, the parties will confer nightly to update opposing counsel as to the expected day that the party intends to complete its presentation of evidence.

A. Witnesses to Be Called

24. Plaintiffs' List of Witnesses to be Called Live or By Deposition is set forth in Exhibit 6.

25. Apotex's List of Witnesses to be Called Live or By Deposition is set forth in Exhibit 7. Apotex has recently learned that its commercial success expert, Glenn Newman, will be unavailable for trial due to a sudden illness. The parties are discussing possible resolutions and expect to update the Court at the pre-trial conference.

26. The parties' lists of witnesses indicate the witnesses they currently intend to call and the witnesses they may call to testify at trial. This list also indicates whether a party intends to introduce live testimony or deposition testimony for each witness. Any witness not listed will be precluded from testifying absent good cause shown.

27. In the event that a witness who was designated by a party to testify live at trial is not available or otherwise cannot testify live due to unforeseeable circumstances beyond the offering party's control, upon a showing of good cause, the offering party may designate deposition testimony in lieu of live testimony at trial. If a party is permitted by the Court to

[3] All times in this Pretrial Order use Eastern Standard Time.

[4] For a direct examination expected to occur on a Monday, the parties will identify the witnesses they expect to call for direct examination by 6:00 p.m. on Saturday. Similarly, for a direct examination expected to occur on a Tuesday, the parties will identify the witnesses they expect to call for direct examination by 6:00 p.m. on Sunday.

designate testimony, the opposing party will have reasonable notice and an opportunity to counter-designate deposition testimony.

28. The parties further reserve the right to call: (1) one or more additional witnesses whose testimony is necessary to establish authenticity or admissibility of any trial exhibit, if that evidentiary status of the exhibit is challenged by an opposing party; (2) additional witnesses to respond to any issues raised by the Court's pretrial or trial rulings; (3) any witness live for impeachment purposes to the extent permitted by applicable rules; and (4) any witness who appears on the other party's witness list.

B. Testimony by Deposition

29. Having exchanged testimony that will be offered by designation of deposition testimony, and having met and conferred in an effort to resolve the objections set forth hereto:

a. Deposition testimony, including Apotex's objections and counter-designations, and Plaintiffs' objections thereto, that Plaintiffs may offer into evidence is set forth in Exhibit 8.

b. Deposition testimony, including Plaintiffs' objections and counter-designations, and Apotex's objections thereto, that Apotex may offer into evidence is set forth in Exhibit 9.

30. With respect to those witnesses the parties have identified in Exhibits 6 and 7 who will be called to testify live at trial, no deposition designations or counter-designations are required. Should a fact witness identified in Exhibits 6 and 7 as testifying live at trial become unavailable, as that term is defined in the Federal Rules of Civil Procedure and Federal Rules of Evidence, the parties may designate specific pages and lines of transcript that they intend to read or play in lieu of the witness's appearance, upon reasonable notice.

31. For deposition testimony provided to the Court, the parties providing the designated testimony shall serve the other parties with the transcript pages and line numbers of the deposition testimony they intend to introduce by **6:00 p.m. three calendar days before** such testimony is to be introduced, and identify the manner in which the deposition will be used, either by video or reading the transcript into the record. The opposing parties will identify any objections to the designated deposition testimony and any specific pages and lines from that deposition to counter-designate by **12:00 p.m. two calendar days before** such testimony is to be introduced, and identify the manner in which the deposition will be used, either by video or reading the transcript into the record. The parties shall meet and confer to resolve any objections to designated testimony by **3:00 p.m. two calendar days before** such testimony is to be introduced.

32. If objections remain to be resolved, the party calling the witness by deposition shall submit to the Court, no later than **10 p.m.** two calendar days before the witness is to be called at trial, on behalf of all parties: (i) a copy of the entire deposition testimony of the witness at issue, clearly highlighting the designations, counter-designations, and pending objections; and (ii) a cover letter clearly identifying the pending objections as well as a brief indication (i.e., no more than one sentence per objection) of the basis for the objection and the offering party's response to it. Failure to comply with these procedures, absent an agreement by the parties and approval by the Court, will result in waiver of the use of the deposition testimony or waiver of objection to the use of the deposition testimony.

33. All irrelevant and redundant material, including colloquy between counsel and objections, will be eliminated when submitting the objections to the Court or when the deposition is read or viewed at trial.

34. When the witness testifies by deposition at trial, the party calling the witness will provide the Court with two copies of the transcript of the designations and counter-designations that will be read or played. The parties will be charged for all time that elapses from the time the witness is called until the next witness is called.

35. When deposition designation excerpts are introduced, all admissible deposition counter-designations excerpts will be introduced simultaneously in the sequence in which the testimony was originally given. The specific portions of the deposition shall be read or played in page order. If an exhibit is referenced in a deposition designation, the exhibit is admitted into evidence if it is included on the offering party's trial exhibit list and is not otherwise objected to, or is included on the joint trial exhibit list. Any deposition testimony, once designated and introduced into evidence, may be used equally by any party for purposes of counter-designation if consistent with the rule of completeness and the rules of evidence.

C. Impeachment with Prior Inconsistent Statements

36. Pursuant to Fed. R. Evid. 613, deposition and other testimony or statements not specifically identified on a party's deposition designation list or exhibit list may be used at trial only for the purpose of impeachment, if otherwise competent for such purpose. The Court will rule at trial on any objections based on lack of completeness and/or lack of consistency.

D. Objections to Expert Testimony

37. The parties request that the Court rule at trial on any objections to expert testimony as beyond the scope of expert disclosures. Before each expert takes the stand, the parties shall provide copies of that expert's report(s) and deposition testimony to the Court. However, unless expressly moved and accepted into evidence, the expert report(s) and deposition

testimony shall be used only for the purpose of ruling on objections to expert testimony offered at trial.

VI. Exhibits

A. Exhibits

38. Plaintiffs' list of exhibits that they may offer at trial, except demonstrative exhibits and exhibits to be used solely for impeachment, and Apotex's objections to Plaintiffs' exhibits, are attached as Exhibit 10.

39. Apotex's list of exhibits that it may offer at trial, except demonstrative exhibits and exhibits to be used solely for impeachment, and Plaintiffs' objections to Apotex's exhibits, are attached as Exhibit 11.

40. Plaintiffs' trial exhibits will be identified with PTX numbers, starting at PTX 1. Apotex's trial exhibits will be identified with DTX numbers, starting at DTX 1.

41. The parties agree that exhibits to be used solely for impeachment need not be included on the lists of trial exhibits or disclosed in advance of being used at trial. Subject to the remaining provisions of this Order, no party may use an exhibit not present on its exhibit list (other than exhibits to be used solely for impeachment), unless the Court determines that good cause has been shown.

42. No exhibit will be admitted unless offered into evidence through a witness, who must be shown the exhibit. Before the completion of the witness' testimony, any party that has used an exhibit with the witness and wishes that exhibit to be admitted into evidence must formally move the exhibit into evidence, by exhibit number.

43. The parties shall identify, by witness, the trial exhibits, including the exhibit numbers, that they expect to use on direct examination by **6:00 p.m. two days before**[5] the direct examination is expected to take place, and objections will be provided no later than **3:00 p.m. the day before** their intended use. The parties shall meet and confer in an attempt to resolve any objections to the trial exhibits that are expected to be used during direct examination. If good faith efforts to resolve the objections fail, the party objecting to the exhibits shall bring its objections to the Court's attention prior to the witness being called to the witness stand.

44. Exhibits not objected to will be received into evidence by the operation of the Final Pretrial Order without the need for additional foundation testimony, provided they are shown to a witness. Nothing herein shall be construed as a stipulation or admission that the document is entitled to any weight in deciding the merits of this case. The parties agree that any description of a document on an exhibit list is provided for convenience only and shall not be used as an admission or otherwise as evidence regarding the listed document or any other listed document.

45. Any party may use an exhibit that is listed on the other party's exhibit list, to the same effect as though it were on its own exhibit list, subject to all evidentiary objections. Any exhibit, once admitted at trial, may be used equally by any party, subject to any limitations as to its admission. The listing of a document on a party's list is not an admission that such document is relevant or admissible when offered by the opposing party for the purpose that the opposing party wishes to admit the document. Each party reserves the right to object to the relevance of

[5] For a direct examination expected to occur on a Monday, the parties shall identify the trial exhibits, by exhibit number, that they expect to use on that direct by 6:00 p.m. on Saturday. Similarly, for a direct examination expected to occur on a Tuesday, the parties shall identify the trial exhibits, by exhibit number, that they expect to use on that direct by 6:00 p.m. on Sunday.

any evidence offered by the other party, at the time such evidence is offered, in view of the specific context in which such evidence is offered.

46. On or before the first day of trial, counsel will deliver to the Courtroom Deputy a completed AO Form 187 exhibit list for each party.

B. Demonstrative Exhibits

47. The parties agree that the demonstrative exhibits the parties intend to use at trial do not need to be included on their respective lists of trial exhibits. Plaintiffs' demonstratives will be identified with PDX numbers, starting at PDX 1. Apotex's demonstratives will be identified with DDX numbers, starting with DDX 1.

48. The parties will exchange demonstrative to be used in opening statements by **3:00 p.m. the night before** opening statements. The parties will provide any objections to such demonstratives by **8:00 p.m. the night before** opening statements. The parties shall meet and confer in an attempt to resolve any objections.

49. The parties will provide demonstrative exhibits to be used in connection with direct examination by **3:00 p.m. the night before** their intended use. The parties will provide any objections by **8:00 p.m. the night before** their intended use. The parties shall meet and confer in an attempt to resolve any objections.

50. If good faith efforts to resolve the objections fail, the party shall bring its objections to the Court's attention prior to opening statements or prior to the applicable witness being called into the witness stand.

51. If any of the demonstratives change after the deadline, the party intending to use the demonstrative will promptly notify the opposing counsel of the change(s).

52. The party seeking to use a demonstrative exhibit will provide a color representation of the demonstrative to the other side in electronic PDF form. However, for video or animations, the party seeking to use the demonstrative will provide it to the other side on a DVD, CD, or via a secure file transfer protocol. For irregularly sized physical exhibits, the party seeking to use the demonstrative will provide the other party a color representation as a color PDF in electronic form as well as 8.5x11 copies of the exhibits.

53. This provision does not apply to demonstratives created during testimony or demonstratives used for cross-examination, neither of which need be provided to the other side in advance of their use. This provision also does not apply to demonstratives consisting solely of reproductions of trial exhibits that contain enlargements, or highlighting text or information.

VII. Damages

54. This case currently does not involve any claims for damages. If Apotex launches its Generic Product, the parties will inform the Court promptly.

VIII. Bifurcated Trial

55. All issues will be tried without bifurcation.

IX. Motions *in Limine*

56. Apotex's First Motion *in Limine* to Exclude Testimony Regarding FDA's State of Mind, Plaintiffs' opposition motion, and Apotex's reply motion are attached as Exhibit 12.

57. Apotex's Second Motion *in Limine* to Exclude Hearsay Scientific Report and Related Testimony, Plaintiffs' opposition motion, and Apotex's reply motion are attached as Exhibit 13.[6]

[6] Plaintiffs have identified Dr. Ying Long from Avomeen Analytical Services as a trial witness. Plaintiffs have also offered Dr. Long for deposition before trial.

58. Apotex's Third Motion *in Limine* to Exclude Evidence of Commercial Success, Plaintiffs' opposition motion, and Apotex's reply motion are attached as Exhibit 14.

X. Discovery

59. Discovery is completed.

XI. Number of Jurors

60. This is a non-jury trial.

XII. Non-Jury Trial/Post-trial Briefs

61. The parties request a detailed opinion from the Court post-trial.

62. Apotex's opening post-trial brief on validity and objective indicia of non-obviousness shall be limited to fifty (50) pages in length. Plaintiffs' answering post-trial brief on validity and objective indicia of non-obviousness shall be limited to fifty (50) pages. Apotex's reply post-trial brief on validity and objective indicia of non-obviousness shall be limited to twenty-five (25) pages. Plaintiffs' sur-repy on secondary considerations shall be limited to twenty-five (25) pages.

63. In addition to their opening post-trial briefs, each party will separately file their proposed Findings of Fact comprising no more than fifty (50) pages in length each. The proposed Findings of Fact, separately stated in numbered paragraphs, will constitute a detailed listing of the relevant material facts the party believes it has proven, in a simple narrative form. No separate proposed Conclusions of Law shall be filed.

64. The parties propose the following post-trial briefing schedule:

a. Both parties shall file Findings of Fact on January 06, 2017;

b. Apotex's opening post-trial brief shall be due on January 20, 2017;

c. Plaintiffs' answering post-trial brief shall be due on February 3, 2017;

d. Apotex's reply brief shall be due February 10, 2017;

e. Plaintiffs' sur-reply brief on secondary considerations shall be due February 17, 2017.

XIII. Motions for Judgment as a Matter of Law

65. The parties have agreed to the following procedure: The parties reserve the right to move for judgment on partial findings pursuant to Fed. R. Civ. P. 52(c). The parties agree that either party making a motion pursuant to Fed. R. Civ. P. 52(c) will advise the Court of its motion promptly and in accordance with that rule. If the Court requests more extensive argument on the motion, such argument will be taken up at the Court's first convenience. The parties will only supplement the motion in writing upon request by the Court. Pursuant to Fed. R. Civ. P. 52(c), the Court may decline to render any judgment until the close of evidence.

XIV. Length of Trial

66. This case is currently set for a **five-day** bench trial on Dec. 12-16, 2016. The parties propose that each side receive **13 hours** for its trial presentations.

67. Time will be charged to a party for its opening statement, direct and redirect examinations of witnesses it calls (including by designation), cross-examination of witnesses called by any other party (including by designation), its argument on any motions for judgment as a matter of law, and all argument on objections a party raises to the opposing party's exhibits and demonstrative exhibits. The Courtroom Deputy will keep a running total of trial time used by counsel.

XV. Amendment of the Pleading

68. The parties are not seeking any amendments to the pleadings at this time.

XVI. Additional Matters

A. Notice of Commercial Launch of Apotex's Generic Product

69. [redacted]. To date, Apotex has not agreed to provide Plaintiffs with notice of its intended commercial launch date. For that reason, Plaintiffs respectfully request that the Court order Apotex to provide Plaintiffs with notice no later than 45 days prior to its intended commercial launch date. Plaintiffs intend to move for an injunction to prevent Apotex's launch if a decision from the Court has not issued and (1) Apotex has provided notice to Plaintiffs that it intends to launch its Generic Product or (2) the 30-month stay will imminently expire. Apotex believes that launch restrictions/notice provisions are premature at this time and can be revisited after trial. However, if this Court requires notice of launch, then within three days from Apotex's notice, the parties will approach the Court with a briefing schedule for any motions for injunctive relief. Alternatively, Plaintiffs request that the Court issue an injunction pending the final decision in this action. *See Galderma Labs., L.P. et al. v. Tolmar Inc.*, C.A. No. 10-cv-0045-LPS, D.I. 334.

B. Closing the Court to the Public

70. The parties agree that the Court should close the Court for presentation of two categories of evidence: 1) confidential research and development information of the subject matter of the patents-in-suit and commercial embodiments thereof; and 2) confidential financial information from both Plaintiffs and Apotex concerning actual and projected sales, actual and projected revenues, and actual and projected profits. However, in-house counsel for the parties, including in-house counsel for the parties' parent companies, should be allowed to attend these sessions.

71. The parties agree to raise the issue with opposing counsel at the appropriate time in their respective identification of witnesses whom they expect to call for direct examination. The requesting party shall bring the issue to the Court's attention prior to the witness being called to the witness stand.

XVII. Settlement Certification

72. [redacted]

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Attorneys for Defendants Apotex Inc. and Apotex Corp.

Dated: November 10, 2016

SO ORDERED this _____ day of __, 2016

_____
Honorable Leonard P. Stark
United States District Judge

CERTIFICATE OF SERVICE

I hereby certify that on November 10, 2016, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF, which will send notification of such filing to all registered participants, and further certify that I caused the foregoing to be sent via electronic mail to the following counsel:

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Exhibit 1

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and CIPLA LTD., Plaintiffs, v. APOTEX INC and APOTEX CORP., Defendant.	C.A. No. 14-1453-LPS

STATEMENT OF UNCONTESTED FACTS

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I. Parties

1. Meda Pharmaceuticals Inc. ("Meda") is a corporation organized and existing under the laws of Delaware, and having its principal place of business at 265 Davidson Avenue, Suite 300, Somerset, New Jersey 08873-4120.

2. Cipla Ltd. ("Cipla") is a publicly held company organized and existing under the laws of India, and having a registered office at Cipla House, Peninsula Business Park, Ganpatrao Kadam Marg, Lower Parel, Mumbai 400 013, Maharashtra, India.

3. Apotex Inc. is a corporation organized and existing under the laws of Canada, and having its principal place of business at 150 Signet Drive, Toronto, Ontario M9L 1T9, Canada.

4. Apotex Corp. is a corporation organized and existing under the laws of Delaware, and having its principal place of business at 2400 North Commerce Parkway, Suite 400, Weston, Florida 33326.

II. Patents-in-Suit

5. UK Patent Application No. 0213739.6 ("GB 0213739.6"), titled "Pharmaceutical Compositions," was filed on June 14, 2002.

6. GB 0213739.6 was published on December 17, 2003, as GB 2389530 A.

7. International Application No. PCT/GB03/02557 ("PCT/GB03/02557") was filed on June 13, 2003. That application states on its face that it claims priority to GB 0213739.6.

8. PCT/GB03/02557 was published on December 24, 2003 as International Publication No. WO 03/105856 A1.

9. On May 1, 2012, the U.S. Patent and Trademark Office issued U.S. Patent No. 8,168,620 B2 ("the '620 patent"), titled "Combination of Azelastine and Steroids."

10. Amar Lulla and Geena Malhotra are named on the face of the '620 patent as inventors.

11. The ’620 patent purports on its face to be a 35 U.S.C. § 371 national stage application of PCT/GB03/02557, which purports on its face to claim priority to GB 0213739.6.

12. According to data provided to FDA by Meda, the FDA’s Orange Book lists the expiration date of the ’620 patent as February 24, 2026.

13. On February 16, 2016, the U.S. Patent and Trademark Office issued U.S. Patent No. 9,259,428 B2 (“the ’428 patent”), titled “Combination of Azelastine and Fluticasone for Nasal Administration.”

14. Amar Lulla and Geena Malhotra are named on the face of the ’428 patent as inventors.

15. The ’428 patent states on its face that it was filed as U.S. Patent Application No. 14/661,720, which is a continuation application of and claims priority to U.S. Patent Application No. 14/539,646, filed on Nov. 12, 2014, which is a continuation application of and claims priority to U.S. Patent Application No. 13/644,127, filed on Oct. 3, 2012, now U.S. Pat. No. 8,937,057, which is a continuation application of and claims priority to U.S. Patent Application No. 12/508,388, filed on Jul. 23, 2009, now U.S. Pat. No. 8,318,709, which is a divisional application of and claims priority to U.S. Patent Application No. 10/518,016, filed Jul. 6, 2005, now U.S. Pat. No. 8,168,620, which is a 35 U.S.C. § 371 national stage application of PCT/GB03/02557, filed Jun. 13, 2003, which claims priority to GB 0213739.6.

16. According to data provided to FDA by Meda, the FDA’s Orange Book lists the expiration date of the ’428 patent as June 13, 2023.

17. The U.S. Patent and Trademark Office issued a Certificate of Correction for the ’428 patent on May 3, 2016.

18. Plaintiff Cipla is the owner of the ’620 and ’428 patents.

19. The ’620 and ’428 patents have an earliest filing date of June 14, 2002.

20. Pursuant to an exclusive license agreement that Meda and Cipla executed on November 13, 2006, and amended on November 7, 2011, Meda has the right to use, market, sell, import and distribute a nasal spray combination product that contains azelastine hydrochloride and fluticasone propionate in specified territories, including in the United States.

21. Meda has the right to enforce the ’620 and ’428 patents.

III. Asserted Claims

22. Meda currently asserts claims 4, 29, and 42-44 of the ’620 patent, and claims 10, 11, 13, 15, 16, 23, 24, 26, 29, and 30 of the ’428 patent (collectively, “Asserted Claims”).

23. The asserted claims of the ’620 patent are listed below in bold, along with claims incorporated therein:

1. A pharmaceutical formulation comprising: azelastine, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable ester of fluticasone, wherein said pharmaceutical formulation is in a dosage form suitable for nasal administration. **(Not asserted.)**
4. The pharmaceutical formulation of claim 1, wherein said formulation has a particle size of less than 10 µm.
5. The pharmaceutical formulation of claim 1, wherein said formulation is an aqueous suspension comprising from 0.0005% (weight/weight) to 2% (weight/weight) of said azelastine, or said pharmaceutically acceptable salt thereof, and from 0.0357% (weight/weight) to 1.5% (weight/weight) of said pharmaceutically acceptable ester of fluticasone. **(Not asserted.)**
6. The pharmaceutical formulation according to claim 5, comprising from 0.001% (weight/weight) to 1% (weight/weight) of said azelastine, or said pharmaceutically acceptable salt thereof, and from 0.0357% (weight/weight) to 1.5% (weight/weight) of said pharmaceutically acceptable ester of fluticasone. **(Not asserted.)**
24. A pharmaceutical formulation comprising azelastine hydrochloride; and, fluticasone propionate, wherein said

formulation is in the dosage form of as a nasal spray, and wherein said formulation is used in the treatment of conditions for which administration of one or more anti-histamine and/or one or more steroid is indicated. **(Not asserted.)**
26. The pharmaceutical formulation of claim 6, comprising 0.1% (weight/weight) of azelastine hydrochloride, and from 0.0357% to 1.5% (weight/weight) of fluticasone propionate. **(Not asserted.)**
29. The pharmaceutical formulation of claim 26, wherein said dosage form suitable for nasal administration comprises a nasal spray.
25. A nasal spray formulation comprising (i) azelastine, or a pharmaceutically acceptable salt thereof, (ii) a pharmaceutically acceptable ester of fluticasone, and (iii) a pharmaceutically acceptable carrier or excipient therefor. **(Not asserted.)**
42. The pharmaceutical formulation of claim 1, further comprising edetate disodium, glycerine, a thickening agent comprising microcrystalline cellulose and sodium carboxy methyl cellulose, polysorbate 80, benzalkonium chloride, phenyl ethyl alcohol, and purified water.
43. The pharmaceutical formulation of claim 24, further comprising edetate disodium, glycerine, a thickening agent comprising microcrystalline cellulose and sodium carboxy methyl cellulose, polysorbate 80, benzalkonium chloride, phenyl ethyl alcohol, and purified water.
44. The pharmaceutical formulation of claim 25, further comprising edetate disodium, glycerine, a thickening agent comprising microcrystalline cellulose and sodium carboxy methyl cellulose, polysorbate 80, benzalkonium chloride, phenyl ethyl alcohol, and purified water.

24. The asserted claims of the ’428 are listed below in bold, along with claims incorporated therein:

1. A method for the treatment of seasonal allergic rhinitis, comprising administration of a therapeutically effective amount of nasal spray formulation comprising: from 0.001% (weight/weight) to 1% (weight/weight) of azelastine hydrochloride; from 0.0357%

(weight/weight) to 1.5% (weight/weight) of fluticasone propionate; one or more preservatives; one or more thickening agents; one or more surfactants; and one or more isotonization agents. **(Not asserted.)**
9. The method of claim 1, wherein the formulation comprises edetate disodium, benzalkonium chloride, microcrystalline cellulose, carboxymethyl cellulose sodium, polysorbate 80, glycerine, and phenyl ethyl alcohol. **(Not asserted.)**
10. The method of claim 9, wherein the formulation comprises: from 0.002% (weight/weight) of 0.05% (weight/weight) of edetate disodium; from 0.002% (weight/weight) to 0.05% (weight/weight) of benzalkonium chloride; from 0.65% (weight/weight) to 3% (weight/weight) of a combination of microcrystalline cellulose and carboxymethyl cellulose sodium; and from 2.3% (weight/weight) to 2.6% (weight/weight) of glycerine.
11. The method of claim 1, wherein the formulation comprises: 0.1% (weight/weight) azelastine hydrochloride; from 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone propionate; from 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium; from 0.002% (weight/weight) to 0.02% (weight/weight) of benzalkonium chloride; from 0.65% (weight/weight) to 3% (weight/weight) of a combination of microcrystalline and carboxymethyl cellulose sodium; polysorbate 80; 2.3% (weight/weight) of glycerine; and 0.25% (weight/weight) of phenyl ethyl alcohol.
13. The method of claim 1, wherein the formulation is contained in a nasal spray product; and wherein from 0.03 mg to 3 mg of azelastine hydrochloride and from 0.05 mg to 0.15 mg of fluticasone propionate is released per individual actuation of the nasal spray product.
14. A method for minimizing symptoms of seasonal allergic rhinitis, comprising administration of a therapeutically effective amount of a nasal spray formulation comprising: from 0.001% (weight/weight) to 1% (weight/weight) of azelastine hydrochloride; from 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone propionate; one or more preservatives; one or more thickening agents; one or more surfactants; and one or more isotonization agents. **(Not asserted.)**
15. The method of claim 14, wherein the formulation has a pH

of 4.5 to about 6.5.
16. The method of claim 14, wherein the formulation is an aqueous suspension.
22. The method of claim 14, wherein the formulation comprises edetate disodium, benzalkonium chloride, microcrystalline cellulose, carboxymethyl cellulose sodium, polysorbate 80, glycerine, and phenyl ethyl alcohol. **(Not asserted.)**
23. The method of claim 22, wherein the formulation comprises: from 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium; from 0.002% (weight/weight) to 0.05% (weight/weight) of benzalkonium chloride; from 0.65% (weight/weight) to 3% (weight/weight) of a combination of microcrystalline cellulose and carboxymethyl cellulose sodium; and from 2.3% (weight/weight) to 2.6% (weight/weight) of glycerine.
24. The method of claim 14, wherein the formulation comprises: 0.1% (weight/weight) azelastine hydrochloride; from 0.0357 (weight/weight) to 1.5% (weight/weight) of fluticasone propionate; from 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium; from 0.002% (weight/weight) to 0.02% (weight/weight) of benzalkonium chloride; from 0.65% (weight/weight) to 3% (weight/weight) of a combination of microcrystalline and carboxymethyl cellulose sodium; polysorbate 80; 2.3% (weight/weight) of glycerine; and 0.25% (weight/weight) of phenyl ethyl alcohol.
26. The method of claim 14, wherein the formulation is contained in a nasal spray product; and wherein from 0.03 mg to 3 mg of azelastine hydrochloride and from 0.05 mg to 0.15 mg of fluticasone propionate is released per individual actuation of the nasal spray product.
28. A method for the treatment of seasonal allergic rhinitis, comprising administration of a therapeutically effective amount of nasal spray formulation comprising: from 0.001% (weight/weight) to 1% (weight/weight) of azelastine hydrochloride; from about 50 μg/mL to about 5 mg/mL of fluticasone propionate; from 0.002% (weight/weight) to 0.05% (weight/weight) of benzalkonium chloride; from 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium; glycerine; polysorbate; and a thickening agent; wherein the formulation has a pH of 4.5 to about 6.5; and wherein the formulation is an aqueous suspension. **(Not asserted.)**

29. The method of claim 28, wherein the formulation is contained in a nasal spray product; and wherein from 0.03 mg to 3 mg of azelastine hydrochloride and from 0.05 mg to 0.15 mg of fluticasone propionate is released per individual actuation of the nasal spray product.
30. The method of claim 28, wherein the thickening agent comprises microcrystalline cellulose and carboxymethyl cellulose sodium.

IV. Claim Construction

25. The parties stipulated and agreed that the term "administration" as it appears in the claims of the '620 patent will have its plain and ordinary meaning, and to the extent that the Court requires further explanation, the parties believe the plain and ordinary meaning of "administration" is "application." (D.I. 108.)

26. The Court construed the term "conditions" that appears in the claims of the '620 patent to mean "disease(s) or illness(es)." (D.I. 115.)

V. Dymista®

27. Meda received approval for a 137 mcg azelastine hydrochloride/50 mcg fluticasone propionate combination nasal spray, as described in New Drug Application No. 202236, from the U.S. Food and Drug Administration ("FDA") on May 1, 2012.

28. Meda markets its 137 mcg azelastine hydrochloride/50 mcg fluticasone propionate combination nasal spray under the trade name Dymista®.

29. Dymista® contains the active ingredients azelastine hydrochloride and fluticasone propionate.

30. Dymista® is indicated for the relief of symptoms of seasonal allergic rhinitis in patients six years of age and older who require treatment with both azelastine hydrochloride and fluticasone propionate for symptomatic relief.

31. Dymista® contains glycerin, microcrystalline cellulose and carboxymethylcellulose sodium, phenylethyl alcohol, edetate disodium, benzalkonium chloride, polysorbate 80, and purified water.

32. Dymista®'s label says that it delivers 137 mcg of azelastine hydrochloride and 50 mcg of fluticasone propionate (137 mcg/50 mcg) in each 0.137 mL spray.

33. Dymista®'s label says that it is indicated for one spray per nostril twice daily.

34. 21 C.F.R. 300.50 states, in part, that "two or more drugs may be combined into a single dosage form when each component makes a contribution to the claimed effects and the dosage of each component (amount, frequency, duration) is such that the combination is safe and effective for a significant patient population requiring such concurrent therapy as defined in the labeling for the drug. Special cases of this general rule are where a component is added."

35. Plaintiffs assert that Dymista® and the conditions of use for which Dymista® is FDA-approved fall within the scope of the Asserted Claims.

VI. Duonase

[redacted]



39. Plaintiffs assert that Duonase and its use for the treatment of symptoms of allergic rhinitis fall within the scope of the Asserted Claims.

40. Duonase and Dymista® are water-based nasal sprays with a density of essentially 1 g/ml.

VII. References Apotex Asserts Are Prior Art

41. Label for ADVAIR DISKUS® 100/50 (fluticasone propionate 100 mcg and salmeterol 50 mcg) Inhalation Powder states on its face that ADVAIR DISKUS® 100/50 was approved in 2002 and also states on its face that the label it was revised in 2008.

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Exhibit 2

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and **CIPLA LTD.**,	)	
Plaintiffs,	)	
	)	Civil Action No. 1:14-cv-01453-LPS
v.	)	
APOTEX INC. and **APOTEX CORP.**,	)	
Defendants.	)	

PLAINTIFFS' STATEMENT OF CONTESTED FACTS

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I. Introduction.

1. Plaintiffs Meda Pharmaceuticals Inc. and Cipla Ltd. filed this lawsuit under the Hatch-Waxman Act to enjoin Apotex from launching a generic product that infringes two patents: U.S. Patent Nos. 8,168,620 (the "'620 patent) and 9,259,428 (the "'428 patent") (collectively, the "patents-in-suit").

2. The '620 patent covers azelastine hydrochloride and fluticasone propionate, combined into a single, fixed-dose pharmaceutical nasal spray formulation suitable for nasal administration.

3. The related '428 patent covers methods of using azelastine hydrochloride and fluticasone propionate, combined into a single, fixed-dose pharmaceutical nasal spray formulation for treating allergic rhinitis.

4. Dymista®, Meda's commercial embodiment of the asserted claims of the patents-in-suit, is the first and only nasal spray combination formulation approved by the FDA for the treatment of allergic rhinitis.

5. Duonase, Cipla's commercial embodiment of the asserted claims of the patents-in-suit, is the world's first nasal spray combination formulation.

6. Apotex claims, but cannot prove by clear and convincing evidence, that the asserted claims of the patents-in-suit are invalid for obviousness, lack of written description, or enablement.

7. Apotex cannot prove by clear and convincing evidence that the asserted claims are obvious because, as Plaintiffs' and Apotex's clinical experts agree, the person of ordinary skill in the art at the time of invention would have expected the drawbacks of a fixed-dose combination nasal spray formulation to far outweigh the expected benefits.

8. Numerous objective indicia of non-obviousness—long-felt but unmet need, unexpected results, industry skepticism, industry praise, failure of others, licensing, and commercial success—support the non-obviousness of the asserted claims.

9. Apotex likewise cannot prove by clear and convincing evidence that the asserted claims lack written description as the specification plainly would have conveyed to the person of ordinary skill in the art at the time of invention that the inventors possessed the formulation inventions claimed in the ’620 patent and the method inventions claimed in the ’428 patent.

10. Finally, Apotex cannot prove by clear and convincing evidence that the asserted claims are not enabled, as the person of ordinary skill in the art at the time of invention would have been able, based on the specification of the patents-in-suit and knowledge of the art, to prepare the claimed formulations and use the claimed methods.

II. Treatment of Allergic Rhinitis.

10. Allergic rhinitis (“AR”), a common condition that afflicts millions of people in the United States, is defined as inflammation of the membranes lining the nose and it is characterized by nasal congestion, rhinorrhea, sneezing, itching of the nose and/or postnasal drainage. PTX0022-00003 – 00004; PTX0326-00017.

11. Patients suffering from AR may also experience sleep loss (and concomitant fatigue), headaches, poor concentration, and other distractions that negatively impact their lives. PTX0022-00013.

A. Background of AR.

12. AR is extremely prevalent: at the time of invention, June 2002, it was estimated that 20-40 million people in the United States, or 10% to 30% of adults and 40% of children, suffered from AR. PTX0022-00003 – 00004.

13. The estimated direct and indirect costs of AR in the years leading up to the date of invention ranged from $1.2 to $5.3 billion. PTX0326-00131; PTX0022-00004; PTX0019-00002; PTX0032-00001.

14. The wide-spread prevalence and high cost of AR at the time of invention demonstrate a need for improved treatment options for AR.

15. AR is the body's reaction to the inhalation of an allergen, a specific type of environmental stimulus, which typically includes pollens, molds, house dust mites, and animal and insect allergens. PTX0022-00022.

16. A patient's first exposure to a given allergen begins a process that sensitizes the patient to that allergen.

17. A subsequent exposure to the same allergen after sensitization may begin the process that leads to an allergic reaction.

18. While it was understood at the time of invention that certain mediators—like histamine, leukotrienes, and other factors—caused inflammation in AR patients, PTX0326-00057 – 00058, the cascade of reactions that cause AR was far more complicated and not fully understood at the time of invention. PTX0099-00003.

19. The mechanisms of AR are far more complicated than early- and late-phase reactions and include interactions of mast cells, basophils, eosinophils, neutrophils, cytokines, kinins, and many other cells and mediators. PTX0326-00044 – 00054.

20. Due to the complexity of the condition, treating physicians did not base their treatment analysis on mechanisms, but instead attempted to manage their patients' symptoms, as each symptom was present in each phase of the reaction. *See generally* PTX0022-00024 – 00033; PTX0326-00093 – 00107 (both describing drug efficacy in terms of symptoms managed).

B. Long-Felt Need For Better and More Complete Symptom Relief of AR.

21. At the time of invention, doctors had a large armamentarium of options for the treatment of AR, including: (1) antihistamines, (2) decongestants, (3) anticholinergics, (4) mast cell stabilizers, (5) leukotriene receptor antagonists, and (6) corticosteroids.

22. Treatments for AR were available in systemic or topical forms at the time of invention.

23. Systemic dosage forms included oral, parenteral, and other dosage forms. PTX0326-00091.

24. Systemic dosage forms were thought to exhibit systemic side effects, e.g. sedation, but were also able to treat multiple organs at once. *Id.*

25. Topical dosage forms included skin creams, nasal sprays, and eye drops. *Id.*

26. Topical dosage forms were thought to exhibit only localized side effects, but their efficacy was limited to the treated organ. *Id.*

27. Patients generally preferred oral dosage forms, and compliance was typically much higher with oral drugs.

28. Despite the long list of drugs available to treat AR, in June 2002, there was still a need for better and more complete symptom relief of AR.

1. Antihistamines.

29. At the time of invention, at least 24 oral or intranasal antihistamines were known to be effective treatments for AR. PTX0326-00092 – 00093, 00095 – 00099; PTX0326-00138.

30. Antihistamines were known to work well on itching, sneezing, and runny nose, but they had little effect on congestion. PTX0022-00024; PTX0022-00026.

31. Antihistamines were available in systemic and topical dosage forms.

32. "Second-generation" antihistamines—including blockbuster oral drugs Claritin® (loratadine), Zyrtec® (cetirizine), and Allegra® (fexofenadine), and the less popular intranasal Astelin® (azelastine)—were largely indistinguishable in onset, efficacy, and side-effects. PTX0099-00009.

33. Azelastine, one of several intranasal second-generation antihistamines known at the time of invention, was well-known to have several significant side-effects, including sedation, headaches, and a uniquely bitter taste that led many patients to avoid it. *See* PTX0011-00014; *see also* PTX0022-00028.

34. Aside from its unique side effects, azelastine was otherwise indistinguishable from the blockbuster oral antihistamines loratadine, cetirizine, and fexofenadine in terms of efficacy, onset, or duration of action. PTX0099-00009.

2. Decongestants.

35. There were also at least nine decongestants available in both intranasal and oral dosage forms at the time of invention. PTX0326-00105.

36. Decongestants were known to be effective in treating congestion, but they had little effect on itching, sneezing, or runny nose. PTX0022-00028.

37. At the time of invention, decongestants were available in systemic and topical dosage forms. *Id.*

38. Decongestants were known to cause elevated blood pressure, palpitations, loss of appetite, sleep disturbance, and rebound congestion if used for too long. *Id.*

39. Thus, it was the practice at the time of invention to limit the use of decongestants to a few days.

40. Intranasal decongestants like oxymetazoline were effective against the symptom of congestion.

3. Anticholinergics.

41. At least four anticholinergic agents were known at the time of invention for use in the treatment of AR. PTX0022-00031.

42. Anticholinergics were primarily available in topical dosage forms, but they were occasionally used in systemic dosage forms as well.

43. Anticholinergics were known to work well in treating the symptom of runny nose, but they had little effect on itching, sneezing, or congestion. *Id.*

4. Mast cell stabilizers.

44. At least two mast cell stabilizers were known for the treatment of AR at the time of invention. PTX0326-00104.

45. Mast cell stabilizers were available in topical dosage forms. *See*, *e.g.*, PTX0022-00030.

46. Mast cell stabilizers were intranasal treatments effective against all symptoms of AR, but they only worked prophylactically. *Id.*

47. Mast cell stabilizers also had a short duration of action, resulting in the need for patients to use the drug four times per day. *Id.*

5. Leukotriene receptor antagonists.

48. At least three leukotriene receptor antagonists were known at the time of invention. PTX0326-00107.

49. Leukotriene receptor antagonists were available in systemic dosage forms. *Id.*

50. Leukotriene receptor antagonists were effective in minimizing certain symptoms of AR, including congestion, but they were particularly effective when used conjunctively with another drug. *Id.*

6. Corticosteroids.

51. There were at least seven intranasal corticosteroids known at the time of invention. PTX0326-00102 – 00103.

52. Fluticasone, one of the seven corticosteroid molecules, was also known to exist in different ester forms. *See* PTX0001-00011, col. 6:56.

53. Corticosteroids were known to be the most effective treatment for AR because they worked well on all symptoms. PTX0022-00029; PTX0326-00099.

54. The primary drawbacks of corticosteroids were safety issues and slow onset of action. PTX0041-00002; PTX0059-00005.

55. Aside from minor variations in patient preference and safety profiles, intranasal corticosteroids were largely indistinguishable. *See, e.g.,* PTX0058-00004; PTX0099-00009.

7. Co-administration of individual drugs.

56. Physicians at the time of invention frequently had to prescribe, or co-administer, multiple drugs in order to control their patients' symptoms. *See generally* PTX0020; PTX0042.

57. Given the large number of monotherapies available at the time of invention, the person of ordinary skill in the art would have been presented with hundreds of possibilities for the co-administration of individual monotherapies.

58. Physicians often cycled through each of these possible co-administration options in an effort to find a treatment that worked for each patient.

59. Due to patient variability, the appropriate pairing was often different for each patient. PTX0022-0034.

60. There is no evidence in the art that any combination of drugs was viewed as more promising than any other combination.

61. The art recognized the benefits of individualized treatment, *id.*, which could only be obtained by way of the co-administration of separate monotherapies. *See, e.g.*, PTX0022-00026 – 00027.

C. Standard of Treatment at the Time of the Invention

62. At the time of invention, patients typically self-medicated with over-the-counter treatment options prior to visiting the doctor's office.

63. At the time of invention, doctors tailored their prescriptions to each patient's symptoms, severity of the condition, seasonality of the condition, and both the patient's and doctor's experience with each drug.

64. Treatment guidelines at the time of invention recommended this patient-tailored practice by way of a stepwise approach to the use of one or more drugs depending on the patient's specific symptoms and severity of the condition. PTX0326-00120.

65. The guidelines also recognized the overarching desire to minimize the patient's drug exposure by titrating down after symptom control is achieved. *Id.*; *see also* PTX0022-00026 – 00027.

66. The guidelines did not recommend specific drugs from among the available classes because the distinctions were minor between drugs within each class. *See, e.g.*, PTX0099-00009; PTX0058-00004.

67. The person of ordinary skill in the art also would have known that there was significant patient-to-patient variability in response to each drug, such that the person of ordinary skill in the art at the time of invention would have preferred the flexibility to use the available drugs interchangeably or on an as-needed basis.

68. Based in part on this patient-to-patient variability, doctors regularly deviated from even the flexible recommendations of the guidelines.

III. Dymista® and Duonase.

69. Dymista®, marketed by Meda, is a commercial embodiment of the asserted claims of the patents-in-suit.

70. Dymista® is a fixed-dose combination of the active pharmaceutical ingredients azelastine hydrochloride ("azelastine") and fluticasone propionate ("fluticasone"). PTX0024.

71. The excipients (inactive ingredients) in Dymista® are benzalkonium chloride, edetate disodium, glycerin, polysorbate 80, microcrystalline cellulose and carboxymethylcellulose sodium, phenylethyl alcohol, and water. PTX0138.

72. Dymista® is the only FDA-approved fixed-dose combination nasal spray product for the treatment of AR.

73. Duonase, marketed by Cipla, is a fixed-dose combination of the active pharmaceutical ingredients azelastine and fluticasone. PTX0135.

74. Released in 2004, Duonase was the first fixed-dose combination nasal spray product for the treatment of AR anywhere in the world.

75. As formulated in 2004, Duonase included the excipients benzalkonium chloride, glycerin, polysorbate 80, microcrystalline cellulose and carboxymethylcellulose sodium, phenylethyl alcohol, and water. *Id.*

76. In 2010, Cipla reformulated Duonase with the same excipients save for the addition of sucralose, a sweetener. PTX0153-00001.

77. Duonase is a commercial embodiment of the asserted claims of the patents-in-suit.

78. As fixed-dose combination products, neither Dymista® nor Duonase allows for titration or substitution of active ingredients.

IV. The Asserted Claims of the Patents-in-Suit are Not Obvious.

79. Apotex cannot prove by clear and convincing evidence that any one of the alleged prior art references relied on by Apotex (1) discloses each and every element, either expressly or inherently, of any asserted claim of the patents-in-suit, and (2) does so in a way that would have enabled a person of ordinary skill in the art to practice the claimed invention without undue experimentation as of the time of invention.

80. Apotex cannot prove by clear and convincing evidence that the asserted claims of the patents-in-suit would have been obvious to the person of ordinary skill in the art at the time of invention.

81. First, Apotex cannot prove by clear and convincing evidence that any of the alleged prior art references relied on by Apotex, either alone or in combination, would have given a person of ordinary skill in the art at the time of invention a motivation to combine any of the alleged prior art references relied on by Apotex to obtain the inventions claimed in any of the asserted claims of the patents-in-suit.

82. Second, Apotex cannot prove by clear and convincing evidence that any of the alleged prior art references relied on by Apotex, either alone or in combination, would have given a person of ordinary skill in the art as of the time of invention a reasonable expectation of success in obtaining the inventions claimed in any of the asserted claims of the patents-in-suit.

83. Third, Objective indicia of non-obviousness further support the non-obviousness of the asserted claims of the patents-in-suit.

A. The person of ordinary skill in the art

84. A person of ordinary skill in the field of the invention of the patents-in-suit would have education and experience in both (1) the treatment of patients suffering from AR and (2) the

development of drug formulations. A person of ordinary skill can draw on the experience of a multi-disciplinary team.

85. The person of ordinary skill in the art would have the experience of a primary care physician with a medical degree and two to four years of experience, as well as a bachelor's of science in pharmaceutical sciences and four to five years of experience, or commensurate work experience.

86. The patents-in-suit are directed to formulations useful in the treatment of AR and methods of using such formulations.

87. Before and after the date of invention, the vast majority of AR patients saw their primary care physician for management of their allergic symptoms. PTX0031-00005; *see also* PTX0326-00117 ("The first point of contact for many patients presenting with allergy symptoms is the primary care physician.").

88. The patents-in-suit have an earliest filing date of June 14, 2002, and the subject matter of the claims of the patents-in-suit was conceived and reduced to practice at least as of that date. *See* PTX0001-00002; PTX0003-00011.

B. Apotex's alleged prior art references do not render obvious the asserted claims of the patents-in-suit.

89. Apotex cannot prove by clear and convincing evidence that any of the following alleged prior art references, either alone or in combination with any other alleged prior art identified by Apotex, would have rendered the subject matter of any of the asserted claims of the patents-in-suit obvious to a person of ordinary skill in the art:

- 1998 Flonase® Label and/or Flonase® Product (collectively, "Flonase® References"), PTX0059.

- 2000 Astelin® Label and/or Astelin® Product (collectively, "Astelin® References"), PTX0011.
- Advair Diskus® Label and/or Advair Diskus® Product (collectively, "Advair Diskus® References), DTX 51.
- U.S. Patent No. 5,164,194 ("Hettche"), PTX0073.
- U.S. Patent No. 4,335,121 ("Phillipps"), PTX0104.
- Allen, Jr., *The Art, Science, and Technology of Pharmaceutical Compounding*, American Pharmaceutical Association, chs. 9-11 and 15-20 (1998) ("Allen"), PTX0166, PTX0167.
- Remington: The Science and Practice of Pharmacy, chapters 16, 18, 19, 22, 52 (2000) ("Remington"), PTX0182, PTX0183, PTX0184, PTX0195.
- Wade et al., *Handbook of Phamaceutical Excipients*, (excerpts), Pharmaceutical Press (2nd ed. 1994) ("Wade"), PTX0189.
- Avicel RC-591 Bulletin (1991), ("Avicel Bulletin"), PTX1091.
- European Patent Application EP 0780127 A1 ("Cramer"), PTX0062.
- PCT Application No. WO 98/48839 ("Segal"), PTX0088.

90. Apotex cannot prove by clear and convincing evidence that one or more of the Flonase® References, Astelin® References, Advair Diskus® References, Hettche, Phillipps, Allen, Remington, Wade, the Avicel Bulletin, Cramer, or Segal would have motivated the person of ordinary skill in the art at the time of invention to combine azelastine, fluticasone, benzalkonium chloride, edetate disodium, glycerin, polysorbate 80, microcrystalline cellulose and carboxymethylcellulose sodium, phenylethyl alcohol, and water into a single nasal spray formulation.

91. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have had a reasonable expectation of success in combining azelastine, fluticasone, benzalkonium chloride, edetate disodium, glycerin, polysorbate 80, microcrystalline cellulose and carboxymethylcellulose sodium, phenylethyl alcohol, and water into a single nasal spray formulation based on one or more of the Flonase® References, Astelin® References, Advair Diskus® References, Hettche, Phillipps, Allen, Remington, Wade, the Avicel Bulletin, Cramer, or Segal.

92. The Flonase® References, Astelin® References, Advair Diskus® References, Hettche, Phillipps, Allen, Remington, Wade, the Avicel Bulletin, Cramer, and Segal were either considered by one or both of the U.S. Patent and Trademark Office ("US PTO") and the European Patent Office ("EPO"), or are cumulative to art considered by the US PTO and EPO. *See*, *e.g.*, PTX0995.

93. Following an opposition proceeding in the EPO by GlaxoSmithKline, the European patent was upheld, in amended form, with claims of a similar scope to those granted in the U.S. PTX0995.

94. The Flonase® References describe an intranasal formulation of fluticasone indicated for the treatment of AR. PTX0059.

95. The Flonase® References do not teach or suggest combining fluticasone with any other treatment for AR.

96. The Flonase® references do not teach using glycerin, edetate disodium, or azelastine.

97. The 1998 Flonase® label was considered by the U.S. Patent and Trademark Office ("US PTO") during prosecution of the patents-in-suit. PTX0001-00006.

98. The Astelin® References describe an intranasal formulation of fluticasone indicated for the treatment of AR. PTX0011.

99. The Astelin® References do not teach or suggest combining azelastine with any other treatment for AR.

100. The Astelin® References do not teach using fluticasone, glycerin, microcrystalline cellulose and carboxymethylcellulose sodium, phenylethyl alcohol, or polysorbate 80.

101. The Astelin® References also do not teach the effects of removing hydroxypropyl methylcellulose, citric acid, dibasic sodium phosphate, or sodium chloride on the stability, safety, or efficacy of azelastine.

102. Astelin® was considered by the US PTO during prosecution of the patents-in-suit. PTX0001-00007.

103. The Advair Diskus® References disclose an oral inhalation powder comprising fluticasone and salmeterol for the treatment of asthma. DTX 51.

104. The Advair Diskus® References do not teach or suggest combining azelastine and fluticasone in a single, fixed-dose nasal spray formulation for the treatment of AR.

105. The Advair Diskus® References do not teach using azelastine, benzalkonium chloride, edetate disodium, glycerin, polysorbate 80, microcrystalline cellulose and carboxymethylcellulose sodium, or phenylethyl alcohol in a nasal spray formulation.

106. The Advair Diskus® References do not provide any information regarding the selection of excipients and concentrations thereof for use in an azelastine and fluticasone fixed-dose combination intranasal spray product.

107. The US PTO considered a fluticasone-salmeterol oral inhalation powder combination during prosecution of the patents-in-suit. *See* PTX0001-00006.

108. The Advair Diskus® References are duplicative of art considered by the US PTO during the prosecution of the patents-in-suit.

109. Hettche teaches a method of using azelastine in an intranasal or ocular dosage form.

110. Hettche does not teach or suggest combining azelastine and fluticasone into a single, fixed-dose combination drug product.

111. Hettche does not provide any information regarding the selection of excipients and concentrations thereof for use in an azelastine and fluticasone fixed-dose combination intranasal spray product.

112. Hettche was considered by the US PTO during prosecution of the patents-in-suit. PTX0001-00002.

113. Phillipps teaches complex chemical compounds.

114. Phillipps does not teach or suggest combining azelastine and fluticasone into a single, fixed-dose combination drug product.

115. Phillipps does not provide any information regarding the selection of excipients and concentrations thereof for use in an azelastine and fluticasone fixed-dose combination intranasal spray product.

116. Remington does not teach or suggest combining azelastine and fluticasone into a single, fixed-dose combination drug product.

117. Remington does not provide any information regarding the selection of excipients and concentrations thereof for use in an azelastine and fluticasone fixed-dose combination intranasal spray product.

118. The Avicel Bulletin does not teach or suggest combining azelastine and fluticasone into a single, fixed-dose combination drug product.

119. The Avicel Bulletin does not provide any information regarding the selection of excipients and concentrations thereof for use in an azelastine and fluticasone fixed-dose combination intranasal spray product.

120. Cramer does not teach or suggest formulations containing azelastine, fluticasone, and the specific excipients claimed in the asserted claims of the patents-in-suit. *See generally* PTX0062.

121. Cramer was considered by the US PTO and was cited by the examiner during the prosecution of both the ’620 and ’428 patents. *See, e.g.*, PTX1147-00009.

122. In response to an obviousness rejection by the examiner over Cramer, the applicants tested Example III of Cramer and determined that Example III exhibited:

- Unacceptable settling and difficulty resuspending;
- Unacceptable jet rather than desired spray mist;
- Unacceptably high viscosity; and
- Unacceptable osmolality. PTX0274-00003 – 00004.

123. These issues rendered the formulation of Cramer Example III unsuitable for nasal administration. PTX0274-00004.

124. The examiner allowed the claims of the patents-in-suit after the applicants explained that Cramer does not teach or suggest a formulation "suitable for nasal administration," among other reasons. PTX1160.

125. Testing conducted during the present litigation confirms the unsuitability and lack of enablement of Cramer.

126. Example III in Cramer discloses a product that is unsuitably acidic.

127. Example III in Cramer discloses a product that is poorly suspended which leads to either a jet spray and/or to poor dose uniformity.

128. Example III in Cramer discloses a product that leads to unacceptable settling and caking.

129. Segal does not teach or suggest formulations containing azelastine, fluticasone, and the specific excipients claimed in the asserted claims of the patents-in-suit. *See generally* PTX0088.

130. Segal was considered by the US PTO and was cited by the examiner during the prosecution of both the '620 and '428 patents. PTX0001-00003.

C. Apotex cannot show that the person of ordinary skill in the art at the time of invention would have had a reason to combine azelastine and fluticasone into a fixed dose combination nasal spray.

131. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated by the alleged prior art references relied on by Apotex, either alone or in combination, to obtain the inventions claimed in any of the asserted claims of the patents-in-suit.

1. Apotex cannot prove that the alleged prior art established a motivation to select an intranasal dosage form for the treatment of allergic rhinitis.

132. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to develop any product for the treatment of AR in an intranasal dosage form.

133. Aside from corticosteroids, which exhibit significant adverse effects when taken systemically, the person of ordinary skill in the art at the time of invention would have been aware of several drawbacks of intranasal dosage forms, including:

- the inability to treat multiple target organs;
- suboptimal drug distribution on the nasal mucosa;
- nasal irritation;
- medication-specific side effects;
- an inability to provide treatment when the nasal passage is completely blocked; and
- lesser patient compliance as compared to oral treatments. PTX0326-00091 – 00092.

134. Medication-specific side effects of intranasal corticosteroids included nasal bleeding and septal perforation. *Id.*

135. Medication-specific side effects of intranasal azelastine included somnolence, headache, and dysgeusia (bitter taste). PTX0011.

136. Patients also preferred oral dosage forms, as shown by the market shares of products available at the time of invention: oral antihistamines controlled a 56.7% share of the total global AR market, whereas all intranasal products—including intranasal corticosteroids—controlled approximately 30% of the market. PTX0098-00029.

137. Intranasal antihistamines—including azelastine—controlled only a portion of the 2.1% market share for all non-steroid and non-decongestant nasal anti-allergic agents, and therefore even less of the overall AR market. *Id.*

138. Given the patient preference for oral treatments and a lack of notable differences between oral and intranasal antihistamines in efficacy, onset, duration of action, and side effects, PTX0099-00009, the person of ordinary skill in the art at the time of invention would have been motivated to select an oral dosage form for a new treatment, not an intranasal form.

2. Apotex cannot prove that the alleged prior art established a motivation to select a corticosteroid and an antihistamine for a fixed dose combination for the treatment of allergic rhinitis.

139. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to select a corticosteroid and an antihistamine for use in a fixed dose combination in the treatment of AR.

a) Apotex cannot prove that the person of ordinary skill in the art would have treated the early- and late-phase reactions separately.

140. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to select a corticosteroid and an antihistamine in order to treat the early and late phase responses of AR.

141. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to select any treatment based on its effects on the alleged mechanisms of AR rather than its demonstrated clinical efficacy in managing the symptoms of AR.

142. The person of ordinary skill in the art at the time of invention would not have been motivated to develop a treatment based on phase because he would have expected several

drug classes to have efficacy in both the early and late phases. *See*, *e.g.*, PTX0022-00005, PTX0022-00028, PTX0022-00031.

143. The person of ordinary skill in the art at the time of invention would not have been motivated to develop a combination drug based on early and late phases because he would have preferred to tailor his treatment strategy to his patient's specific symptoms. *See* PTX0022-00034; PTX0326-00119 – 00120.

144. The person of ordinary skill in the art at the time of the invention understood that all symptoms were present in both the early and phases of AR. PTX0022-00004; PTX0326-00058, 00060.

145. The person of ordinary skill in the art at the time of invention would have known that intranasal corticosteroids worked on all symptoms of AR. PTX0022-00029; PTX0326-00100.

146. The person of ordinary skill in the art at the time of invention also would have expected the addition of an antihistamine to a corticosteroid would achieve no benefit, in part because it had been postulated that the overlapping activity of corticosteroids and antihistamines "mak[es] the action of the latter redundant." PTX0337-00005.

147. Since the person of ordinary skill in the art at the time of invention knew that corticosteroids were effective against *all* symptoms of AR, PTX0022-00029; PTX0326-00099, he would have had little expectation of improvement by adding another drug to the corticosteroid.

b) The prior art taught away from the conjunctive use of corticosteroids and antihistamines.

148. It was well-known in the art at the time of invention that the conjunctive use of an antihistamine and a corticosteroid yielded no benefit over the use of a corticosteroid alone.

149. Juniper 1989 considered the conjunctive use of the antihistamine astemizole and the corticosteroid beclomethasone dipropionate. PTX0336-00003.

150. Juniper 1989 concluded that "[b]eclomethasone plus astemizole provided no better control of rhinitis than beclomethasone alone." *Id.*

151. Benincasa 1994 considered the conjunctive use of the antihistamine cetirizine and the corticosteroid fluticasone. PTX0013-00001.

152. Benincasa 1994 concluded that "there is no significant difference in efficacy between [fluticasone], taken once daily in the morning, and [fluticasone] once daily in combination with oral cetirizine 10 mg, in the prophylactic treatment of seasonal allergic rhinitis." *Id.*

153. Simpson 1994 considered the conjunctive use of the antihistamine terfenadine and the corticosteroid budesonide. PTX0039-00003.

154. Simpson 1994 concluded that "budesonide alone is a highly effective treatment for hay fever with few side effects." *Id.*

155. Simpson 1994 stated that "[b]udesonide and terfenadine combination treatment produced a similar effect to treatment with budesonide alone." PTX0039-00005.

156. Ratner 1998 considered the conjunctive use of the antihistamine loratadine and the corticosteroid fluticasone. PTX0331-00003.

157. Ratner 1998 concluded that "adding loratadine to [fluticasone] does not confer meaningful additional benefit." *Id.*

158. Drouin 1995 concluded that the conjunctive use of the antihistamine loratadine and the corticosteroid beclomethasone dipropionate was more effective than the use of beclomethasone dipropionate alone. PTX0333-00001 – 00002.

159. Brooks 1996 concluded that the conjunctive use of the antihistamine loratadine and the corticosteroid beclomethasone dipropionate improved control of some symptoms of AR. PTX0332-00001.

160. Brooks 1996 showed statistically significant improvement for the conjunctive use in one assessment of runny nose, two assessments of itching, and two assessments of sneezing out of three assessments each. PTX0332-00006, Table IV.

161. Brooks 1996, however, excluded one day of treatment data and grouped all other data into three-day segments. PTX0332-00002, Table I.

162. The person of ordinary skill in the art at the time of invention would have been skeptical of any benefit shown in Brooks due to the organization and exclusion of data from the study.

163. Juniper, Benincasa, Simpson, Ratner 1998, Drouin, and Brooks tested the hypothesis that an antihistamine for the early phase of AR and a corticosteroid for the late phase or AR would provide greater relief, but that hypothesis was proved incorrect years before the date of invention.

164. More specifically, Benincasa and Ratner 1998 would have discouraged the person of ordinary skill in the art at the time of invention from using fluticasone with an add-on antihistamine because these studies showed that fluticasone did not receive any benefit from the addition of two different leading second-generation antihistamines. *See* PTX0013; PTX0331.

165. In a 2000 survey of the literature, one expert in the field at the time of invention concluded that studies of the conjunctive use of an antihistamine and a corticosteroid "do not support a superior effect with long-term regular therapy with the combination [of an antihistamine and corticosteroid] compared with topical corticosteroid alone." PTX0337-00005.

166. The 2000 Howarth survey further concluded that "[t]he lack of additional clinical benefit when antihistamines are used in combination with corticosteroids indicates that, *in vivo*, the anti-inflammatory effects on the airway of corticosteroids overlap those of the H_1-antihistamines, making the action of the latter redundant." *Id*.

167. In a 2001 survey of the literature, three more experts in the field at the time of invention concluded that "[t]he common clinical practice of combining INCS and oral antihistamines in the treatment of allergic rhinitis has no support in clinical evidence, as the combination has not provided effects beyond INCS alone and so it cannot be considered cost effect." PTX0036-00014.

168. In reaching this conclusion, the 2001 Nielsen survey team explicitly considered Juniper 1989, Ratner 1998, Simpson 1994, and Brooks 1996, among other references. PTX0036-00013, Table III.

169. The person of ordinary skill in the art at the time of invention would have known that experts in the field saw no meaningful benefit to the conjunctive use of antihistamines and corticosteroids over corticosteroids alone. PTX0337; PTX0036.

170. The person of ordinary skill in the art at the time of invention, aware of the Juniper, Benincasa, Simpson, and Ratner 1998 studies and the unanimous views of experts expressed in the Howarth and Nielsen surveys, would not have been motivated to attempt a fixed-dose nasal spray combining two drug classes known in the art to confer no benefit when used together.

171. This state of the art remained unchanged for several years as studies and surveys published after the date of invention continued to reiterate that add-on therapy conferred no additional benefit to corticosteroid treatment. *See*, *e.g.*, PTX0085-00006 (reviewing conjunctive

studies and finding that "[t]hree of these [studies], including almost 800 patients, showed that the combination therapy … offered no advantages over corticosteroids alone."); PTX0021-00002 (concluding that "the regular combined therapy of [fluticasone] plus [cetirizine] or plus [montelukast] would not seem to offer substantial advantage with respect to [fluticasone] in mono-therapy in patients affected by seasonal allergic rhinitis."); PTX0053-00017 (use of an antihistamine and a corticosteroid "is not supported by controlled clinical trials… Thus, if this recommendation is followed, it will increase the cost of the treatment without any proven added efficacy on nasal symptoms."); PTX0012-00001 ("Contrary to current practice, the present results demonstrate that for the majority of patients, antihistamine add-on to effective nasal steroid treatment is inappropriate."); PTX0330-00002 ("the weight of clinical evidence indicates that combination therapy with these agents [steroids and antihistamines] is no more effective than the corticosteroid alone.").

172. Other combinations of drugs, however, were known at the time of invention to confer meaningful benefit beyond the effect of each drug as a monotherapy. *See* PTX0083-00001 ("concomitant montelukast with loratadine improved the primary end point significantly ($P<0.001$) compared with placebo and each agent alone.").

173. The person of ordinary skill in the art at the time of invention would have sought to develop a treatment with reduced side effects, PTX0041-00002, and by using more than one drug together, he would have expected an increased side effect profile.

174. The person of ordinary skill in the art at the time of invention therefore, would not have been motivated to use two treatments known to have several significant side effects while conferring no meaningful benefit in efficacy.

3. Apotex cannot prove that the alleged prior art established a motivation to select azelastine and fluticasone for inclusion in a fixed-dose combination nasal spray for the treatment of allergic rhinitis.

175. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have selected fluticasone as the starting point for an improved treatment of AR.

176. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have selected azelastine to modify the treatment of fluticasone.

177. The person of ordinary skill in the art at the time of invention would have known that Flonase®, the commercial embodiment of fluticasone available at the time of invention, was no more efficacious than any other corticosteroid available at the time of invention. PTX0058-00004.

178. The person of ordinary skill in the art at the time of invention would have known that fluticasone had both an undesirable taste and an undesirable odor that led patients in comparative clinical studies to prefer other corticosteroids. PTX0058.

179. The person of ordinary skill in the art at the time of invention would have known that the mechanism of action of fluticasone was unknown, such that he would have had no expectation that fluticasone would be beneficial in conjunctive use with any other drugs. PTX0059-00003.

180. The person of ordinary skill in the art at the time of invention would not have been motivated to select fluticasone in order to develop a product with a fast onset because it was known that fluticasone had a delayed onset of 12 hours and a time to maximum efficacy of several days. *Id.*

181. The person of ordinary skill in the art at the time of invention would not have been motivated to select fluticasone in order to develop a safer treatment for AR because it was well known that corticosteroids, including fluticasone, came with significant safety concerns. *See*, *e.g.*, PTX0326-00101; PTX0022-00029 – 00030.

182. The person of ordinary skill in the art at the time of invention would have been aware that the FDA-approved onset of azelastine was "within 3 hours." PTX0011-00008.

183. The person of ordinary skill in the art at the time of invention would have interpreted "within 3 hours" to mean "around three hours," not "within 15-30 minutes."

184. The person of ordinary skill in the art at the time of invention would have known that the onset of azelastine was not materially different from the onset of the more popular oral antihistamines at the time of invention. PTX0099-00009.

185. The person of ordinary skill in the art at the time of invention would have known that several other drug classes had onsets comparable to, or faster than, antihistamines. *See*, *e.g.*, PTX0326-00105 (stating that intranasal decongestants have an onset of within 10 minutes while oral decongestants have an onset within 30 minutes); PTX0326-00106 (stating that anticholinergics have an onset of 15-30 minutes).

186. Based on this knowledge, the person of ordinary skill in the art at the time of invention would have had no reason to specifically select azelastine from among the numerous available AR treatment options with fast onset.

187. The person of ordinary skill in the art at the time of invention would have known that topical AR treatments were expected to have a reduced side effect profile as compared to systemic, or oral, treatments. *See* PTX0326-00091.

188. The person of ordinary skill in the art at the time of invention would have known that, despite the expectation of reduced side effects for intranasal administration, azelastine produced several severe side effects, including sedation, headache, and bad taste. PTX0011-00014.

189. For these reasons, azelastine was not widely used, *see* PTX0098-00029, prompting Meda to conduct significant research and development to reformulate azelastine.

190. The person of ordinary skill in the art at the time of invention would have been aware that fluticasone had been studied in conjunctive use with several other antihistamines and that it was repeatedly found that antihistamine add-on therapy conferred no benefit beyond fluticasone alone. PTX0013, PTX0331.

191. The person of ordinary skill in the art at the time of invention would have known that azelastine was, aside from its side effects, indistinguishable from other second-generation oral antihistamines in terms of efficacy, onset, or duration of action. PTX0099-00009.

D. The person of ordinary skill in the art at the time of invention would not have been motivated to combine azelastine and fluticasone into a single, fixed-dose combination drug product.

192. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to combine two existing drugs into a single, fixed-dose nasal spray combination product.

193. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have expected any clinically relevant difference between the administration of azelastine and fluticasone as sequential nasal spray monotherapies or in a fixed-dose nasal spray combination drug product.

194. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to combine azelastine and

fluticasone into a single, fixed-dose nasal spray formulation in light of the significant clinical and formulation drawbacks to such a formulation.

1. The person of ordinary skill in the art at the time of invention would not have been motivated to combine azelastine and fluticasone into a single, fixed-dose nasal spray formulation because the expected clinical costs would have far outweighed the expected clinical benefits.

195. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to combine azelastine and fluticasone into a single, fixed-dose nasal spray formulation.

196. The person of ordinary skill in the art at the time of invention would have expected that the only improvement to be gained from a fixed-dose combination nasal spray with azelastine and fluticasone would be a modest improvement to patient convenience.

197. The person of ordinary skill in the art at the time of invention would have known that patients who required two or more treatments for AR were not concerned with convenience as their condition was severe enough that they complied with any necessary dosing regimen.

198. The person of ordinary skill in the art at the time of invention would have known that a fixed-dose combination nasal spray product prohibits physicians from controlling their patient's dosing and achieving optimum dosing of each drug. *See, e.g.*, PTX0022-00026 – 00027.

199. The person of ordinary skill in the art at the time of invention would have known that the inability to titrate to an optimal dosage would subject patients to unnecessarily high drug exposure and increase the risk of undesirable side effects. *See, e.g.*, PTX0022-00026 – 00027.

200. The person of ordinary skill in the art at the time of invention would have known that a combination nasal spray product including azelastine would require patients to take

azelastine even if that drug was unnecessary while needlessly exposing his patients to the significant side effects of dysgeusia, somnolence, and headache. *See* PTX0022-00026.

201. The person of ordinary skill in the art at the time of invention would have known that a combination nasal spray product including fluticasone would require his patients to take fluticasone even if that drug was unnecessary while needlessly exposing his patients to the significant side effects of growth suppression, headache, pharyngitis, and epistaxis. *Id.*

202. The person of ordinary skill in the art at the time of invention would have known that a fixed-dose combination product would not allow for substitution of one active pharmaceutical ingredient for another, e.g., the substitution of budesonide for fluticasone.

203. The person of ordinary skill in the art at the time of invention would not have been motivated to combine azelastine and fluticasone into a single, fixed-dose combination nasal spray product because the sole expected benefit to such a combination—a modest improvement in convenience—is outweighed by the needless exposure of patients to significant side effects, the physician's inability to titrate dosing, and the inability to account for patient-to-patient variability in response to azelastine or fluticasone therapies.

2. The person of ordinary skill in the art at the time of invention would not have been motivated to combine azelastine and fluticasone into a single, fixed-dose nasal spray formulation due to the significant expected complications in such a formulation.

204. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have been motivated to combine azelastine and fluticasone into a single, fixed-dose formulation.

205. The person of ordinary skill in the art at the time of the invention would have known that the FDA-approved quantity of azelastine nasal spray was two sprays per nostril twice

a day, and the FDA-approved quantity of fluticasone nasal spray was two sprays per nostril once a day or one spray per nostril twice a day.

206. The person of ordinary skill in the art at the time of the invention would have known that to combine azelastine and fluticasone into a single, fixed-dose nasal spray formulation would require altering the FDA-approved quantity of azelastine, fluticasone, or both.

207. The person of ordinary skill in the art at the time of the invention would have been deterred from altering the quantities of azelastine and fluticasone known to be safe and effective because doing so would potentially involve more time-consuming and expensive testing of safety and efficacy.

E. The person of ordinary skill in the art at the time of invention would not have had a reasonable expectation of successfully combining azelastine, fluticasone, and the claimed excipients into a single, fixed-dose nasal spray formulation due to the significant complications of such a formulation.

208. The person of ordinary skill in the art at the time of the invention would not have had a reasonable expectation of success in creating a single, fixed-dose nasal spray formulation containing azelastine and fluticasone.

209. The person of ordinary skill in the art at the time of the invention would not have had any working examples of a nasal spray that combined two different therapeutically active pharmaceutical ingredients.

210. The person of ordinary skill in the art at the time of the invention would have known that azelastine for use in a nasal spray to treat AR was formulated as a solution.

211. The person of ordinary skill in the art at the time of the invention would have known that fluticasone for use in a nasal spray to treat AR was formulated as a suspension.

212. The person of ordinary skill in the art at the time of the invention would not have had a reasonable expectation of success in formulating a nasal spray that combined an active ingredient in a solution and an active ingredient in a suspension.

213. The person of ordinary skill in the art at the time of the invention would not have had any guidance on how to formulate a nasal spray in which one active ingredient remained in solution and another active ingredient remained in suspension.

214. The person of ordinary skill in the art at the time of the invention would not have had any expectation that fluticasone and azelastine could be used in the same nasal spray formulation without deleterious effects on the efficacy, safety, or both, of either fluticasone or azelastine.

215. The person of ordinary skill in the art at the time of the invention would not have had any expectation that fluticasone and glycerin could be successfully used in the same formulation together.

216. The person of ordinary skill in the art at the time of the invention would not have had any expectation that fluticasone and edetate disodium could be successfully used in the same formulation together.

217. The person of ordinary skill in the art at the time of the invention would not have had any expectation that azelastine and glycerin could be successfully used in the same formulation together.

218. The person of ordinary skill in the art at the time of the invention would not have had any expectation that azelastine and microcrystalline cellulose could be successfully used in the same formulation together.

219. The person of ordinary skill in the art at the time of the invention would not have had any expectation that azelastine and carboxymethylcellulose sodium could be successfully used in the same formulation together.

220. The person of ordinary skill in the art at the time of the invention would not have had any expectation that azelastine and phenylethyl alcohol could be successfully used in the same formulation together.

221. The person of ordinary skill in the art at the time of the invention would not have had any expectation that azelastine and polysorbate 80 could be successfully used in the same formulation together.

222. The person of ordinary skill in the art at the time of invention would not have had any expectation that azelastine, fluticasone, benzalkonium chloride, edetate disodium, glycerin, polysorbate 80, microcrystalline cellulose and carboxymethycellulose sodium, phenylethyl alcohol, and water could be successfully used in the same formulation together.

223. The person of ordinary skill in the art at the time of invention would not have had any expectation that a pharmaceutically acceptable ester of azelastine and a pharmaceutically acceptable ester of fluticasone could be successfully used in the same formulation suitable for nasal administration, wherein said formulation has a particle size of less than 10 µm.

224. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.1% (weight/weight) azelastine and 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone could be successfully used in the same formulation suitable for nasal sprays.

225. The person of ordinary skill in the art at the time of invention would not have had any expectation that a pharmaceutically acceptable ester of azelastine, a pharmaceutically

acceptable ester of fluticasone, edetate disodium, glycerin, microcrystalline cellulose and carboxymethylcellulose sodium, polysorbate 80, benzalkonium chloride, phenylethyl alcohol, and water could be successfully used in the same formulation suitable for nasal administration.

226. The person of ordinary skill in the art at the time of invention would not have had any expectation that azelastine, fluticasone, edetate disodium, glycerin, microcrystalline cellulose and carboxymethylcellulose sodium, polysorbate 80, benzalkonium chloride, phenylethyl alcohol, and water could be successfully used in the same nasal spray formulation that is used in the treatment of conditions for which administration of one or more antihistamine and/or one or more steroid is indicated.

227. The person of ordinary skill in the art at the time of invention would not have had any expectation that a pharmaceutically acceptable ester of azelastine, a pharmaceutically acceptable ester of fluticasone, edetate disodium, glycerin, microcrystalline cellulose and carboxymethylcellulose sodium, polysorbate 80, benzalkonium chloride, phenylethyl alcohol, and water could be successfully used in the same nasal spray formulation.

228. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium, 0.002% (weight/weight) to 0.05% (weight/weight) of benzalkonium chloride, 0.65% (weight/weight) to 3% (weight/weight) of microcrystalline cellulose and carboxymethylcellulose sodium, polysorbate 80, 2.3% (weight/weight) to 2.6% (weight/weight) of glycerin, and phenylethyl alcohol could be successfully used in the same nasal spray formulation that is used in the treatment of seasonal AR.

229. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.1% (weight/weight) azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium, 0.002% (weight/weight) to 0.02% (weight/weight) of benzalkonium chloride, 0.65% (weight/weight) to 3% (weight/weight) of microcrystalline cellulose and carboxymethylcellulose sodium, polysorbate 80, 2.3% (weight/weight) of glycerin, and 0.25% (weight/weight) of phenylethyl alcohol could be successfully used in the same nasal spray formulation that is used in the treatment of seasonal AR.

230. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine and 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone could be successfully used in the same nasal spray formulation that is used in the treatment of seasonal AR, wherein the formulation is contained in a nasal spray product that releases from 0.03 mg to 3 mg of azelastine and from 0.05 mg to 0.15 mg of fluticasone for each individual actuation.

231. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, one or more preservatives, one or more thickening agents, one or more surfactants, and one or more isotonization agents could be successfully used in the same nasal spray formulation having a pH of 4.5 to about 6.5 that is used in the treatment of seasonal AR.

232. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, one or more preservatives, one or more

thickening agents, one or more surfactants, and one or more isotonization agents could be successfully used in the same nasal spray formulation that is an aqueous suspension and is used in the treatment of seasonal AR.

233. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium, 0.002% (weight/weight) to 0.05% (weight/weight) of benzalkonium chloride, 0.65% (weight/weight) to 3% (weight/weight) of microcrystalline cellulose and carboxymethylcellulose sodium, polysorbate 80, 2.3% (weight/weight) to 2.6% (weight/weight) of glycerin, and phenylethyl alcohol could be successfully used in the same nasal spray formulation that is used in the treatment of seasonal AR.

234. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.1% (weight/weight) azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium, 0.002% (weight/weight) to 0.02% (weight/weight) of benzalkonium chloride, 0.65% (weight/weight) to 3% (weight/weight) of microcrystalline cellulose and carboxymethylcellulose sodium, polysorbate 80, 2.3% (weight/weight) of glycerin, and 0.25% (weight/weight) of phenylethyl alcohol could be successfully used in the same nasal spray formulation that is used in the treatment of seasonal AR.

235. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, one or more preservatives, one or more thickening agents, one or more surfactants, and one or more isotonization agents could be

successfully used in the same nasal spray formulation that is used in the treatment of seasonal AR, wherein the formulation is contained in a nasal spray product that releases from 0.03 mg to 3 mg of azelastine and from 0.05 mg to 0.15 mg of fluticasone for each individual actuation.

236. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium, 0.002% (weight/weight) to 0.05% (weight/weight) of benzalkonium chloride, glycerin, polysorbate, and a thickening agent could be successfully used in the same nasal spray formulation having a pH of 4.5 to about 6.5 that is an aqueous suspension and is used in the treatment of seasonal AR, wherein the formulation is contained in a nasal spray product that releases from 0.03 mg to 3 mg of azelastine and from 0.05 mg to 0.15 mg of fluticasone for each individual actuation.

237. The person of ordinary skill in the art at the time of invention would not have had any expectation that 0.001% (weight/weight) to 1% (weight/weight) of azelastine, 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone, 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium, 0.002% (weight/weight) to 0.05% (weight/weight) of benzalkonium chloride, glycerin, polysorbate, and microcrystalline cellulose and carboxymethylcellulose sodium could be successfully used in the same nasal spray formulation having a pH of 4.5 to about 6.5 that is an aqueous suspension and is used in the treatment of seasonal AR.

F. Objective indicia of non-obviousness support the patentability of the asserted claims of the patents-in-suit.

238. Apotex cannot show *prima facie* obviousness by clear and convincing evidence, and several objective indicia of non-obviousness further demonstrate the non-obviousness of the asserted claims of the patents-in-suit.

1. Dymista® satisfies a long-felt but unmet need for improved treatment of allergic rhinitis.

239. There was a long-felt and widely recognized need for better, faster, and safer treatment of AR.

240. The person of ordinary skill in the art at the time of invention would have recognized that the available treatment options for AR did not adequately treat the condition.

241. There was a recognized need at the time of invention for a treatment of AR with a faster onset.

242. There was a recognized need at the time of invention for a more effective treatment of AR.

243. There was a recognized need at the time of invention for a treatment of AR with fewer side effects.

a) *Dymista® satisfies the long-felt but unmet need for an allergic rhinitis treatment with faster onset.*

244. There was a long-felt but unmet need for a faster onset of treatment for AR.

245. The person of ordinary skill in the art at the time of invention would have known that corticosteroids were the most effective individual treatment for AR, but that they had a very delayed onset of action. *See* PTX0022-00029; PTX0326-00101.

246. The person of ordinary skill in the art at the time of invention would have known that antihistamines, another drug class frequently used for the treatment of AR, also had a delayed onset of action on the order of hours. *See* PTX0099-00006; PTX0011-00008.

247. The person of ordinary skill in the art at the time of invention would have known that patients wanted, but no drug provided, an onset of action on the order of minutes from administration.

248. Dymista®, which has an FDA-approved onset of action of 15-30 minutes, meets the need for faster onset than was available from the drugs known at the time of invention. PTX0024.

b) Dymista® satisfies the long-felt but unmet need for a more effective allergic rhinitis treatment.

249. There was a long-felt but unmet need for a more effect treatment for AR. PTX0336, PTX0013, PTX0039, PTX0331.

250. Frequent and repeated studies of the conjunctive use of two or more treatments for AR, beginning in the mid-1980s and continuing through the date of invention, confirm that physicians saw a need for a more effect treatment for AR. PTX0336, PTX0013, PTX0039, PTX0331, PTX0326.

251. Although some of these co-administration studies showed clinically relevant improvement over the monotherapies involved, these studies did not satisfy the need for more effective treatment of AR. *See* PTX0326-00104, PTX0326-00107 (summarizing studies showing improvement from: nedocromil and astemizole; ipratropium bromide and terfenadine; ipratropium bromide and beclomethasone dipropionate; and montelukast and loratadine).

252. Other studies, in which both an antihistamine and a corticosteroid were administered to the same patient, showed no improvement beyond the corticosteroid alone. PTX0336, PTX0013, PTX0039, PTX0331.

253. Despite these numerous studies, no pairing was shown to satisfy the long-felt need for a drug that exhibited a clinically relevant improvement over a corticosteroid alone.

254. Dymista® satisfies the long-felt need for a treatment that provided a significant, clinically relevant improvement over corticosteroids alone. PTX0227.

255. This conclusion was stated by the editors of the *Journal of Allergy and Clinical Immunology*, the leading journal in the field of AR, who in a summary entitled "[Dymista®]: A major advancement in the treatment of allergic rhinitis," concluded that Dymista® "is significantly more effective than intranasal fluticasone," such that Dymista® "can be considered the drug of choice for the treatment of AR." PTX0029.

256. Dymista® is not only more effective overall, but it exceeds both azelastine and fluticasone in efficacy at every time interval during treatment and it achieves near-complete relief. PTX0227.

257. This immediate and consistent improvement over the available treatment options is important given that the typical pollen season, and therefore, the patient's symptoms, generally only last for 2-4 weeks. PTX0009.

c) *Dymista® satisfies the long-felt need for an allergic rhinitis treatment with reduced side effects.*

258. There was a long-felt but unmet need for a safer treatment for AR.

259. The person of ordinary skill in the art at the time of invention knew that corticosteroids, the most effective treatment for AR, suffered from severe side effects including growth suppression. PTX0099-00007.

260. The person of ordinary skill in the art at the time of invention also knew that fluticasone carried this risk, as well as several drug-specific side effects including headache, pharyngitis, and epistaxis. PTX0059-00009.

261. The person of ordinary skill in the art at the time of invention knew that antihistamines suffered from several side-effects, including somnolence. PTX0326, PTX0022.

262. The person of ordinary skill in the art at the time of invention also knew that, despite being available in an intranasal form, azelastine exhibited the same side effects as systemic antihistamines, including somnolence, and drug-specific side effects including bitter taste, headache, and nasal burning. PTX0011.

263. The person of ordinary skill in the art at the time of invention would have known that, while other drug classes were not as effective as corticosteroids, they also did not exhibit significant side effects. *See, e.g.*, PTX0099-00008.

264. The person of ordinary skill in the art at the time of invention also would have expected that a patient on multiple drugs would experience an increase in side effects.

265. Years after the date of invention, this increase in side effects was shown in sequentially administered azelastine and fluticasone. PTX0330-00005.

266. Nevertheless, Dymista® not only exhibits significantly greater efficacy than corticosteroids, but it exhibits a reduction in the side effects typical of azelastine and fluticasone, including a significant reduction in bitter taste, headache, epistaxis, and somnolence. *See* PTX0024-00006.

2. Dymista® exhibits unexpected results over the closest prior art, and over Ratner 2008.

267. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art at the time of invention would have expected a fixed-dose combination of

azelastine and fluticasone in a nasal spray formulation to achieve the results exhibited by Dymista®.

a) *The prior art created an expectation that the conjunctive use of antihistamines and corticosteroids was no more effective than corticosteroids.*

268. Before the date of invention, several studies had considered the conjunctive use of antihistamines and corticosteroids, and the great majority of these studies found no clinical benefit to the co-administration of these classes. PTX0336, PTX0013, PTX0039, PTX0331.

269. In light of these studies, the person of ordinary skill in the art at the time of invention would have expected the co-administration of an antihistamine and a corticosteroid, whether sequential or in a fixed-dose combination, to exhibit efficacy equal to the corticosteroid. *See* PTX0337; PTX0036.

270. Dymista® nevertheless exhibits a significant and clinically relevant improvement over both of its constituent active pharmaceutical ingredients. PTX0227.

271. The two exceptions to these consistent findings both studied the same combination—beclomethasone dipropionate and loratadine—and both studies showed only minimal and inconsistent improvement over beclomethasone alone. PTX0333, PTX0332.

272. To the extent that Drouin and Brooks would have created any expectation of improved efficacy, such an improvement would have been only for the specific combination of beclomethasone dipropionate and loratadine, because both of these drugs had been tested in other co-administration studies that showed no benefit. *See* PTX0336, PTX0331.

b) *Alleged pre-invention practices of treating physicians do not show an expectation of improved efficacy.*

273. Apotex cannot prove by clear and convincing evidence that any prescription practices prior to the date of invention would have overcome these studies or rendered Dymista®'s results expected.

274. The combination of azelastine and fluticasone was prescribed exceedingly rarely prior to the date of invention, and there is no evidence that any benefit to this combination was ever identified prior to the date of invention. PTX1132.

275. The person of ordinary skill in the art at the time of invention would have known that the guidelines recommended nothing more than the practice of cycling through drug after drug until a particular drug or combination of drugs was found to treat a specific patient's symptoms. PTX0022, PTX0326.

276. The medical records of Dr. Donald Accetta reflect nothing more than the practice of cycling through drugs until a patient's symptoms subsided.

277. The medical records of Dr. Accetta are incomplete and contain no evidence that he identified any benefit to the co-administration of azelastine and fluticasone.

278. The medical records of Dr. Accetta frequently recommended [redacted] which is inconsistent with a fixed-dose combination of azelastine and fluticasone. *See generally* PTX0234-PTX-244.

279. The medical records of Dr. Accetta are incomplete: [redacted]

280. Dr. Accetta has not conducted any scientific comparison of the efficacy sequential administration of azelastine and fluticasone to the efficacy of Dymista®. PTX1132-00076.

281. Dr. Accetta admitted that he has no proof that his patients complied with any of his prescriptions. *Id*.

[redacted]

284. Dr. Wedner has offered no documentary evidence or corroboration to support his testimony that he prescribed azelastine and fluticasone together.

285. Apotex cannot prove by clear and convincing evidence that the person of ordinary skill in the art had any expectation that a fixed-dose combination nasal spray of azelastine and fluticasone would exhibit improved efficacy, onset, or safety in the treatment of AR.

3. Skepticism of Dymista® prior to its release shifted to industry praise after Dymista® was studied.

286. Dymista® was subject to skepticism before it was ever released.

287. Experts in the field after the date of invention continued to doubt that antihistamines could improve the efficacy of corticosteroids for years after the date of invention.

288. [redacted]

a) *Experts after the date of invention continued to express skepticism that an antihistamine would provide any added benefit to a corticosteroid alone.*

289. Prior to the date of invention, experts in the field of AR had concluded that the addition of an antihistamine to a corticosteroid yielded no benefit over the corticosteroid alone. PTX0337, PTX0036.

290. After the date of invention, experts in the field maintained their skepticism that the addition of an antihistamine to a corticosteroid conferred any additional benefit. PTX0085, PTX0012, PTX0021, PTX0053.

291. In 2003, experts stated that the conjunctive use of antihistamines and corticosteroids "merely offer[s] no or a marginal clinical benefit compared with intranasal corticosteroids alone." PTX0085-00008.

292. In 2005, another expert in the field stated that, while the conjunctive use of antihistamines and corticosteroids "seems logical," the use of both classes together "is not supported by clinical trials." PTX0053-00017.

293. In 2006, Barnes et al. reviewed the clinical evidence and hypothesized that, "[i]n view of the previous evidence, instead of hypothesizing a difference in efficacy, we set out with the hypothesis that monotherapy could be considered no worse than combination therapy, i.e., non-inferior." PTX0012-00005.

294. Based on their research, Barnes et al. concluded that add-on use of an antihistamine to corticosteroid therapy was "inappropriate." PTX0012-00001.

b) *The FDA was skeptical of Dymista®.*

295. [redacted]

c) *Skepticism shifted to praise after Dymista® was studied.*

306. After Dymista® had been thoroughly studied, expert skepticism shifted to praise for the new gold standard in treatment of AR.

307. The editors of the *Journal of Allergy and Clinical Immunology* ("JACI")—the world's premier allergy journal—reviewed the data from Dymista® clinical studies and concluded that Dymista® should be considered "the drug of choice for the treatment of AR." PTX0029.

308. Not only did the JACI editors hail Dymista® as the new drug of choice for the treatment of AR, but they also observed that Dymista® "is significantly more effective than intranasal fluticasone or azelastine," *id.*, praising Dymista® for achieving the very improvement over which experts had expressed skepticism for more than a decade.

309. Another expert likewise praised Dymista®'s unexpected improvement over steroid therapy, stating that Dymista® "represents a breakthrough in AR management … because the efficacy of an intranasal corticosteroid, the first-line choice for AR, has been exceeded for the first time without safety repercussions." PTX0015..

310. Another author praised Dymista® as a "novel" therapy that "paves the way for the development of other combinations of intranasal corticosteroids and antihistamines." PTX0038.

311. This praise arose a decade after the date of invention, after intervening skepticism, and only after Dymista® had been studied and used by the public at large.

4. Significant evidence of copying in India supports the patentability of the asserted claims of the patents-in-suit.

312. Widespread copying of Duonase in India supports the non-obviousness of the asserted claims of the patents-in-suit.

313. In the years after Duonase was released in India, several companies copied the Duonase formulation and released their own products that are covered by the asserted claims of the patents-in-suit.

314. Combinase AQ, Azeflo, Nazomac-AF, Floresp-AZ, Ezicas-AZ, and Nasocom-AZ are all embodiments of the asserted claims of the patents-in-suit. *See* PTX0129.

315. Combinase AQ, Azeflo, Nazomac-AF, Floresp-AZ, Ezicas-AZ, and Nasocom-AZ are copies of Duonase.



366. [redacted]

6. Dymista® is a commercial success.

367. Dymista® is a commercial success.

a) Dymista® sales and profit.

368. Dymista® entered the commercial market in September 2012. PTX0970.

[redacted]



f) There is a nexus between the claims and the commercial success of Dymista®, Duonase, and the Indian copycat products.

526. The marketplace performance of Dymista®, Duonase, Combinase AQ, Azeflo, Ezicas-AZ, Nasocom-AZ, Nazomac-AF, and Floresp-AZ is driven by the patented features of these products.

G. Apotex cannot prove that the asserted claims of the patents-in-suit are invalid for lack of enablement or written description.

527. Apotex cannot prove by clear and convincing evidence that the asserted claims of the patents-in-suit are invalid for lack of enablement.

528. Apotex cannot prove by clear and convincing evidence that the asserted claims of the patents-in-suit are invalid for lack of written description.

1. The asserted claims of the patents-in-suit are adequately described in the specification.

529. The specification of the ’620 patent adequately describes the subject matter of the asserted claims of the ’620 patent.

530. The specification of the ’620 patent describes formulations and provides several example formulations that would convey to the person of ordinary skill in the art at the time of

invention that the inventors had possession of the claimed subject matter as of the date of filing. *See, e.g.,* PTX0001-00012 – 00014.

531. The specification of the ’428 patent adequately describes the subject matter of the asserted claims of the ’428 patent.

532. The specification of the ’428 patent describes formulations, provides several example formulations, and describes the use of such formulations in such a way that would convey to the person of ordinary skill in the art at the time of invention that the inventors had possession of the claimed subject matter as of the date of filing. PTX0003-00014 – 00016.

2. The asserted claims of the patents-in-suit are enabled by the joint specification.

533. The asserted claims of the ’620 patent are enabled by the specification of the ’620 patent.

534. The asserted claims of the ’620 patent cover various formulations comprising azelastine, fluticasone, and excipients. PTX0001-00014 – 00016.

535. The specification discusses the active pharmaceutical ingredients as well as the various excipients and their purposes, and provides several example formulations that would enable the person of ordinary skill in the art at the time of invention to make the formulations recited in the asserted claims of the patents-in-suit. PTX0001-00012 – 00014.

536. The asserted claims of the ’428 patent cover the use of various formulations for the treatment of AR. PTX0003-00016 – 00017.

537. The specification discusses the active pharmaceutical ingredients as well as the various excipients and their purposes, and provides several example formulations that would enable the person of ordinary skill in the art at the time of invention to make the formulations recited in the asserted claims of the patents-in-suit. PTX0003-00014 – 00016.

538. The person of ordinary skill in the art at the time of invention would have expected a fixed-dose combination of azelastine and fluticasone to be as effective as fluticasone alone. PTX0336, PTX0039, PTX0013, PTX0331, PTX0337, PTX0036.

539. The person of ordinary skill in the art at the time of invention would have known of the FDA-approved effective dosage of fluticasone and, based on that well-known dosage, would have been able to ascertain the effective dosage of the claimed formulations without undue experimentation. PTX0059.

H. Blocking patents

540. Apotex cannot prove that any patent blocked others from developing the technology recited in the asserted claims of the patents-in-suit.

541. Apotex cannot prove that U.S. Patent No. 4,335,121 ("Phillipps") was a blocking patent.

542. Phillipps was assigned to Glaxo Group Limited. PTX0104.

543. Apotex cannot prove that U.S. Patent No. 5,164,194 ("Hettche") was a blocking patent.

544. Hettche was assigned to Asta Pharma AG. PTX0073.

545. Cipla was not an assignee of either Phillipps or Hettche, and it was not blocked from developing the technology recited in the asserted claims of the patents-in-suit.

546. The Indian copycat products—Combinase AQ, Azeflo, Ezicas-AZ, Nasocom-AZ, Nazomac-AF, and Floresp-AZ—were not blocked by Phillipps or Hettche.

547. Because Phillipps and Hettche do not have extraterritorial effect, they could not block market entry of any Indian product.

548. Hettche claims a closed *Markush* group of active ingredients consisting of azelastine and its pharmaceutically acceptable salts. PTX0073-00005 at 8:1-46.

549. Hettche cannot cover a product that contains an active ingredient other than azelastine or its pharmaceutically acceptable salts.

550. The safe harbor provision, 35 U.S.C. § 271(e)(1), enabled others to develop similar drug combinations, but none did so.

551. Hettche and Phillipps both expired well before the commercial release of Dymista®, so they did not block market entry of any product.

552. Hettche contains only method claims, and so could not block the development of any product.

V. Conclusion

553. Apotex cannot prove by clear and convincing evidence that the asserted claims of the patents-in-suit are invalid as obvious under 35 U.S.C. § 103.

554. Apotex cannot prove by clear and convincing evidence that the asserted claims of the patents-in-suit are invalid for lack of written description under 35 U.S.C. § 112.

555. Apotex cannot prove by clear and convincing evidence that the asserted claims of the patents-in-suit are invalid for lack of enablement under 35 U.S.C. § 112.

556. Apotex infringes claims 4, 29, and 42-44 of the ’620 patent and claims 10, 11, 13, 15, 16, 23, 24, 26, 29, and 30 of the ’428 patent.[1]

[1] Plaintiffs reserve their rights to amend or supplement their submission after they consider Apotex’s submissions, whether made as part of the Pretrial Order, other pretrial proceedings, during trial, or in post-trial briefing. To the extent that this exhibit contains issues of law, those issues are incorporated into Plaintiffs’ Statement of Issues to Be Litigated. Likewise, to the extent that Plaintiffs’ Statement of Issues to Be Litigated contains issues of fact, those issues are incorporated herein by reference. Plaintiffs incorporate by reference their responses to Apotex’s Invalidity Contentions submitted during discovery and their expert reports in support of any proof to be presented by expert testimony.

Exhibit 3

EXHIBIT 3

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS, INC. and CIPLA LTD. Plaintiffs, v. APOTEX, INC. and APOTEX CORP. Defendants.	)	Civil Action No. 14-1453 (LPS)

DEFENDANTS' STATEMENT OF
ISSUES OF FACT THAT REMAIN TO BE LITIGATED

EXHIBIT 3

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F. There was no industry praise by individuals unassociated with Meda after Dymista's launch. 36

G. No other person or group tried but failed to make the invention prior to the priority date. 38

EXHIBIT 3

Pursuant to Local Rule 16.3(c)(4), Defendants submit the following statement of issues of fact that remain to be litigated. This statement supplements the joint statement of undisputed facts set forth as Exhibit 1 to the Pretrial Order.

I. INTRODUCTION

1. Meda filed this lawsuit under the Hatch-Waxman Act to enjoin Apotex from launching a generic product that allegedly infringes two related patents: U.S. Patent Nos. 8,168,620 and 9,259,428, expiring February 24, 2026, and June 13, 2023, respectively. Apotex will show by clear and convincing evidence that the asserted claims of the patents-in-suit are invalid as obvious, because they merely claim the co-formulation of two safe, effective, FDA-approved products that were already used together in the prior art. Alternatively, the evidence will show that the asserted claims are invalid under § 112 of the Patent Act.

2. The patents-in-suit cover similar subject matter. The ’620 patent generally covers pharmaceutical *products* suitable for nasal administration that include the active ingredients fluticasone propionate and azelastine hydrochloride, along with various excipients. DTX 136. The ’428 patent generally covers *methods* of using these products for the treatment of allergic rhinitis—more informally referred to as hay fever. DTX 253.

3. This co-formulated product and its use for the treatment of allergic rhinitis were obvious to a person of ordinary skill in the art at the time of the alleged invention from both clinical and formulation perspectives. Before the priority date for the patents-in-suit (June 14, 2002), the corticosteroid fluticasone propionate (50 mcg per spray) was commercially available in the FDA-approved drug Flonase®, and the antihistamine azelastine hydrochloride (137 mcg per spray) was commercially available in the FDA-approved drug Astelin®. DTX 33, Flonase® Final Printed Label; PTX 11, Astelin® Final Printed Label. Meda’s Dymista®—the embodiment of the asserted

claims—is merely a nasal spray for the treatment of allergic rhinitis that combines the active ingredients, and most of the excipients, from Flonase® and Astelin®.

4. Not only were Flonase® and Astelin® readily available to patients suffering from allergic rhinitis, physicians actually prescribed them to be taken together for combination therapy. Multiple witnesses, called by both Meda and Apotex, will attest to this prior art practice—including Drs. Accetta, Wedner, Kaliner, and Carr. As taught by the prior art, including guidance documents for physicians treating allergic rhinitis, fluticasone propionate (a steroid) and azelastine hydrochloride (an antihistamine) treated patients suffering from allergic rhinitis through different mechanisms of action. *See, e.g.*, PTX 41, Spector 1999, at S387; PTX 333, Drouin 1995, at 347; Galant & Wilkinson 2001; Dykewicz 1998 at 503; Pipkorn 1987; Schleimer 1983; Grönneberg 1981; Dunsky 1977; Slott 1975; Slott 1974.

5. Thus, Plaintiffs cannot credibly dispute that it was obvious from a clinical perspective to combine fluticasone propionate and azelastine hydrochloride to treat allergic rhinitis. After all, this was an actual prior art practice, as confirmed by patient records.

6. It was similarly obvious to co-formulate these active ingredients from two FDA-approved products. The motivation for such a co-formulation was plainly obvious: patients obviously prefer to use one nasal spray instead of two, and simpler treatments improve patient compliance. Indeed, the prior art expressly recognized this motivation and the ability of those skilled in the art to co-formulate the two drugs at issue here. For example, the Cramer and Segal patent applications both described a single nasal spray formulation combination product comprising a corticosteroid selected from a group that included fluticasone propionate and an antihistamine selected from a group that included azelastine hydrochloride. DTX 12 ("Cramer"); DTX 21 ("Segal").

7. As confirmed by these prior art patent applications, a person of ordinary skill in the art at the time had a reasonable expectation of success in formulating a fluticasone/azelastine combination product. Such a skilled artisan would have started with the excipients from the FDA-approved products and, through routine experimentation, would have arrived at a formulation falling within the scope of even the narrowest of the asserted claims.

8. The Patent Office never found otherwise—instead, it issued the patent based solely on secondary considerations, i.e., findings of unexpected results, commercial success and satisfaction of a long-felt but unmet need. PTX 1160. The evidence at trial will show that these considerations do not exist both factually and legally.

9. For example, the existence of blocking patents explain why those skilled in the art did not practice this obvious co-formulation of two known drugs that were used together to treat allergic rhinitis. From 1982, a decade before the priority date, until May 2004 (past the 2002 priority date), the patent for fluticasone propionate (i.e., Flonase®) blocked skilled artisans from using that compound, including in co-formulated products. DTX 96. And from 1992 through May 2011, a separate patent covered methods of using "medicament[s]" that "contain" (i.e., include but are not limited to) azelastine hydrochloride—thus covering the combination of this product with fluticasone propionate. PTX 73.

10. Even putting aside these blocking patents, as discussed below, Plaintiffs have no evidence of secondary considerations under the appropriate legal standards, much less evidence that could outweigh the strong showing of obviousness here.

II. BACKGROUND

11. The patents-in-suit cover similar subject matter, both relating to the use for the treatment of allergic rhinitis of a pharmaceutical composition suitable for nasal administration including the active ingredients fluticasone propionate and azelastine hydrochloride. Independent

claim 1 of the ’620 patent, on which the asserted claims depend and which is representative of all the claims, states, “A pharmaceutical formulation comprising: azelastine, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable ester of fluticasone, wherein said pharmaceutical formulation is in a dosage form suitable for nasal administration.” DTX 136. Independent claim 1 of the ’428 patent, on which the asserted claims depend and which is representative of all the claims, states, “A method for the treatment of seasonal allergic rhinitis, comprising administration of a therapeutically effective amount of nasal spray formulation comprising: from 0.001% (weight/weight) to 1% (weight/weight) of azelastine hydrochloride; from 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone propionate; one or more preservatives; one or more thickening agents; one or more surfactants; and one or more isotonization agents.” DTX 253.

12. Additional claims cover a formulation including the preservatives benzalkonium chloride, edetate disodium, and phenyl ethyl alcohol; the thickening agent combination of carboxymethyl cellulose sodium and microcrystalline cellulose; the surfactant polysorbate 80; the tonicity-adjusting agent glycerin; and various concentration ranges thereof. The narrowest claim (claim 11 of the ’428 patent) recites: “The method of claim 1, wherein the formulation comprises: 0.1% (weight/weight) azelastine hydrochloride; from 0.0357% (weight/weight) to 1.5% (weight/weight) of fluticasone propionate; from 0.002% (weight/weight) to 0.05% (weight/weight) of edetate disodium; from 0.002% (weight/weight) to 0.02% (weight/weight) of benzalkonium chloride; from 0.65% (weight/weight) to 3% (weight/weight) of a combination of microcrystalline and carboxymethyl cellulose sodium; polysorbate 80; 2.3% (weight/weight) of glycerine; and 0.25% (weight/weight) of phenyl ethyl alcohol.”

13. The statement of uncontested facts recites the asserted claims and all related non-asserted claims, and is incorporated herein. Ex. 1.

14. The ’620 patent application was received by the U.S. Patent and Trademark Office (“PTO”) on December 14, 2004, and claims a priority date of June 14, 2002. PTX 1144. On January 23, 2009, the patent examiner, in a non-final action, rejected the claims on a number of grounds, including as anticipated by the Cramer reference (EP 0780127) and obvious over Cramer alone or in combination with other references. PTX 1147. The examiner correctly noted that Cramer taught a nasal spray composition comprising a range of corticosteroids selected from a group that included fluticasone, and a range of antihistamines selected from a group that included azelastine. PTX 1147 at 8-9. The examiner noted that the Cramer references disclosed tonicity-adjusting agents, thickening agents, and preservatives that appeared in the ’620 claims. *Id.* at 9. The examiner also noted that Cramer disclosed a pH range similar to that of the claims. *Id.*

15. The examiner concluded that, although “Cramer does not exemplify a composition comprising azelastine and fluticasone,” a person “of ordinary skill in the art would have been motivated to make a composition comprising azelastine and fluticasone because Cramer suggests that the combination of a glucocorticoid (i.e. fluticasone) and antihistamine (i.e. azelastine) provided improved relief of symptoms associated with seasonal or perennial allergic rhinoconjunctivitis.” *Id.* at 12. The examiner further rejected the 10 µm particle size claim limitation, stating that the prior art taught that a particle size of less than 15 µm, “which will disperse evenly over the nasal mucosa,” was taught in the prior art. *Id.* at 17.

16. On April 28, 2010, the examiner issued a final rejection, reiterating many of his prior findings. PTX 1150. The examiner added that “it is known in the art that pharmaceutically acceptable salt forms [of fluticasone] can include hydrochloride, propionate, valerate salt, etc. (as

evidenced by Link et al. US 6,583,180, see column 183, lines 38-67)." *Id.* at 5. The examiner added, responding to Meda's argument that Cramer was not specific, that the list of corticosteroids was limited to six and the list of antihistamines was limited to three. *Id.* at 14-15. The examiner rejected a declaration by the inventor Geena Malhotra purporting to show unexpectedly superior purity to other combinations because the declaration "has not described what testing methods was used, what assay was utilized, and how the impurity level was calculated," and that the inventor's formulation contained phenyl ethyl alcohol whereas the comparator formulation did not. *Id.* at 16.

17. After an amendment was filed (PTX 1151) and the inventor submitted another declaration (PTX 1152), the examiner issued another non-final rejection (PTX 1153). The examiner first rejected the steroid concentration claims as anticipated by Cramer. PTX 1153 at 3. The examiner added once more that "salts and esters are well-known variants." *Id.* at 5. The examiner then rejected various secondary considerations in light of having rejected the claims as anticipated. *Id.* at 9-14.

18. Subsequently, Plaintiffs' submitted declarations regarding a number of alleged secondary considerations (PTX 1156-59) and the PTO issued a notice of allowance (PTX 1160). In the notice of allowance, the examiner decided that based on the first-year sales of the commercial embodiment of the patents in India (Duonase) and the existence of "copycat" products in India there was evidence of commercial success. PTX 1160 at 3-4. The examiner also concluded that the product met an unmet need in India and was unexpectedly superior in light of a handful of studies cited by Meda in one of its declarations that purported to show no benefit to a combination of an oral antihistamine and an intranasal steroid over the steroid alone. *Id.* at 4-6.

19. The specifications of the two patents-in-suit are substantively the same. The specification recognize that "it is known to use the antihistamine azelastine (usually as the

hydrochloride salt) as a nasal spray against seasonal or perennial allergic rhinitis," that "[i]t is also known to treat these conditions using a corticosteroid, which will suppress nasal and ocular inflammatory conditions," that "[a]mong the corticosteroids known for nasal use are, for example, beclomethasone, mometasone, fluticasone, budesonide and cyclosenide," and that "[i]t would be highly desirable, however, to provide a treatment that combines the effects of anti-histamine treatments and steroid treatments." '620 Patent, Col. 1, ll. 20-36.

III. THE PATENTS ARE INVALID AS OBVIOUS

A. Person of Ordinary Skill in the Art

20. A POSA in the clinical field of the asserted patents has an M.D., Ph.D. or Pharm.D. in the field of allergy/immunology and/or pharmacology (or the equivalent), and at least three additional years of experience in the treatment, or research for treatments, of allergic rhinitis, including with nasally administered steroids and antihistamines.

21. A person of ordinary skill in the formulation field of the asserted patents has at least a bachelor's degree in chemistry, biology, chemical engineering or pharmaceutical sciences with significant experience, 3-5 years in formulation development of nasal dosage forms and the ability to operate independently on formulation activities. A person of skill in the art would also have familiarity with pharmaceutical excipients and their uses. Such a person may also have a Master's degree in chemistry, biology, chemical engineering, or pharmaceutical sciences with 1-3 years in formulation development of nasal agents as well as the ability to operate independently on formulation activities. Such a person may also have a Ph.D. in chemistry, chemical engineering, or pharmaceutical sciences with at least one year of experience in formulation development of sterile dosage forms. These persons would also have familiarity with pharmaceutical excipients and their uses.

22. The opinions of Plaintiffs expert on the level of ordinary skill in the art differ in non-substantive ways from the levels noted above. The patents-in-suit are obvious even if the Court were to adopt the Plaintiffs' understanding of the level of ordinary skill in the art.

B. The prior art disclosed several motivations to combine azelastine hydrochloride and fluticasone propionate in a single nasal spray.

23. There were clear motivations to combine Flonase® and Astelin®, or their active ingredients, in a single nasal spray before the priority date (June 14, 2002) of the patents-in-suit. Apotex incorporates all of the prior art referenced in its section 282 statement to the extent they are not specifically discussed below, and reserves the right to rely on them at trial.

1. Both azelastine hydrochloride and fluticasone propionate were FDA-approved, commercially available nasal sprays for the treatment of allergic rhinitis.

24. Dymista®—the embodiment of the claims—is a nasal spray for the treatment of allergic rhinitis containing both the corticosteroid fluticasone propionate (50 mcg per spray) and the antihistamine azelastine hydrochloride (137 mcg per spray). Before June 14, 2002, which is the priority date of the patents-in-suit, there was an FDA-approved, commercially available fluticasone propionate nasal spray for the treatment of allergic rhinitis (Flonase®) and an FDA-approved, commercially available azelastine hydrochloride nasal spray for the same indication (Astelin®).

25. Flonase® was approved in 1994, and Astelin® was approved in 1996. Flonase® dispenses 50 mcg of fluticasone propionate per spray, and Astelin® dispenses 137 mcg of azelastine hydrochloride per spray. DTX 33, Flonase® Final Printed Label; PTX 11, Astelin® Final Printed Label.

26. The efficacy of fluticasone propionate was well established in the prior art. *See, e.g.*, Schleimer 1998; Wiseman 1997; Laforce 1994; Van As 1993; Bryson 1992; Nathan 1991; Scadding 1991; Harding 1990.

27. The efficacy of azelastine hydrochloride was well established in the prior art. *See, e.g.*, Lytinas 2002; Kusters 2002; Galant & Wilkinson 2001; Lieberman 2001; Berger 1999; Jacobi 1999; Mosges 1998; Hide 1997; Wang 1997; Ciprandi 1996; Katayama 1987; Fields 1984; Honda 1982; Fischer 1981.

2. The prior art disclosed motivations to combine an antihistamine with a steroid.

28. The prior art disclosed several additional motivations to combine azelastine hydrochloride (or Astelin®) and fluticasone propionate (or Flonase®) into a fixed-dose combination.

29. First, antihistamines and steroids are and were the mainstays of allergic rhinitis treatments before 2002. DTX 85, Kusters 2002, at 98 ("Histamine H_1-receptor antagonists together with topical steroids are the treatment of choice in allergic rhinitis."); PTX 17, Cauwenberge 2000, at 119 ("In conclusion, . . . the second-generation antihistamines can be considered the first-choice treatment for AR . . . ."); PTX 22, Dykewicz 1998, at 501 ("Oral antihistamines are effective in reducing symptoms of itching, sneezing, and rhinorrhea, and are first line therapy for treatment of allergic rhinitis.").

30. As of June 14, 2002, intranasal steroids were known to be the most effective treatment for allergic rhinitis. *See, e.g.*, PTX 22, Dykewicz 1998, at 506 ("Nasally inhaled corticosteroids are the most effective medication class in controlling symptoms of allergic rhinitis.").

31. Before the date of invention, the mainstay of AR treatment was a combination of an intranasal corticosteroid and an oral antihistamine. DTX 85, Kusters 2002 at 98 ("Histamine H_1-receptor antagonists together with topical steroids are the treatment of choice in allergic rhinitis."); PTX 328, Berger 1999 at 536 ("An antihistamine alone or a nasal corticosteroid alone can be used as first-line therapy for the treatment of seasonal allergic rhinitis, and for those patients whose symptoms are not adequately controlled by either treatment often a combination of both an antihistamine with an intranasal corticosteroid is prescribed.").

32. As Dr. Wedner is expected to testify, if a patient insufficiently responded to that regimen, the intranasal antihistamine azelastine was typically added.

33. Indeed, the practice guidelines recommended corticosteroids as a first-line therapy, and to add an antihistamine—including azelastine—if the patient was inadequately controlled. PTX 17, Cauwenberge 2000 at 125-26 (flow chart depicting if "Inadequate control" with "Nasal corticosteroids," then use "Nasal corticosteroids plus Oral/nasal antihistamines"); PTX 326, Bousquet et al. ARIA Guidelines 2001, at S251 (for "Moderate/severe persistent" rhinitis, "It is advised to use intranasal glucocorticosteroids as a first-line treatment" and "If the patient does not improve," "add: H1-antihistamines if the major symptoms are sneezing, itching or rhinorrhea"); *id.* at S230 ("Topical H1-antihistamines . . . may therefore be recommended for mild organ-limited disease, as an 'on demand' medication in conjunction with a continuous one."). Thus, the Lieberman 2001 reference stated: "In summary, the mainstay of the treatment of chronic nonallergic rhinitis is the application of topical nasal steroids and/or azelastine." PTX 80, at 202.

34. Second, antihistamines and steroids were thought to have different mechanisms of action, with antihistamines relieving primarily early-phase response ("EPR") of allergic rhinitis and steroids relieving primarily late-phase response ("LPR"). Thus, it was expected that the two

drug classes together would have some additive effect. PTX 41, Spector 1999, at S387 ("Optimal treatment of patients with SAR can be achieved only by managing both the EPR and LPR. The symptoms observed in EPR are most effectively managed by an H_1-receptor antagonist, whereas the effects of LPR are best managed with a corticosteroids."); PTX 333, Drouin 1995, at 347 ("Clinically, patients respond differently following treatment of allergic rhinitis with antihistamines or intranasal steroids. Antihistamines relieve pruritus, sneezing, rhinorrhea, and ocular symptoms but do not control nasal stuffiness. Intranasal steroids can attenuate all nasal symptoms but are most effective against stuffiness and rhinorrhea. Thus, treatment that combines an antihistamine and a steroid nasal spray may maximize clinical efficacy."); *see also* Galant & Wilkinson 2001; Dykewicz 1998 at 503; Pipkorn 1987; Schleimer 1983; Grönneberg 1981; Dunsky 1977; Slott 1975; Slott 1974.

35. Dr. Carr is expected to testify that the distinction between early and late phase and the impact of antihistamines and steroids on the respective phases was considered medical "dogma" before the date of invention.

36. Third, corticosteroids were known to be useful in combination therapy. For example, they were combined with β_2-agonists, which have complementary mechanisms of action, very successfully for the treatment of asthma, a condition related to allergic rhinitis. *See, e.g.*, PTX 92, Stoloff 2002 at 212 ("Scientific and clinical data support the complementary mechanisms of action of the inhaled corticosteroids and the long-acting β_2-agonists in achieving a superior level of asthma control."); PTX 82, Markham 2000 at 1213 ("Based on evidence of a complementary effect, and the fact that compliance with inhaled asthma medication is generally poor, salmeterol and fluticasone propionate have been combined in a single inhalation device."); *see also* DTX 23, ADVAIR® Label 2000; PTX 56, Barnes 2001; PTX 72, Hancox 1999.

37. Fourth, antihistamines had fast onsets of action and thus provided quick relief. PTX 11, Astelin® Label (relief within three hours); PTX 326, Bousquet et al. ARIA Guidelines 2001 at S230 ("Topical H1-antihistamines have a rapid onset of action (less than 15 minutes) at low drug dosage"); DTX 207, Nielsen 2001 at 1565 (topical antihistamines act within 15 to 30 minutes); PTX 99, Galant & Wilkinson 2001 at 456 (relief within an hour); DTX 43, McNeely 1998 at 92 ("Symptom improvements are evident as early as 30 minutes after intranasal administration of azelastine . . . and are apparent for up to 12 hours . . . ."); DTX 99, Greiff 1997 (antihistamine response within an hour).

38. Steroids, on the other hand, had delayed onsets of action, taking days to reach full effect. DTX 33, Flonase® Label at 2 ("A decrease in nasal symptoms has been noted in some patients 12 hours after initial treatment with FLONASE Nasal Spray. Maximum benefit may not be reached for several days."); DTX 44, Meltzer 2001 at 286 (onset of fluticasone propionate within 12 hours).

39. Thus, Dr. Kaliner and Dr. Carr are expected to testify that antihistamines met a key patient need unmet by steroids because patients wanted and needed quick relief.

40. Fifth, combination studies of oral antihistamines and intranasal steroids showed improvement in sneezing, itching, or total nasal symptom scores for patients taking both together. For example, the Dykewicz guidelines reported that "one study has reported that at least 50% of patients need to take both nasal corticosteroids and oral antihistamines to adequately control symptoms of seasonal allergic rhinitis." PTX 22, Dykewicz 1998 at 506. The cited study concluded: "Regardless of the treatment [fluticasone propionate or terfenadine], at least 50% of patients will need to take both types of medication in combination to control symptoms adequately." DTX 107, Juniper 1997 at 1123.

41. Further, a study done by Ratner 1998 of fluticasone propionate and loratadine in combination showed statistically significant improvement for patient-rated total nasal symptom score with the combination treatment over fluticasone propionate monotherapy. DTX 140, Ratner 1998 at 121, Figure 1.

42. A study done by Brooks 1996 showed that a combination of beclomethasone and loratadine "benefitted sneezing and itching significantly better than [beclomethasone] alone . . . in most of the treatment segments" and "provided significantly greater suppression [of itching] than [beclomethasone] alone in all segments," PTX 332, Brooks 1996 at 197, 198.

43. The study of beclomethasone and loratadine done by Drouin 1995 demonstrated statistically significant improvement for total symptom score on day 7, statistically significant improvement in total nasal symptom score on day 3, and statistically significant improvement in sneezing and itching on multiple days when compared to the steroid monotherapy. PTX 333, Drouin 1995 at 344 Table 2.

44. The Simpson 1994 study of budesonide and terfenadine showed statistically significant improvement in sneezing for the combination compared with the steroid monotherapy, and some (but not statistically significant) improvement in both itching and rhinorrhea over the monotherapy. PTX 1071, Simpson 1994 at 500 Figure 2.

45. And at least one other reference studied the use of azelastine hydrochloride in combination with an intranasal steroid, and showed high compliance, efficacy, and safety: "A prospective multicentre study involving 219 patients with seasonal or aperiodic rhinitis was performed to assess the acceptability of a local treatment combining antihistamine (azelastine) and corticoid (beclomethasone) drugs. . . . [P]ractitioners judged treatment efficacy as good or excellent[.]" DTX 30, Portmann 2000 at 273.

46. Sixth, the prior art discussed how combining two drugs into single, fixed doses improved patient compliance. PTX 22, Dykewicz 1998, at 512 ("Compliance is enhanced when: (1) a fewer number of daily doses is required . . . ."); DTX 48, Shenfield 1986 at 16 ("The most frequently quoted reason for using fixed combination products is improved compliance."). Indeed, that was also a motivation for combining the β_2-agonist salmeterol with fluticasone propionate for the treatment of asthma. PTX 82, Markham 2000 at 1213 ("Based on evidence of a complementary effect, and the fact that compliance with inhaled asthma medication is generally poor, salmeterol and fluticasone propionate have been combined in a single inhalation device.").

47. Seventh, combining two sprays into one was known to potentially reduce problems with excess nasal drainage. PTX 102, Harris 1986 at 1086-87, Figs. 1-3 (showing that the greater volume of spray, the more is drained out of the nasal cavity).

3. The prior art disclosed azelastine hydrochloride as the best choice for the antihistamine component, and fluticasone propionate as the best choice for the steroid component.

48. Of the available antihistamines, azelastine hydrochloride was the top choice for those skilled in the art at the time. Topical antihistamines were known to have faster onsets of action than oral antihistamines. PTX 17, Cauwenberge 2000 at 119 ("Azelastine and levocabastine . . . demonstrate a similar efficacy profile to oral antihistamines with the advantage of a significantly faster onset of action on both nasal and ocular symptoms."); DTX 207, Nielsen 2001 at 1565 (topical antihistamines "have a faster onset of action than oral antihistamines and act within 15 to 30 minutes").

49. Topical antihistamines were also known to deliver higher concentrations without the side effects. "The major advantage of delivering drugs directly into the nose is that high

concentrations can be delivered more effectively into the target organ and systemic side effects are avoided or minimised." PTX 326, Bousquet et al. ARIA Guidelines 2001 at S229.

50. Most importantly, topical antihistamines were known to have anti-inflammatory activity unknown to oral antihistamines. PTX 328, Berger 1999, at 536 ("Many patients with nasal congestion also experienced improvement in this symptom, an effect not typically associated with oral antihistamines."); *id.* at 539 ("The ability of azelastine to affect inflammatory cells and inflammatory mediators in addition to histamine suggested that azelastine nasal spray could be effective treatment for both the histamine-related early-phase symptoms as well as the late-phase effects of seasonal allergic rhinitis."); PTX 80, Lieberman 2001, at 201 ("In clinical trials [azelastine] has been shown to reduce components of the symptom complex including postnasal drainage, sneezing, rhinorrhea, and congestion."); *see also* Lytinas 2002; Kusters 2002; Galant & Wilkinson 2001; Jacobi 1999; Hide 1997; Wang 1997; Ciprandi 1996; Katayama 1987; Fields 1984; Honda 1982; Fischer 1981.

51. Of the two available topical antihistamines in 2002—azelastine and levocabastine—azelastine was safer and more efficacious and thus superior. PTX 66, Falser 2001 at 387 ("Azelastine . . . was statistically superior in efficacy as well as in safety" to levocabastine); *see also* DTX 85, Kusters 2002 at 99-100 (azelastine inhibited leukotriene mediator by 86% compared to 20% for levocabastine). Indeed, as Drs. Wedner, Kaliner, and Carr are expected to testify, levocabastine was rarely used.

52. Of the half-dozen available intranasal steroids, fluticasone propionate was one of the best-selling steroids and was also known to be more potent than other steroids. *See* PTX 325, Stellato 1999 (fluticasone propionate more potent than mometasone furoate, budesonide, triamcinolone acetonide, and beclomethasone dipropionate); DTX 39, Johnson 1998 at S434

("[Fluticasone propionate] is more potent than beclomethasone dipropionate, budesonide, triamcinolone acetonide, and mometasone furoate in inhibiting human T-cell migration and proliferation, inhibiting CD4+ T=cell cytokine and basophil histamine release, attenuating adhesion molecule expression, stimulating inflammatory cell apoptosis, and inducing cellular antiprotease release.").

53. [redacted]

4. The combination of Astelin® (azelastine hydrochloride) and Flonase® (fluticasone propionate) was actually practiced in the prior art.

54. [redacted]

55. Indeed, the specification of the '620 patent admits that the uses of the two drugs were known, and it was "highly desirable" to have a treatment that combined both azelastine and fluticasone:

> It is known to use antihistamines in nasal sprays and eye drops to treat allergy-related conditions. Thus, for example, it is known to use the antihistamine azelastine (usually as the hydrochloride salt) as a nasal spray against seasonal or perennial allergic rhinitis, or as eye drops against seasonal and perennial allergic conjunctivitis. It is also known to treat these conditions using a corticosteroid, which will suppress nasal and ocular inflammatory conditions. Among the corticosteroids known for nasal use are, for example, beclomethasone, mometasone, fluticasone, budesonide and cyclosenide. . . . It would be highly desirable, however, to provide a treatment that combines the effects of anti-histamine treatments and steroid treatments . . . .

'620 Patent, Col. 1, *ll.* 20-36.

5. The prior art taught the combination of azelastine hydrochloride and fluticasone propionate in a single, fixed-dose combination product.

56. Prior art also disclosed the combination of azelastine hydrochloride and fluticasone propionate in a single, fixed-dose combination product. For example, European Patent Application No. 0 780 127 ("Cramer"), filed in 1997, describes "nasal spray compositions comprising a safe and effective amount of a glucocorticosteroid and an antihistamine possessing leukotriene inhibiting properties." Under the heading, "SUMMARY OF THE INVENTION," Cramer states: "The present invention relates to pharmaceutical compositions for nasal administration comprising: a) a safe and effective amount of glucocorticoid selected from the group consisting of beclomethasone, flunisolide, triamcinolone, ***fluticasone***, mometasone, budesonide, pharmaceutically acceptable salts thereof and mixtures thereof; b) a safe and effective amount of a leukotriene inhibiting antihistamine selected from the group consisting of cetirizine, loratadine, ***azelastine***, pharmaceutically acceptable salts thereof, optically active racemates thereof and mixtures thereof; and c) an intranasal carrier." DTX 12.

57. Additionally, Cramer stated that the combination of an intranasal corticosteroid and intranasal antihistamine was superior to each individual agent alone. "The present inventor has found that by combining a nasal corticosteroid with a leukotriene inhibiting antihistamine, improved intranasal compositions result, providing improved relief of symptoms generally associated with either seasonal or perennial allergic rhinoconjunctivitis." Cramer, at 2, ll. 28-29.

58. PCT Publication No. WO 98/48839 ("Segal"), filed in 1998, describes under "SUMMARY OF THE INVENTION": "The present inventions provides topically applicable nasal compositions comprising a therapeutically effective amount of a topical antiinflammatory agent and a therapeutically effective amount of at least one agent suitable for topical nasal administration and selected from the group consisting of a vasoconstrictor, a neuramidinase inhibitor, an anticholinergic agent, a leukotriene inhibitor, an antihistamine, an antiallergic agent,

an anesthetic, and a mucolytic agent." DTX 21. Segal states: "The topical antiinflammatory agents in the compositions of the present invention are corticosteroids known in the art to suppress inflammation. In a preferred embodiment the topical antiinflammatory agent is beclomethasone diproprionate, budesonide, dexamethasone, memotasone furoate, ***fluticasone propionate*** or triamcinolone acetonide." 2, ll. 22-25. Segal further states: "Suitable antihistamines are diphenhydramine, chlorpheniramine, cetirizine, terfenadine, fenofexadine, astemizole, norastemizole, ***azelastine***, and azatidine." 3, ll. 19-20.

59. Several other prior art references also explicitly taught or recommended combining an antihistamine and a corticosteroid in a single nasal formulation. PTX 984, PCT Publication No. WO 97/01337 ("Helzner") 1997 at p. 2 ll. 8-16; PTX 985, PCT Publication No. WO 97/46243 ("Koochaki") 1997 at at p. 1, ll. 34-36, p. 2, ll18-31; PTX 986, U.S. Patent Publication No. 2004/024638 ("Yanni") 2001 at ¶¶ 6-10.

60. [redacted]

C. The prior art disclosed how to formulate a pharmaceutical composition containing azelastine hydrochloride and a pharmaceutical composition containing fluticasone propionate.

61. As Apotex's expert, Dr. Maureen Donovan will explain at trial, the prior art also disclosed how to formulate combination product with azelastine hydrochloride and fluticasone propionate. Azelastine hydrochloride was successfully formulated in Astelin® and fluticasone propionate was successfully formulated in Flonase®. Each excipient listed in the asserted claims was present in either Astelin® or Flonase® or both, with the exception of one ingredient: glycerin. And that ingredient was disclosed as a preferable solvent for azelastine hydrochloride in the prior art Astelin®'s patent (the "'194 patent" or the "Hettche" patent). Each excipient in the claims is

used for the purpose disclosed and taught in prior art such as the Handbook of Pharmaceutical Excipient (1994). None of the excipients functions in any novel way in the asserted claims.

62. Specifically, Astelin® Nasal Spray contains a concentration of azelastine hydrochloride of 0.1% w/v. It contains the preservative benzalkonium chloride in a concentration of 0.0125% w/v. Astelin® also contains edetate disodium, hydroxypropyl methyl cellulose, citric acid, dibasic sodium phosphate, sodium chloride, and purified water. PTX 11, Astelin® Label.

63. United States Patent No. 5,164,194 ("Hettche" or "the '194 patent"), of which Astelin® is the commercial embodiment, was filed on July 12, 1990. PTX 73. Claim 1 recites: "A method for the treatment of irritation or disorders of the nose and eye which comprises applying directly to nasal tissues or to the conjunctival sac of the eyes a medicament which contains a member selected from the group consisting of azelastine and its physiologically acceptable salts." Hettche teaches amounts and concentrations of azelastine hydrochloride (col. 2, ll. 20-23; col. 3, ll. 26-31), and teaches the use of preservatives (col. 2, l. 46 – col. 4, l. 9), isotonization agents (col. 4, ll. 31-35), thickening agents (col. 4, ll. 51-66), and surfactants (col. 4, ll. 14-29). Hettche teaches benzalkonium chloride, edetate disodium, and phenylethyl alcohol and respective concentration ranges, (col. 3, ll. 3-25; col. 4, ll. 4-9; col. 3, ll. 19-25), and carboxymethyl cellulose sodium and sorbitol (col. 4, ll. 55-60; col. 4, l. 34). Hettche teaches that glycerin is a preferable solvent (col. 2, l. 39) and isotonization agent (col. 4, l. 34).

64. Flonase® Nasal Spray contains a concentration of fluticasone propionate of 0.05% w/w. It contains the preservatives benzalkonium chloride in a concentration of 0.2% w/w, phenyl ethyl alcohol in a concentration of 0.25% w/w. It also contains microcrystalline cellulose and carboxymethylcellulose sodium, dextrose, and polysorbate 80. DTX 33, Flonase® Label.

65. Each excipient and concentration of such excipient in the asserted claims were used either in Flonase®, Astelin®, or both, with the exception of glycerin. However, glycerin was

disclosed in the ’194 patent, of which Astelin® is the commercial embodiment, as a preferable solvent for azelastine hydrochloride: “Solvents which may preferably be used for the formulations are: water, saturated aliphatic mono and polyvalent alcohols which contain 2-3 carbon atoms (for example, ethanol, isopropanol, 1,2-propylene glycol, glycerine), liquid polyglycols (molecular weight 200 to 600).” PTX 73 at col. 2, l. 39.

66. The Cramer reference also taught a preferred concentration of glucocorticosteroid from about 0.01% to about 0.1% w/w (col. 3, l. 20), and a preferred concentration of antihistamine from about 0.01% to about 1% w/w (*id.* at 3, l. 30). Cramer also taught the use of tonicity-adjusting agents (*id*. at 4, ll. 50-55), thickening agents (id.at 4, l. 56–5, l. 5), surfactants (id. at 5, ll. 11-15), and preservatives (id. at 5, ll. 16-22) in its combination products.

67. Cramer more specifically taught the preservatives benzalkonium chloride and EDTA (*id.* at 5, ll. 19-21), the thickening agents microcrystalline cellulose and carboxymethyl cellulose sodium (*id*. at 4, l. 58–5, l. 1), the surfactant polysorbate 80 (*id*. at 5, ll. 12-13), and the use of isotonization agents including glycerin (*id*. at 6, l. 36).

68. More specifically, Cramer taught that the preservative could be a combination of benzalkonium chloride and EDTA, with a suitable weight/weight concentration of 0.001% to 2%. *Id.* at 5, ll. 19-21. Example I of Cramer contains 1.2% w/v of a microcrystalline cellulose and carboxymethyl cellulose sodium combination (*id*. at 5, l. 47) and Example III contains 1.0% w/v of a similar cellulose derivative (id. at 6, l. 36). Example III contains 2.0% w/v of glycerin. *Id*. at 6, l. 35. The pH of the compositions in Cramer is preferably from about 4.5 to about 9, more preferably from about 6 to about 7. *Id*. at 2, l. 57.

69. Before the priority date, fluticasone propionate had been formulated into a combination inhalation product with another drug substance for the treatment or prophylaxis of a condition for which the use of one or more steroids is indicated. Advair Diskus® (fluticasone

propionate 100 μg and salmeterol 50 μg) is a combination product of fluticasone propionate and salmeterol formulated as a metered-spray solution for inhalation. It was approved in 2000. Thus, before 2001, fluticasone propionate had been formulated into a combination inhalation product with another drug substance for the treatment or prophylaxis of a condition for which the use of one or more steroids is indicated. DTX 23.

70. Chapter 20 of Loyd V. Allen, The Art, Science, and Technology of Pharmaceutical Compounding (1998), describes "Ophthalmic, Otic, and Nasal Preparations," and discusses nasal preparations at pages 233-38. For example, these pages describe several methods of mixing both nasal solutions and nasal suspensions. *Id*. at 233-34. It discusses pH and buffering, stating that "[g]enerally, pH in the range of 4 to 8 is considered optimum." *Id*. at 235. It also discusses routine buffering systems. *Id.* It also discusses tonicity, explaining that "[a] tonicity of 300 mOsm/L is ideal, although a range of 200 to 600 mOsm/L is acceptable." *Id*.

71. Each excipient in the asserted claims is used for the purpose described for that excipient in the Handbook of Pharmaceutical Excipients (1994). PTX 189, Wade & Weller, Handbook of Pharmaceutical Excipients.

72. For example, Wade & Weller describes benzalkonium chloride as an "antimicrobial preservative." *Id.* at 27. It describes its typical concentration, too. *Id.* ("In nasal and otic formulations a concentration of 0.002-0.02% [w/v] is used[.]").

73. Wade & Weller describes the preservative function of edetate disodium and other edetates: "Edetic acid and edetates possess some antimicrobial activity but are most frequently used in combination with other antimicrobial preservatives due to their synergistic effects." *Id.* at 176; *see also id.* (describing that edetates have been used to stabilize, among other things, corticosteroids). It also describes typical concentrations. *Id.* ("Typically, edetic acid and edetates

are used in concentrations of 0.01-0.1% w/v as antimicrobial preservative synergists"; otherwise, "[t]ypically, edetic acid is used at a concentration of 0.1-0.15% w/v").

74. Wade & Weller describes phenylethyl alcohol as an "antimicrobial preservative." *Id.* at 340. It also provides typical concentrations. *Id.* ("Phenylethyl alcohol is used as an antimicrobial preservative in parenteral and ophthalmic formulations at 0.25-0.5% v/v concentration; it is generally used in combination with other preservatives."). (The density of phenylethyl alcohol is known to be 1.02 g/cm3, and the density of solution will have a density slightly greater than water (1.0 g/cm3).)

75. Wade & Weller describes microcrystalline cellulose and carboxymethylcellulose sodium as a "suspending agent" and "viscosity-increasing agent," respectively. *Id.* at 78, 84. It describes "mixtures of microcrystalline cellulose and carboxymethylcellulose sodium that are dispersible in water" as "suitable as suspending vehicles in pharmaceutical formulations." *Id.* at 86. It describes a w/v of 1.2% for an aqueous dispersion. *Id.*

76. Wade & Weller describes polysorbate 80 as a "nonionic surfactant." *Id.* at 375-76.

77. Wade & Weller also describes glycerin as a "tonicity agent" among other things. *Id.* at 204. It teaches that 2.6% v/v is iso-osmotic with serum. *Id.* Remington: The Science and Practice of Pharmacy, Chapter 18 (2000) at 258 also teaches an iso-osmotic concentration of glycerin of 2.6%. PTX 183.

78. It was known that solutions should preferably be isotonic with nasal secretions. *See, e.g.*, PTX 73, Hettche, at 4:36-38 ("The isotonization agents adjust the osmotic pressure of the formulations to the same osmotic pressure as nasal secretions."); *see also* PTX 183, Remington 2000, at 246-62. However, it was also known that a tonicity within "a range of 200 to 600 mOsm/L is acceptable." PTX 167, Allen 1998 at 235.

79. The particle size of fluticasone propionate was disclosed in the patent for Flonase® and in other prior art. The labeling indicates that the drug product is an "aqueous suspension of microfine fluticasone propionate." DTX 33, Flonase® Label. Microfine indicates that the particle size of the solid fluticasone propionate has been reduced such that the diameter of the drug particles is in the low-micron size range. Ansel et al. (1995), at 255, defines the size of "micronized" particles to be under 10 microns (μm). PTX 168.

80. Additionally, the Flonase® patent explains that its composition is "micronized," which means it has a "particle size as defined in BPC 1973 pg. 911 for Ultra-Fine powder." DTX 96, U.S. Patent No. 4,335,121 to Phillips ("Phillips"), at 34:47-49. That reference, in turn, explains that an ultrafine powder is "[a] powder of which the maximum diameter of 90 per cent of the particles is not greater than 5 μm and of which the diameter of none of the particles is greater than 50 μm." PTX 1092, British Pharmaceutical Codex (1973) at 911.

81. U.S. Patent Publication No. 2004/0136918 to Garrett et al. titled "Pharmaceutical Formulations" was filed as a PCT application on March 4, 2002. Garrett teaches the advantages of particles of less than 10 μm diameter in a formulation containing fluticasone propionate. PTX 989 at [0023], [0030].

82. The pH is an inherent quality of the composition, and is within the range disclosed by the prior art. "Generally, pH in the range of 4 to 8 is considered optimum." PTX 167, Allen 1998 at 235.

83. Additionally, combination products including a steroid in suspension and a different active ingredient in solution have been formulated before. DTX 109, Blephamide Ophthalmic Suspension (Physicians' Desk Reference 2001).

84. Indeed, the specification of the patents states, "In examples where only the ingredients of formulations according to the present invention are listed, these formulations are prepared by techniques well known in the art." DTX 136, '620 Patent, at col. 8, l. 67–col. 8, l. 2. Example 3 is described as "Nasal Spray or Nasal Drops with Azelastine and Steroid" and lists 0.1% azelastine, 0.0357% fluticasone propionate, and various excipients. Only the ingredients are listed. All other nasal spray examples with azelastine and a steroid similarly list only ingredients and do not describe any novel mixing techniques.

D. [redacted]

85. [redacted]

E. Additional prior art confirms obviousness.

86. Apotex incorporates any additional prior art in its section 282 statement or listed in the statement of uncontested facts. Apotex claims without limitation that the following references, cited in its contentions or shown to experts during discovery, also are prior art:

87. Berge, Stephen M., et al., "Pharmaceutical Salts," Journal of Pharmaceutical Sciences, vol. 66, No. 1, Jan. 1977, pp. 1-19.

88. Berger, W.E., "Treatment Update: Allergic Rhinitis," Allergy and Asthma Proc., Vol. 22, No. 4, pp. 191-98 (July-August 2001).

89. Blephamide Ophthalmic Suspension – Physicians' Desk Reference 2001.

90. Bryson, et al., "Intranasal fluticasone propionate: a review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in allergic rhinitis," Drugs, 1992, vol. 43, No. 5, pp. 760-775.

91. Harding, "The human pharmacology of fluticasone propionate," Respiratory Medicine, 1990, vol. 84, Suppl. A, pp. 25-29.

92. Hodges, N. A., et al., "Preservative Efficacy Tests in Formulated Nasal Products: Reproducibility and Factors Affecting Preservative Activity," J. Pharm. Pharmacol., 1996, vol. 48, pp. 1237-1242.

93. Hodges, Norman, et al., "Antimicrobial Preservative Efficacy Testing," Handbook of Microbiological Quality Control, Pharmaceuticals and Medical Devices, 2000, p. 168 plus cover page and publication page.

94. Johnson, Malcolm, "Development of fluticasone propionate and comparison with other inhaled corticosteroids," J. Allergy Clin. Immunol., Apr. 1998, vol. 101, No. 4, Part 2, pp. S434-S439.

95. Laforce, et al., "Fluticasone propionate: an effective alternative treatment for seasonal allergic rhinitis in adults and adolescents," J. Fam. Pract., 1994, vol. 38, No. 2, pp. 145-152.

96. McNeely, Wendy, et al., "Intranasal Azelastine A Review of its Efficacy in the Management of Allergic Rhinitis," Drugs, 1998, vol. 56, No. 1, pp. 91-114.

97. Nathan, et al., "A once daily fluticasone proprionate aqueous nasal spray is an effective treatment for seasonal allergic rhinitis," Annals of Allergy, 1991, vol. 67, pp. 332-338.

98. Portmann, D. et al., "Acceptability of local treatment of allergic rhinitis with a combination of a corticoid (beclomethasone) and an antihistaminic (azelastine)", Revue de

Laryngologie Otologie Rhinologie: European Review of E.N.T., 2000, vol. 121, No. 4, pp. 273-279, XP-002252974.

99. Scadding, et al., "Clinical and physiological effects of fluticasone propionate aqueous nasal spray in the treatment of perennial rhinitis," Rhinology, 1991, Suppl. 11, pp. 37-43.

100. Shenfield, "Fixed drug combinations: which ones can be recommended?" Current Therapeutics, 1986, pp. 15-29.

101. U.S. Patent Publication No. 2004/0136918 to Garrett et al. ("Garrett") (March 2002).

102. Van As, et al., "Once daily fluticasone propionate is as effective for perennial allergic rhinitis as twice daily beclomethasone dipropionate," J. Allergy Clin. Immunol., 1993, vol. 91, No. 6, pp. 1146-1154.

IV. ALTERNATIVELY, THE PATENTS-IN-SUIT ARE INVALID FOR LACK OF ENABLEMENT OR WRITTEN DESCRIPTION

103. Apotex maintains for the reasons stated above and below in connection with objective indicia of nonobviousness that the asserted claims are invalid as obvious under 35 U.S.C. § 103. However, if one assumes hypothetically that the claims are not obvious, but instead involved inventive work and that the Dymista® product has unexpectedly superior results over the prior art, then the asserted claims are neither adequately described nor enabled by the specifications of the patents-in-suit and are therefore invalid under 35 U.S.C. § 112.

104. The specifications contain no evidence showing that the combination nasal drug products covered by the claims actually have any effect whatsoever in humans, animals, or even any *in vitro* tests. Nor does the specification contain any data showing that the claimed compositions are pharmaceutically acceptable. That is consistent with Apotex's positions on obviousness—a person of ordinary skill in the art was well aware of the uses of azelastine HCl and

fluticasone propionate before 2002, and would not have been surprised to know that combining the two drugs would have a clinical, additive effect. The person of ordinary skill also would have known that it was possible to combine the two active ingredients with various excipients to make a pharmaceutically acceptable product.

105. But if one assumes that a person of ordinary skill in the art would think the combination was surprisingly made and surprisingly useful in 2002, then one must also assume a person of ordinary skill in the art did not know of the uses of azelastine HCl or fluticasone propionate for intranasal administration, and/or would not know or think without some level of non-routine experimentation that the combined drugs would have any effect on any disease when administered in a nasal spray, and/or that a person or ordinary skill in the art would not have known that it was possible to make the claimed compositions so they are pharmaceutically acceptable.

106. Given those assumptions, it is inconsistent to find on the one hand that the claimed drug combination is inventive over the prior art and leads to unexpected superior results, yet at the same time allege that the written description and enablement requirements are satisfied by a specification that adds no new data to the field beyond what was disclosed in the prior art. Thus, assuming Plaintiffs contentions are correct, the specifications of the patents-in-suit as of 2002 did not disclose to a person or ordinary skill that the named inventors were actually in possession of the full scope of their invention with respect to a product that could be made and would be (1) pharmaceutically acceptable and (2) clinically effective. The person of ordinary skill under these assumptions would not have understood the inventors to have been in possession of any pharmaceutically effective treatment in the absence of, for example, some evidence actually showing that it worked in more detail than what was described and shown in the specification.

Nor would the person of ordinary skill in the art thought that the inventors had found or disclosed a way to make such a formulation in a pharmaceutically acceptable manner.

107. Thus, if the Court were to find the patents-in-suit nonobvious, they still should be declared invalid because they are inadequately described in, and are not enabled by, the respective patent specifications. The specifications contain no data showing that the combination nasal drug products covered by the claims actually have any effect whatsoever in humans, animals, or even any in vitro tests. Thus, if the efficacy of a combination were *not* obvious, this necessarily would mean that the patents-in-suit lack a sufficient written description and/or would not be enabled.

108. Additionally, if Apotex were wrong, and it would not have been obvious to formulate a combination product, the patents-in-suit do not adequately describe such a product, or enable a skilled artisan to make it. The patents teach a POSA nothing about how to formulate the pharmaceutical composition, or how to use and administer such a composition for the treatment of allergic rhinitis.

V. THERE ARE NO OBJECTIVE INDICIA OF NON-OBVIOUSNESS

109. Meda carries the burden of production as to secondary considerations of nonobviousness. Apotex understands that Meda intends to present evidence of commercial success, satisfaction of long-felt but unmet needs, unexpected results, skepticism of others, industry praise, copying, and failure of others. There are no objective indicia of non-obviousness, certainly none that could overcome the strong showing of prima facie obviousness.

A. Evidence of commercial success or unmet needs are irrelevant because there were two blocking patents.

110. The compound fluticasone propionate, whose chemical name is S-fluoromethyl 6α,9α-difluoro-11β-hydroxy-16α-methyl-3-oxo-17α-propionyloxyandrosta-1,4-diene-17β-carbothioate (DTX 33, Flonase® Label), was claimed by U.S. Patent No. 4,335,121

("Phillips" or "the '121 patent") since 1982—two decades before the priority date. *See* DTX 96 ("We claim: . . . 13. A compound as claimed in claim 1 which is S-fluoromethyl 6α,9α-difluoro-11β-hydroxy-16α-methyl-3-oxo-17α-propionyloxyandrosta-1,4-diene-17β-carbothioate."). The '121 patent did not expire until May 2004, after the priority date of the patents-in-suit.

111. United States Patent No. 5,164,194 ("Hettche" or "the '194 patent"), of which Astelin® is the commercial embodiment, was filed on July 12, 1990. PTX 73. The patent did not expire until May 2011, long after the 2002 priority date. PTX 1650, FDA Letter to Apotex Corp. re: ANDA 77-954. Claim 1 recites: "A method for the treatment of irritation or disorders of the nose and eye which comprises applying directly to nasal tissues or to the conjunctival sac of the eyes a medicament which contains a member selected from the group consisting of azelastine and its physiologically acceptable salts."

112. This claim covers Dymista®, because "contains" is a term of non-limitation. It is "well established" that "'containing' is generally an open-ended term that is synonymous with 'comprising' or 'including' and does not exclude additional, unrecited elements." *INVISTA N. Am. S.a.r.l. v. M & G USA Corp.*, 951 F. Supp. 2d 604, 615 (D. Del. 2013); *see also* MPEP § 2111.03. Thus, any skilled artisan who combined azelastine hydrochloride and fluticasone propionate into a single nasal spray for the treatment of allergic rhinitis before the priority date of the patents-in-suit would have infringed the '194 patent. That is, such a product would have been "a medicament which contains [i.e., includes but is not limited to] a member selected from the group consisting of azelastine and its physiologically acceptable salts" "for the treatment of irritation or disorders of the nose and eye."

113. There is no evidence that Meda licensed the Hettche patent to others.

114. Thus, since 1982 through past the priority date, skilled artisans knew that they could not make products with fluticasone and/or azelastine. Any connection or nexus between any commercial success of Dymista® and the claims of the patents-in-suit is therefore weak. That is,

a rational economic actor would not have been motivated to combine azelastine hydrochloride and fluticasone propionate into a single nasal spray before the date of alleged invention, because doing so would have infringed the '194 patent.

115. Further, although the Hettche patent expired before the Dymista® launch, the applications for the patents-in-suit were public since at least December 2003. Thus, even from May 2011 (when the '194 patent expired) through September 2012 (when Dymista® launched), a POSA would have been blocked by the patents-in-suit.

B. Dymsita® is not a commercial success.

116. Even if commercial success were relevant, Dymista® could not be considered a commercial success for purposes of assessing obviousness.

117. [redacted]

118. [redacted]

119. [redacted]

120. [redacted]

121. [redacted]

C. Dymista® did not satisfy a long-felt but unmet need.

123. Dymista obviously did not satisfy a long-felt unmet need to treat allergic rhinitis—after all, Flonase® and Astelin® were combined in the prior art for this precise purpose. Thus, the only medical need Dymista® even arguably could have met would be a purported need for a more

convenient dosage form to administer these two drugs. This need, however, was obviously satisfied through a co-formulation of the two drugs.

124. Indeed, Meda's argument that such a need existed (to improve patient compliance) confirms the motivation in the art to co-formulate fluticasone propionate with azelastine hydrochloride. *See, e.g.*, PTX 22, Dykewicz 1998, at 512 ("Compliance is enhanced when: (1) a fewer number of daily doses is required . . . ."); DTX 48, Shenfield 1986 at 16 ("The most frequently quoted reason for using fixed combination products is improved compliance.").

D. Dymista is not unexpectedly superior to the closest prior art.

125. There is no evidence that Dymista® is superior, much less unexpectedly so, to the closest prior art—the combined administration of both Flonase® and Astelin®. Meda submitted to the patent examiner a declaration by Joachim Maus claiming that Dymista® was unexpectedly superior to fluticasone propionate *monotherapy* and to azelastine *monotherapy*. PTX 1158. But in light of the prior art discussed above, it would be *expected* that a combination product would be superior to azelastine alone or fluticasone alone—i.e., additive effects were expected. PTX 22, Dykewicz 1998 at 506; DTX 107, Juniper 1997 at 1123; DTX 140, Ratner 1998 at 121, Figure 1; PTX 332, Brooks 1996 at 197, 198; PTX 333, Drouin 1995 at 344 Table 2; PTX 1071, Simpson 1994 at 500, Figure 2.

126. Moreover, Dymista® must be unexpectedly superior to the closest prior art. As the evidence above will show, the closest actually practiced prior art was the concurrent administration of Flonase® and Astelin® to individual patients. The only available evidence suggests that Dymista® is no more effective than the concurrent administration of Flonase® and Astelin®, and is possibly less effective. Carr 2012 is a meta-analysis of multiple studies comparing Dymista® to an azelastine monotherapy and a fluticasone monotherapy. Carr 2012 reports that the reduction

in total nasal symptom score (TNSS) over baseline is 5.7 for Dymista®, but the reduction for fluticasone alone is nearly as large (a reduction of 5.1). Therefore, the gain from using the fixed combination therapy as opposed to fluticasone alone is only 0.6 (5.7 compared to 5.1). The gain from using the combination therapy as opposed to azelastine is 1.3 (5.7 compared to 4.4). PTX 227, Carr et al. 2012 at 4, Table II.

127. On the other hand, a 2008 study of Ratner et al. describes the concurrent administration of azelastine and fluticasone compared to the monotherapies. In this study, concurrent therapy reduced rTNSS symptoms (compared to baseline) by 7.4 points compared to 5.2 for fluticasone alone and 4.8 for azelastine alone. PTX 330, Ratner 2008 at 77, Table 2.

128. Thus, the concurrent therapy achieved a 2.2 point greater reduction than fluticasone alone and a 2.6 point greater reduction than azelastine alone in Ratner 2008, whereas the fixed-dose combination in Carr 2012 achieved only a 0.6 greater reduction than fluticasone alone and a 1.3 point greater reduction than azelastine alone. This suggests that Dymista® is not superior to a concurrent administration of Astelin® and Flonase®, and may even be slightly less effective than a concurrent administration.

129. Dymista® is not superior in degree, and is certainly not superior in kind, to the closest prior art.

130. Indeed, studies of fluticasone propionate in combination with the β_2-agonist salmeterol in a fixed-dose treatment (Advair®) versus taken concurrently demonstrated similar improvements on asthma symptom relief, suggesting that a fixed-dose combination of fluticasone propionate in combination with an H_1-agonist may not have superior results to concurrent use. *See* PTX 92, Stoloff 2002 at 221 ("Several studies in adults and adolescents demonstrated similar improvements . . . with a combination product . . . and with the concurrent administration of

salmeterol and fluticasone at the same doses in separate Diskus devices."); *see also* PTX 82, Markham 2000 at 1208 ("Well designed studies . . . demonstrate that salmeterol/fluticasone propionate 50/100, 20/250 and 50/500µg administered via a dry powder inhaler (DPI) is clinically equivalent to concurrent delivery of the same dosages of the 2 drugs via separate DPIs.").

131. Plaintiffs may argue that Dymista® has an unexpectedly faster onset of action than Astelin® because it has an onset of action of only 15 to 30 minutes. As explained above, however, topical azelastine is known to have an onset of action of 15 to 30 minutes. PTX 326, Bousquet et al. ARIA Guidelines 2001 at S230 ("Topical H1-antihistamines have a rapid onset of action (less than 15 minutes) at low drug dosage"); DTX 207, Nielsen 2001 at 1565 (topical antihistamines act within 15 to 30 minutes); DTX 43, McNeely 1998 at 92 ("Symptom improvements are evident as early as 30 minutes after intranasal administration of azelastine . . . and are apparent for up to 12 hours . . . .").

132. Finally, Plaintiffs may argue that Dymista® is unexpectedly less bitter than Astelin®. However, Plaintiffs have never produced a head-to-head study to demonstrate that Dymista® is less bitter than Astelin®. But moreover, such a difference would be a difference in degree and not a difference in kind.

E. There was no industry or other skepticism with respect to whether fluticasone propionate® and azelastine hydrochloride® could be co-formulated or would be effective.

133. [redacted]

[redacted]

F. There was no industry praise by individuals unassociated with Meda after Dymista's launch.

139. There is no objective industry praise that could support a showing of non-obviousness. All examples of industry praise are by individuals who has consulted for or been paid by Meda, or whose articles were reviewed by Meda prior to publication.

140. First, it should be noted that one of the plaintiffs' own experts, Dr. Carr, who is also the author of several of the clinical trials discussed above, has also been a paid consultant for Meda for many years. *See, e.g.*, PTX 227, Carr et al. 2012 ("W. Carr has consulted for and received

research support from MEDA, Alcon, and Ista."). Moreover, Meda's second clinical expert, Dr. Kaliner, is expected to testify that he could not testify on behalf of Apotex in this matter because he had worked too closely with Meda and had loyalty to them.

141. Meda may point to praise from a Dr. Meltzer. However, Dr. Meltzer was involved in the clinical trials for Dymista® and has received funding from Meda. *See, e.g.*, PTX 33, Meltzer et al. (2012) at 324 ("Drs. Meltzer, La Force, Ratner, and Carr have consulted for and received research support from Meda Pharmaceuticals Inc.").

142. Meda may point to praise from a Dr. J. Bernstein, but Dr. Bernstein also received funding and support from Meda Pharmaceuticals. *See* PTX 227, Carr et al. (2012) at 1 ("J. Bernstein has received research support from Meda and Dynova . . . ."); PTX 15, Bernstein (2013) at 11 ("JA Bernstein has received honoraria, consulted, for and received research support from MEDA and has received speaker fees from TEVA.").

143. Meda may point to the editors of the Journal of Allergy and Clinical Immunology as praising Dymista® for being "the drug of choice for the treatment of AR." However, the editors of the Journal did not make this statement; it is nothing more than a summary reporting the conclusions of Dr. Carr in his previously discussed clinical studies. In that study, Dr. Carr stated: "Taken together, these results show that [Dymista®] can be considered the drug of choice for AR therapy . . . ." *See* PTX 227, Carr et al. (2012) at 7. Thus, when the editors of the journal state in the "Editors' Choice" section that, "Given these findings, MP29-02 can be considered the drug of choice for the treatment of AR" (PTX 29), it is a clear paraphrase of Dr. Carr's own findings.

144. Indeed, it is clear from the testimony of Dr. Accetta and Dr. Wedner that Dymista® is not considered the drug of choice for most doctors and patients.

145. Meda may also cite an article by E. Ridolo, but again that article simply reported the results of the Meltzer and Carr clinical trials. PTX 38. Additionally, that the manuscript was sent to Meda Pharmaceuticals for review before it was published. *Id.*

146. Most importantly, none of this purported industry praise matters. No one questions that Dymista® is an effective treatment for allergic rhinitis. The question, rather, is whether Dymsita®'s combination was obvious as of 2002—and it was.

G. No other person or group tried but failed to make the invention prior to the priority date.

147. Plaintiffs have not identified any party that tried but failed to formulate a combination product before the priority date, i.e., a failure of others.

148. [redacted]

151. However, a person of ordinary skill knew how to use solubilizing agents and co-solvents to enhance solubility. It was well known that "[p]oor aqueous solubility is a common concern in the pharmaceutical sciences" and that "[t]here are several established methods for increasing the equilibrium solubility of non-polar drugs in aqueous vehicles." Millard et al. (2002), at 155. Additionally, azelastine's solubility was known to be pH-dependent.

152. Moreover, a formulator of ordinary skill would ordinarily begin with all the active ingredients and excipients and build a formulation from the bottom up, knowing that the order in which excipients are added can affect the viability of a formulation.

153. [redacted]

154. Moreover, at the time of MedPointe's experiment in 2006, at least three commercial embodiments of the patents-in-suit were already on the market in India: Duonase, and the alleged copycat products Combinase AQ and Nezalast. PTX 1156, Chopra Declaration ¶ 9. MedPointe's failure cannot be evidence of failure of others when at least two entities other than the inventor also successfully created the invention prior to 2006.[1]

[1] By submitting this statement, Defendants reserve their rights to amend or supplement their submission after they consider Plaintiffs' submissions, whether made part of this Pretrial Order or otherwise made apparent in pretrial proceedings, the trial itself, or post-trial briefing. To the extent this exhibit contains issues of law, those issues are incorporated into Defendants' Joint Statement of Law that Remain to be Litigated by reference. To the extent Defendants' Joint Statement of Law that Remain to be Litigated contain issues of fact, those issues are incorporated by reference into this exhibit. Defendants incorporate by reference their invalidity contentions submitted during discovery and their expert reports in support of any proof to be presented by expert testimony.

Exhibit 4

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and CIPLA LTD., Plaintiffs, v. APOTEX INC and APOTEX CORP., Defendant.	C.A. No. 14-1453-LPS

PLAINTIFFS' STATEMENT OF ISSUES TO BE LITIGATED

Plaintiffs respectfully submit the following list of issues of law that remain to be litigated. Should the Court determine that any issue identified in this list is more properly considered an issue of fact, it shall be so considered. Plaintiffs reserve the right to revise this list in light of the Court's rulings and in light of Apotex's list of issues of law and fact to be litigated.

I. Patent Validity: Obviousness

A. Presumption of validity

1. Whether Apotex can prove by clear and convincing evidence that the differences between the subject matter of any of the asserted claims of the '620 and '428 patents and any asserted prior art references relied upon by Apotex (alone or in combination) are such that any of the asserted claims of the '620 and '428 patents would have been obvious to a person of ordinary skill in the art.

Citation of Authorities

Each patent claim is accorded a statutory presumption of validity. 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 94-102 (2011). "[B]ased on the basic proposition that a government agency such as the [PTO] was presumed to do its job," the patent challenger bears the burden of proving invalidity by clear and convincing evidence. *Microsoft*, 564 U.S. at 94 (citation omitted). Clear and convincing evidence must "place in the ultimate factfinder an abiding conviction that the truth of [the] factual contentions [is] highly probable." *Colorado v. New Mexico*, 467 U.S. 310, 316 (1984) (quotations omitted); *Addington v. Texas*, 441 U.S. 418, 425 (1979) (explaining that "clear and convincing evidence" is an intermediate standard which lies in between the "beyond a reasonable doubt" and the "preponderance of the evidence" standards of proof). If evidence requires the court to draw extensive inferences, it does not

satisfy the clear and convincing standard. *Intel Corp. v. U.S. Int'l Trade Comm'n*, 946 F.2d 821, 829-30 (Fed. Cir. 1991).

The patent challenger bears the burden of proving each fact that underlies its challenge to the validity of each patent claim by clear and convincing evidence. *Microsoft*, 564 U.S. at 94; *Symbol Techs., Inc. v. Opticon, Inc.*, 935 F.2d 1569, 1580 (Fed. Cir. 1991). That burden remains on the patent challenger at all times. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1077-78 (Fed. Cir. 2012).

The patent challenger's burden to prove invalidity by clear and convincing evidence is "especially difficult" when the invalidity references at trial were previously considered during patent prosecution. *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006); *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 961 (Fed. Cir. 1986).

B. Prima Facie Showing

2. Whether Apotex can prove by clear and convincing evidence that the asserted claims of the '620 and '428 patents were obvious to a person of ordinary skill in the art at the time of the invention in light of (1) the scope and content of the alleged prior art; (2) the differences between such claim and the alleged prior art; (3) the level of ordinary skill in the art at the time; and (4) the objective evidence of nonobviousness.

Citation of Authorities

Obviousness is determined as a matter of law with underlying factual determinations. 35 U.S.C. § 103; *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *see also In re Cyclobenzaprine Hydrochloride*, 676 F.3d at 1068. The underlying factual determinations are: 1) the scope and content of the prior art; (2) the level of ordinary skill in the pertinent art; (3) the differences between the claimed invention and the prior art; and (4) evidence of the objective indicia of

nonobviousness. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007); *In re Cyclobenzaprine*, 676 F.3d at 1068; *Eisai Co. v. Dr. Reddy's Labs., Ltd.*, 533 F.3d 1353, 1356 (Fed. Cir. 2008); *Graham*, 383 U.S. at 17-18. Under § 103, obviousness is determined with respect to the subject matter of the claimed invention as a whole, not by viewing separate pieces of the claimed invention in isolation. *KSR*, 550 U.S. at 406. For example, "[t]wo ingredients might be therapeutically effective when used separately as part of an overall treatment regimen, yet be incompatible or ineffective when combined in a single solution." *In re Brimonidine Patent Litig.*, 643 F.3d 1366, 1374 (Fed. Cir. 2011), as corrected (Aug. 8, 2011) (stating that simply because two drugs "were routinely prescribed together . . . does not establish that it would have been obvious to combine the two in a single formulation.").

To prove that a patent is obvious, a party must demonstrate by clear and convincing evidence "that a skilled artisan would have had reason to combine the teaching of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success from doing so." *In re Cyclobenzaprine*, 676 F.3d at 1069 (internal citation and quotation marks omitted); *see also Amgen, Inc. v. F. Hoffman–La Roche Ltd.*, 580 F.3d 1340, 1362 (Fed. Cir. 2009) ("An obviousness determination requires that a skilled artisan would have perceived a reasonable expectation of success in making the invention in light of the prior art.").

"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR*, 550 U.S. at 418; *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1379 (Fed. Cir. 2006) (explaining that "mere identification in the prior art of each component of a composition does not show that the combination as a whole" is obvious); *see also Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346,

1353 (Fed. Cir. 2013) (finding that the patent-at-issue "is not simply a combination of elements found in the prior art"); *Allergan, Inc. v. Barr Labs., Inc.*, 808 F. Supp. 2d 715, 732 (D. Del).

In conducting the obviousness analysis, the claimed invention must be viewed in light of the art that existed at the time the invention. *See* 35 U.S.C. § 103(a). In addition, the scope and content of the prior art must be considered as a whole. *See In re Kuderna*, 426 F.2d 385, 389 (C.C.P.A. 1970) ("We must approach the issue of patentability in terms of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art."); *see also In re Wesslau*, 353 F.2d 238, 241 (C.C.P.A. 1965) ("It is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art."). All teachings in the prior art must be considered in the obviousness determination, "including that which might lead away from the claimed invention." *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988).

1. The Person of Ordinary Skill in the Art

An invention is not patentable if it would have been obvious to a person having ordinary skill in the art at the time the invention was made. *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1355 (Fed. Cir. 2007). Such an individual is presumed to be one who thinks along the line of conventional wisdom in the art without undertaking to innovate, whether by systematic research or "by extraordinary insights, it makes no difference which." *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985); *see also Life Techs., Inc. v. Clontech Labs., Inc.*, 224 F.3d 1320, 1325 (Fed. Cir. 2000).

In determining the level of ordinary skill in the art, a court may consider factors including: (1) the educational level of the inventor; (2) type of problems encountered in the art;

(3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field. *Daiichi Sankyo Co., Ltd. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). The actual inventor's skill is irrelevant to the determination of the level of ordinary skill in the art. *Standard Oil*, 774 F.2d at 454 (noting that "[i]nventors, as a class, . . . possess something—call it what you will—which sets them apart from the workers of ordinary skill.").

2. The Challenger Cannot Use Hindsight or Rely on the Path of the Inventor

The obviousness analysis takes place at the time of the invention, and focuses on evidence existing before the time of the invention. *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364-65 (Fed. Cir. 2008). Accordingly, under 35 U.S.C. § 103(a), an obviousness analysis "requires the analysis to examine 'the subject matter as a whole' to ascertain if it 'would have been obvious at the time the invention was made.'" *Id.* at 1364 (quoting 35 U.S.C. § 103(a)) (emphasis omitted).

The use of hindsight is prohibited in the obviousness analysis. KSR, 550 U.S. at 421 ("A factfinder should be aware . . . of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning."); *Graham*, 383 U.S. at 36 (warning against "the temptation to read into the prior art the teachings of the invention in issue."); *Yamanouchi Pharm. Co. v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1345 (Fed. Cir. 2000) (using "the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention" is impermissible hindsight reasoning) (citation omitted); *In re Rosuvastatin Calcium Patent Litig.*, 719 F. Supp. 2d 388, 407 (D. Del. 2010) *aff'd*, 703 F.3d 511 (Fed. Cir. 2012) (dismissing "Defendants' arguments [as] driven by hindsight and based on numerous assumptions," the validity of which were countered by "Plaintiffs' equally

compelling evidence that significant work was needed to develop [the drug]"); *Janssen Pharm. N.V. v. Mylan Pharms., Inc.*, 456 F. Supp. 2d 644, 662-63 (D.N.J. 2006) (discrediting expert testimony that did not consider the motivations of researchers at the time of the invention).

As part of the admonition against using hindsight, "[t]he inventor's own path itself never leads to a conclusion of obviousness; that is hindsight. What matters is the path that the person of ordinary skill in the art would have followed, as evidenced by the pertinent prior art." *Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1296 (Fed. Cir. 2012) (rejecting the argument that the inventor's own research and development efforts established a motivation to modify the lead compound); *Life Techs*, 224 F.3d at 1325 (holding that "the path that leads an inventor to the invention is expressly made irrelevant to patentability by statute."); *see also* 35 U.S.C. § 103(a) ("Patentability shall not be negatived by the manner in which the invention was made.").

The obviousness analysis must avoid using the teachings of the patent-in-suit because "[t]he invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time." *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985). Therefore, "[i]t is critical that the question of obviousness not be viewed in the light of the accomplished result." *BOC Health Care, Inc. v. Nellcor Inc.*, 892 F. Supp. 598, 603 (D. Del. 1995) (internal quotation marks omitted), *aff'd*, 98 F.3d 1357 (Fed. Cir. 1996). It is always inappropriate to "simply retrace[] the path of the inventor with hindsight, discount[] the number and complexity of the alternatives, and conclude[] that the invention . . . was obvious." *Ortho-McNeil*, 520 F.3d at 1364. Thus, an obviousness analysis cannot discount "inventor's insight[], willingness to confront and overcome obstacles, and . . . even serendipity." *Id.*

3. The Prior Art Must Guide a POSA Towards the Invention

"To render a claim obvious, prior art cannot be 'vague' and must collectively, although not explicitly, guide an artisan of ordinary skill towards a particular solution." *Unigene Labs.*,

Inc. v. Apotex, Inc., 655 F.3d 1352, 1361 (Fed. Cir. 2011) (quoting *Bayer Schering Pharma AG v. Barr Labs., Inc.*, 575 F.3d 1341, 1347 (Fed. Cir. 2009)).

Evidence of obviousness, especially when that evidence is proffered in support of an "obvious-to-try" theory, is insufficient unless it shows that the possible options skilled artisans would have encountered were "finite," "small," or "easily traversed," and that skilled artisans would have had a reason to select the route that produced the claimed invention. *In re Cyclobenzaprine*, 676 F.3d at 1072. An invention is not obvious to try "[w]hen a field is unreduced by direction of the prior art, and when prior art gives no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful." *Unigene Labs.*, 655 F.3d at 1361 (quoting *Bayer Schering*, 575 F.3d at 1347) (internal quotations omitted); *see also Ortho–McNeil*, 520 F.3d at 1364 (stating the number of considered options must be "small or easily traversed").

An invention is not obvious "[w]hen what would have been obvious to try would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful." *Bayer Schering*, 575 F.3d at 1347 (quoting *In re O'Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988)) (internal quotations omitted).

An invention is also "not obvious to try where vague prior art does not guide an inventor toward a particular solution." *Bayer Schering*, 575 F.3d at 1347. "[W]here the prior art, at best, gives only general guidance as to the particular form of the claimed invention or how to achieve it, relying on an obvious-to-try theory to support an obviousness finding is impermissible." *In re Cyclobenzaprine*, 676 F.3d at 1072 (internal citations and quotations omitted).

"Where the prior art contains 'apparently conflicting' teachings (i.e., where some references teach the combination and others teach away from it) each reference must be considered 'for its power to suggest solutions to an artisan of ordinary skill.... consider[ing] the degree to which one reference might accurately discredit another.'" *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (quoting *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991)).

4. The Challenger Must Show a Motivation to Select and Modify Prior Art Elements with a Reasonable Expectation of Success

"A prima facie case of obviousness in the chemical arts is often based on a known compound, called a 'lead compound,' which serves as a starting point for a person of ordinary skill developing the claimed invention." *Unigene Labs.*, 655 F.3d at 1361; *see also Eisai*, 533 F.3d at 1357. "In the context of a composition or formulation patent where the patented formulation was made to mimic a previously FDA-approved formulation, the functional and pharmaceutical properties of the 'lead compound' can be more relevant than the actual chemical structure (though not always mutually exclusive)." *Unigene Labs.*, 655 F.3d at 1361-62; *see generally Sanofi-Aventis Deutschland GmbH v. Glenmark Pharm. Inc.*, 821 F. Supp. 2d 681, 689 (D.N.J. 2011) (applying a lead compound analysis in a combination drug case), *aff'd and remanded sub nom. Sanofi-Aventis Deutschland GmbH v. Glenmark Pharm. Inc., USA*, 748 F.3d 1354 (Fed. Cir. 2014); *Otsuka*, 678 F.3d at 1292 ("In determining whether a [POSA] would have selected a prior art compound as a lead, the analysis is guided by evidence of the compound's pertinent properties.").

As with validity challenges generally, a patent challenger to a chemical compound patent must make a prima facie showing of obviousness. *Yamanouchi*, 231 F.3d at 1345. Courts have held that a compound is not obvious under § 103 when the prior art discloses a broad selection of

compounds any one of which could have been selected as a lead compound by a person of ordinary skill in the art. *Yamanouchi*, 231 F.3d at 1345 (affirming nonobviousness of a chemical compound where, *inter alia*, the patent challenger "did not show the required motivation for selecting example 44 as a lead compound"); *Takeda*, 492 F.3d at 1358-60 (affirming nonobviousness of a chemical compound because, *inter alia*, the prior art identified other "mo[re] favorable" compounds "in terms of toxicity and activity" and "many [other] promising, broad avenues for further research" existed); *Janssen Pharm.*, 456 F. Supp. 2d at 657 (holding a chemical compound nonobvious where, *inter alia*, "[t]he prior art provided other more likely starting points for the development of an improved atypical antipsychotic drug").

In analyzing the difference between the claimed invention and prior art, a court cannot "analyze each prior art reference in isolation without considering the prior arts' teaching as a whole in light of the creativity and common sense of a person of ordinary skill." *Duramed Pharm., Inc. v. Watson Labs., Inc.*, 413 F. App'x 289, 294 (Fed. Cir. 2011). Even when all claim limitations are found in prior art references, the fact-finder must determine what the prior art teaches, whether the prior art teaches away from the claimed invention, and whether there was motivation to combine teachings from separate references. *See DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006).

"Obviousness requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination." *Unigene Labs.*, 655 F.3d at 1360. "Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention." *Id.* Therefore, "the

claimed invention is not obvious if a person of ordinary skill would not select and combine the prior art references to reach the claimed composition or formulation." *Id.* at 1361.

The prior art must provide a person of ordinary skill in the art a reason or motivation to combine or modify a lead compound or formulation to make the claimed compound with a reasonable expectation of success. *In re O'Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988); *Otsuka*, 678 F.3d at 1292 (citing *Takeda*, 492 F.3d at 1357); *Eisai*, 533 F.3d at 1358.

Courts have held that a person of ordinary skill in the art would not have been motivated to a modify a lead compound or formulation if the prior art taught away from making such a modification. *Daiichi Sankyo Co. v. Matrix Labs., Ltd.*, 619 F.3d 1346, 1354-55 (Fed. Cir. 2010) (finding that the prior art demonstrated a preference for lipophilic substituents while the claimed invention possessed hydrophilic substituents); *Eisai*, 533 F.3d at 1358 (finding that the prior art demonstrated a preference for lipophilic substituents and therefore the prior art provided "no discernible reason" for a person of ordinary skill to remove these substituents). An obviousness determination requires not only the existence of a motivation to combine elements from different prior art references, but also that a skilled artisan would have perceived a reasonable expectation of success in making the invention via that combination. *In re O'Farrell*, 853 F.2d at 903. "[O]bviousness law in general recognizes an important distinction between combining known options into a finite number of identified, predictable solutions, merely throwing metaphorical darts at a board in hopes of arriving at a successful result." *Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346, 1357 (Fed. Cir. 2013) (internal citations and quotation marks omitted). The patent challenger must also show that a person of ordinary skill in the art reasonably would have expected the unique combination of all of the properties of the claimed invention. *Id.* at 1344-45;

see also Takeda, 492 F.3d at 1362-63; *Matrix Labs*, 619 F.3d at 1352; *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 348 F. Supp. 2d 713, 752 (N.D. W.Va. 2004).

Courts have held that "there can be little better evidence negating an expectation of success than actual reports of failure." *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1354 (Fed. Cir. 2003); *see, e.g., In re Rinehart*, 531 F.2d 1048, 1053–54, 189 USPQ 143, 148–49 (CCPA 1976).

C. Objective Indicia of Nonobviousness ("Secondary Considerations")

3. Whether any objective indicia of nonobviousness exist with respect to the inventions of the asserted claims of the '620 and '428 patents.

Citation of Authorities

The fact finder must consider the objective considerations of nonobviousness before making a determination of obviousness. *In re Cyclobenzaprine*, 676 F.3d at 1075. "The objective considerations, when considered with the balance of the obviousness evidence in the record, guard as a check against hindsight bias." *Id.* at 1079.

Objective indicia of nonobviousness are not "just a cumulative or confirmatory part of the obviousness calculus but constitute independent evidence of nonobviousness." *Leo*, 726 F.3d at 1358 (internal quotation omitted). The patentee is required to come forward with evidence of nonobviousness only after the challenger has successfully made his prima facie case demonstrating that the patent might be obvious. *In re Cyclobenzaprine*, 676 F.3d at 1075. Further, the patentee prevails on the issue of validity unless the challenger proves to the decision-maker by a clear and convincing standard that, after all of the evidence has been placed on the table for consideration, the claim is invalid. *Id.*

"Objective indicia can be the most probative evidence of nonobviousness in the record, and enables the court to avert the trap of hindsight." *Leo*, 726 F.3d at 1358 (internal quotation omitted); *see also Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1378 (Fed. Cir. 2012) ("These objective guideposts are powerful tools for courts faced with the difficult task of avoiding subconscious reliance on hindsight.... These objective criteria thus help turn back the clock and place the claims in the context that led to their invention.").

4. Whether a nexus exists between the asserted claims and the evidence of objective considerations of nonobviousness with respect to the inventions of the asserted claims of the '620 and '428 patents.

Citation of Authorities

"[T]here is a presumption of nexus for objective considerations when the patentee shows that the asserted objective evidence is tied to a specific product and that product is the invention disclosed and claimed in the patent." *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1329 (Fed. Cir. 2016) (internal quotations omitted). Further, showing "that the specific products are embodiments of the claimed invention and that the proffered objective evidence relates to these products" is sufficient to establish the presumption of nexus for the objective considerations. *Id.* at 1330.

When the nexus is presumed, "the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus. The presumed evidence cannot be rebutted with mere argument; evidence must be put forth." *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000).

1. Unexpected Results

5. Whether the commercial embodiments of the '620 and '428 patents demonstrate unexpected results in view of the prior art.

Citation of Authorities

"If a patent challenger makes a prima facie showing of obviousness, the owner may rebut based on 'unexpected results' by demonstrating 'that the claimed invention exhibits some superior property or advantage that a person of ordinary skill in the relevant art would have found surprising or unexpected.'" *Procter & Gamble Co. v. Teva Pharm. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995)).

"All relevant properties of the compound must be considered in the obviousness calculus because when claimed properties differ from the prior art, those differences, if unexpected and significant, may lead to nonobviousness." *Sanofi-Aventis*, 821 F. Supp. 2d at 689 (D.N.J. 2011) (quoting *Eli Lilly*, 471 F.3d at 1378) (internal quotations omitted); *see also Cadence Pharm. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1376 (Fed. Cir. 2015) (finding evidence of nonobviousness with the claimed process achieving "somewhat unexpected" stability of several years over the prior art that only achieved several months' stability).

Every property of a claimed compound need not be fully recognized as of the filing date of the patent application to be relevant to nonobviousness. *Genetics Inst., LLC v. Novartis Vaccines & Diagnostics, Inc.*, 655 F.3d 1291, 1307 (Fed. Cir. 2011); *Knoll Pharm. Co. v. Teva Pharms. USA, Inc.*, 367 F.3d 1381, 1385 (Fed. Cir. 2004) ("There is no requirement that an invention's properties and advantages were fully known before the patent application was filed, or that the patent application contains all of the work done in studying the invention, in order for that work to be introduced into evidence in response to litigation attack."). Therefore, evidence of unexpected results may be used to rebut a case of prima facie obviousness even if that evidence was obtained after the patent's filing or issue date. *Genetics*, 655 F.3d at 1307; *Knoll*, 367 F.3d at 1385 ("Evidence [of unexpected results] developed after the patent grant is not

excluded from consideration, for understanding of the full range of an invention is not always achieved at the time of filing the patent application.").

2. Industry Skepticism

6. Whether evidence exists of industry skepticism for the commercial embodiments of the '620 and '428 patents.

Citation of Authorities

Evidence of industry skepticism weighs in favor of nonobviousness. *WBIP*, 829 F.3d at 1335. "If industry participants or skilled artisans are skeptical about whether or how a problem could be solved or the workability of the claimed solution, it favors nonobviousness. Doubt or disbelief by skilled artisans regarding the likely success of a combination or solution weighs against the notion that one would combine elements in references to achieve the claimed invention." *Id.*

Furthermore, post-invention skepticism can be used as evidence of nonobviousness. *See, e.g.*, *Knoll*, 367 F.3d at 1384–85.

3. Industry Praise

7. Whether the commercial embodiments of the '620 and '428 patents have received recognition and acceptance in the industry.

Citation of Authorities

Courts may look to praise for the patented invention in the relevant industry as indicating non-obviousness. *Pfizer Inc. v. Teva Pharm. U.S.A.*, Inc., 882 F. Supp. 2d 643, 672 (D. Del. 2012), *aff'd sub nom. Pfizer Inc. v. Teva Pharm. USA, Inc.*, 555 F. App'x 961 (Fed. Cir. 2014) ("A court assessing secondary considerations in an obviousness analysis may consider evidence of substantial industry recognition where it is presented to rebut the defendants' prima facie case of obviousness."). Relevant evidence of industry praise can include industry journals and

publications. *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1351 (Fed. Cir. 2012), *cert. dismissed*, 134 S. Ct. 2333, 189 L. Ed. 2d 205 (2014) (finding industry praise sufficient to support non-obviousness in the form of industry press linking benefits in industry to claimed invention). Substantial industry praise is compelling evidence of nonobviousness. *Crocs., Inc. v. ITC*, 598 F.3d 1294, 1311 (Fed. Cir. 2010).

4. Failure by Others to Make the Invention

8. Whether others skilled in the art of the claimed inventions tried and failed to make the claimed inventions.

Citation of Authorities

Evidence of failure "show[s] indirectly the presence of a significant defect in the prior art, while serving as a simulated laboratory test of the obviousness of the solution to a skilled artisan." *In re Cyclobenzaprine Hydrochloride*, 676 F.3d at 1082 (internal quotation marks and citation omitted). "In the pharmaceutical industry, the failure of others to develop a safe and effective drug often supports the nonobviousness of a drug that finally achieves success." *ViiV Healthcare UK Ltd. v. Lupin Ltd.*, 6 F. Supp. 3d 461, 496 (D. Del. 2013), *aff'd*, 594 F. App'x 686 (Fed. Cir. 2015) (internal quotation omitted).

The "failure of others" analysis first requires the Court to define the problem that the patent purports to solve, since objective criteria such as this "help[s] turn back the clock and place the claim[ ] in the context that led to [its] invention." *Mintz*, 679 F.3d at 1378. To this end, the Federal Circuit has cautioned against "us[ing] the invention to define the problem that the invention solves." *Id*. at 1377.

Evidence of the failures of others are generally more relevant when the unsucessful attempts occur after the publication of the asserted invalidating prior art. *See Graham*, 383 U.S.

at 36 (stating that arguments reading long-felt need and unsuccessful attempts of others at a time before the publication of the prior-art reference were irrelevant).

In fact, "[b]ecause science necessarily builds upon past discoveries, failure of others after a patent's issue date may be more persuasive than failures that occur before." *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, No. CIV. 09-MD-2118-SLR, 2010 WL 3766530, at *2 (D. Del. Sept. 21, 2010) (rejecting argument that failures occurring after the issue date of the patent should be excluded and instead characterizing evidence of failures after the patent's issue date as "highly relevant to a finding of nonobviousness.").

5. Licensing

9. Whether a nexus exists between the patents-at-issue and the licensing activity of the subject matter.

Citation of Authorities

"Licenses taken under the patent in suit may constitute evidence of nonobviousness." *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). However, "the relevant inquiry is whether there is a nexus between the patent and the licensing activity itself, such that the factfinder can infer that the licensing 'arose out of recognition and acceptance of the subject matter claimed' in the patent." *S. Alabama Med. Sci. Found. v. Gnosis S.P.A.*, 808 F.3d 823, 827 (Fed. Cir. 2015) (quoting *In re GPAC Inc.*, 57 F.3d at 1580).

Even though "evidence that the licensee ultimately manufactured a product that embodies the claimed invention may be probative of a nexus between the claimed invention and the licensing activity, the patentee is not necessarily required to establish an independent nexus between those products and the claimed invention for the licensing activity to be relevant." *Id*. at 827–28.

6. Long-felt but Unmet Need

10. Whether the inventions of the '620 and '428 patents have fulfilled a long-felt need.

Citation of Authorities

Evidence that there was a long felt and unsolved need in the industry for the solution offered by the patented invention, may support a showing of nonobviousness. *WBIP*, 829 F.3d at 1332 (holding that "a long felt but unresolved need tends to show nonobviousness because it is reasonable to infer that the need would have not persisted had the solution been obvious.").

Long-felt need is analyzed based on the date when the problem to be solved was identified. *Texas Instruments Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993) (holding that "long-felt need is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem."). Determining whether a long-felt need is unmet must be judged as of the filing date of the patent application and not the date that the patented product is first introduced into the market, if that date of market entry is later than the filing date. *Procter & Gamble Co.*, 566 F.3d at 998 (rejecting accused infringer's argument that long-felt need should be judged as of the time when the invention becomes available to the public to satisfy the need, but instead is determined as of the application filing date).

"Long-felt need is closely related to the failure of others. Evidence is particularly probative of obviousness when it demonstrates both that a demand existed for the patented invention, and that others tried but failed to satisfy that demand." *In re Cyclobenzaprine Hydrochloride*, 676 F.3d at 1082; *see also In re Piasecki*, 745 F.2d 1468, 1475 (Fed. Cir. 1984) (finding nonobviousness where the evidence demonstrated "a failure of others to provide a feasible solution to a longstanding problem."); *Alco Standard Corp. v. Tenn. Valley Auth.*, 808 F.2d 1490, 1500 (Fed. Cir. 1986) (affirming a nonobviousness finding where the evidence

showed that the relevant industry had searched for more than a decade for a reliable solution and that major manufacturers in the industry had tried but failed to develop such a solution). "Because a desire existed for such a product, researchers, presumably, would have created one if they were able to do so." *In re Cyclobenzaprine Hydrochloride*, 676 F.3d at 1083.

7. Commercial Success

11. Whether the commercial embodiments of the '620 and '428 patents were a commercial success.

Citation of Authorities

"The secondary consideration of commercial success is relevant because the law presumes an idea would successfully have been brought to market sooner, in response to market forces, had the idea been obvious to persons skilled in the art. Thus, the law deems evidence of (1) commercial success, and (2) some causal relation or 'nexus' between an invention and commercial success of a product embodying that invention, probative of whether an invention was non-obvious." *Bristol-Myers Squibb Co. v. Teva Pharm. USA, Inc.*, 923 F. Supp. 2d 602, 677 (D. Del. 2013) (citing *Merck & Co. v. Teva Pharm., USA, Inc.*, 395 F.3d 1364, 1376). A patentee can usually demonstrate commercial success by showing significant sales in a relevant market. *J.T. Eaton & Co. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997).

Evidence of commercial success includes the worldwide sales of the claimed invention. *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1461 (Fed. Cir. 1984) (holding that "[a] showing of commercial success of a claimed invention, wherever such success occurs, is relevant in resolving the issue of nonobviousness."); *see also 3Com Corp. v. D-Link Sys., Inc.*, 2007 WL 949596, at *4 (N.D. Cal. Mar. 27, 2007) (holding that "worldwide sales and profits are relevant to the affirmative defense of obviousness.").

In addition, courts have held that a product that meets a claim only under the doctrine of equivalents can support a secondary consideration of commercial success. *Dome Patent, L.P. v. Rea*, 59 F. Supp. 3d 52, 84 (D.D.C. 2014) (ruling that "the commercial success of a product that infringes a patent claim under the doctrine of equivalents can inform whether the patent claim is obvious."), *and aff'd sub nom.* Dome Patent L.P. v. Lee, 799 F.3d 1372 (Fed. Cir. 2015).

"A prima facie case of nexus is made when the patentee shows both that there is commercial success, and that the product that is commercially successful is the invention disclosed and claimed in the patent." *Crocs*, 598 F.3d at 1310–11. And "[o]nce the patentee demonstrates a prima facie nexus, the burden of coming forward with evidence in rebuttal shifts to the challenger." *Id.* at 1311; see also *Pfizer*, 882 F. Supp. 2d at 671.

In cases involving blocking patents, evidence of nexus between the invention and its commercial success is only undermined when the evidence shows that other competitors were actually precluded from entering the market by the asserted blocking patent. *See Merck*, 395 F.3d at 1376-77 ("[T]hat chain of inferences fails *on these facts*.") (emphasis added).

The evidence of nexus for commercial success is not undercut "simply because a patent holder also holds a prior art patent." *Takeda Chem. Indus., Ltd. v. Mylan Labs., Inc.*, 417 F. Supp. 2d 341, 387 n.77 (S.D.N.Y. 2006), *aff'd*, 549 F.3d 1381 (Fed. Cir. 2008) (rejecting defendant's contention that nexus for commercial success was undermined by the patent holder's right to exclude others from making the closest prior art compounds); *see also Otsuka Pharm. Co. v. Sandoz, Inc.*, 2010 WL 4596324, *26 (D.N.J. Nov. 15, 2010), *aff'd*, 678 F.3d 1280 (Fed. Cir. 2012) (rejecting defendants' contention that a prior patent foreclosed competitors from investigating derivatives of the previously claimed compound and finding commercial success was compelling evidence of nonobviousness).

In fact, prior art patents are not considered blocking when the evidence shows that "competitors had every opportunity to develop new compounds that were improvements over the compounds [] disclosed." *Takeda Chem. Indus.*, 417 F. Supp. 2d at 387.

Additionally, a blocking patent is only relevant to the commercial success analysis when the asserted blocking patents expired after the alleged commercial success. *See Merck*, 395 F.3d at 1376 (commercial sales beginning 2003, blocking patent exclusivity expiration 2008); *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 740 (Fed. Cir. 2013) (commercial sales beginning in 2007, blocking patent expiration in 2010); *Warner Chilcott Co., LLC v. Teva Pharm. USA, Inc.*, 37 F. Supp. 3d 731, 739 (D. Del. 2014), *aff'd*, 594 F. App'x 630 (Fed. Cir. 2014) (commercial sales beginning in 2005, blocking patent expiration in 2013).

8. Copying

12. Whether the copying of the commercial embodiments of the '620 and '428 patents demonstrate nonobviousness.

Citation of Authorities

"Copying may indeed be another form of flattering praise for inventive features, and thus evidence of copying tends to show nonobviousness." *WBIP*, 829 F.3d at 1336 (internal citations omitted); *Transocean*, 699 F.3d at 1352 (finding evidence of copying helped show nonobviousness even though the accused infringer may have copied the patented feature based on a belief of invalidity). "The fact that a competitor copied technology suggests it would not have been obvious." *WBIP*, 829 F.3d at 1336.

While the Federal Circuit has held that "evidence of copying in the ANDA context is not probative of nonobviousness because a showing of bioequivalence is required for FDA approval," *Bayer Healthcare Pharm., Inc. v. Watson Pharm., Inc.*, 713 F.3d 1369, 1377 (Fed.

Cir. 2013), it has not addressed the scenario where there is evidence of copying by competitors in other countries that do not require FDA approval.

II. Patent Validity: Written Description and Enablement

13. Whether Apotex can prove by clear and convincing evidence that the ’620 and ’428 patents do not enable a person of ordinary skill in the art to make and use the claimed invention.

Citation of Authorities

A patent must provide a sufficient description of the claimed invention to permit or enable a person of ordinary skill in the art to make and use the claimed invention. 35 U.S.C.A. § 112. “[T]his statutory language mandates satisfaction of two separate and independent requirements: an applicant must both describe the claimed invention adequately and enable its production and use.” *Allergan, Inc. v. Sandoz Inc.*, 796 F.3d 1293, 1307–08 (Fed. Cir. 2015).

This requirement is met when one skilled in the art, having read the specification, could practice the invention without “undue experimentation” at the time of filing the application. *In re Wands*, 858 F.2d 731, 736–37 (Fed. Cir. 1988). The following factors may be considered when determining if a disclosure requires undue experimentation: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *Id.* at 737.

These factors, however, are not mandatory. *Cephalon, Inc. v. Watson Pharm., Inc.*, 707 F.3d 1330, 1336-39 (Fed. Cir. 2013). Although experimentation must not be undue, a reasonable amount of routine experimentation required to practice a claimed invention does not violate the

enablement requirement. *Id.* (stating that "extensive experimentation does not necessarily render the experiments unduly extensive where the experiments involve repetition of known or commonly used techniques."). Therefore, "the focus is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance." *Id.* at 1339 (internal quotations omitted).

For example, the mere potential need for clinical studies, without more, is not dispositive to the determination of undue experimentation. *Id.* at 1338-39 (stating that "the fact that a clinician's involvement may be necessary to determine effective amounts of the single compound effervescent agent . . . does not itself constitute undue experimentation."); *see also Ortho–McNeil*, 520 F.3d at 1365–66 ("[E]ven if clinical trials informed the anticonvulsively effective amount, this record does not show that extensive or 'undue' tests would be required to practice the invention.").

Additionally, efficacy data is generally not required in a patent application. *Allergan, Inc. v. Sandoz Inc.*, 796 F.3d 1293, 1310 (Fed. Cir. 2015). "Similarly, a patentee is not required to provide actual working examples; [courts] have rejected enablement challenges based on the theory that there can be no guarantee that prophetic examples actually work, as '[t]he burden is on one challenging validity to show by clear and convincing evidence that the prophetic examples together with other parts of the specification are not enabling.'" *Alcon Research Ltd. v. Barr Labs., Inc.*, 745 F.3d 1180, 1189–90 (Fed. Cir. 2014) (quoting *Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750 F.2d 1569, 1577 (Fed. Cir. 1984)).

14. Whether Apotex can prove by clear and convincing evidence that the '620 and '428 patents do not reasonably convey to those skilled in the art that the inventors had possession of the invention as of the filing date.

Citation of Authorities

Written description is a question of fact, judged from the perspective of one of ordinary skill in the art as of the relevant filing date. *Tobinick v. Olmarker,* 753 F.3d 1220, 1226 (Fed. Cir. 2014), *reh'g denied* (July 3, 2014). "[T]he level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology." *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). "[T]he written description requirement does not demand either examples or an actual reduction to practice; a constructive reduction to practice that in a definite way identifies the claimed invention can satisfy the written description requirement." *Id.* at 1352.

The specification of the patent "need only reasonably convey to one skilled in the art that [the inventor] had possession of at least one embodiment" of the patent. *Tobinick*, 753 F.3d at 1227 (emphasis omitted). Compliance with the written-description requirement does not mandate using the identical terms in the specification as used in the claims. *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1345 (Fed. Cir. 2016).

For chemical cases, the requirement of conveying possession of the invention is often stated as requiring the written description to provide clear direction to reasonably lead those of skill to the claimed compounds. *Pfizer Inc. v. Teva Pharm. USA, Inc.*, 555 F. App'x 961, 968 (Fed. Cir. 2014) (holding that the written description requirement is satisfied when the

specification "details relevant identifying characteristics such that the compound can be distinguished from other compounds.").

III. Relief Against Apotex

15. Whether Plaintiffs are entitled to a permanent injunction restraining and enjoining Apotex (and all persons in active concert with Apotex) from engaging in the commercial manufacture, use, offer for sale, or sale of Apotex's Generic Product within the United States, or importation into the United States, during the terms of the '620 and '428 patents.

16. Whether Plaintiffs are entitled to an order pursuant to 35 U.S.C. § 271(e)(4)(A) that the effective date of any approval by U.S. Food and Drug Administration ("FDA") not be earlier than the latest expiration dates of the '620 and '428 patents, inclusive of any extension(s) and additional period(s) of exclusivity.

Citation of Authorities

The Supreme Court defines the factors for determining equitable relief: "[a]ccording to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief. A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006).

The Court has held that "[t]hese familiar principles apply with equal force to disputes arising under the Patent Act. . . . [T]he Patent Act expressly provides that injunctions 'may' issue 'in accordance with the principles of equity.'" *Id.* at 391-392 (quoting 35 U.S.C. § 283 (2006))

(providing that, "[t]he several courts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.").

Exhibit 5

EXHIBIT 5

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS, INC. and CIPLA LTD. Plaintiffs, v. APOTEX, INC. and APOTEX CORP. Defendants.	)	Civil Action No. 14-1453 (LPS)

DEFENDANTS' STATEMENT OF
ISSUES OF LAW THAT REMAIN TO BE LITIGATED

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EXHIBIT 5

Pursuant to Local Rule 16.3(c)(5), Defendants Apotex Corp. and Apotex, Inc. (together, "Apotex"), submit the following statement of issues of law that remain to be litigated.

To the extent that Defendants' Statement of Issues of Fact contains issues of law, those issues are incorporated herein by reference. Should the Court determine that any issue identified in this Exhibit as an issue of law is more appropriately considered an issue of fact, it should be treated as an issue of fact as if listed by Defendants in the Statement of Issues of Fact.

Defendants' identification of the issues of law that remain to be litigated is based on their understanding of the arguments Plaintiffs Cipla Ltd. and Meda Pharmaceuticals, Inc. (together, "Meda") are likely to make in attempting to respond to Defendants' invalidity case, based upon the pleadings and discovery in the action to date. To the extent that Plaintiffs intend or attempt to introduce different or additional legal arguments, Defendants reserve their right to contest those legal arguments, and to present any and all rebuttal evidence in response to those arguments, and will not be bound by this summary of issues of law to be litigated. Defendants further reserve the right to amend or revise these issues in view of any amendments or revisions of Plaintiffs' statements of issues of fact and/or law remaining to be litigated.

The two primary questions of law remaining to be litigated are: (1) Are the asserted claims invalid as obvious under 35 U.S.C. § 103? (2) Are the asserted claims invalid under 35 U.S.C. § 112 for failure to satisfy the requirements for written description and enablement?

I. REMAINING LEGAL ISSUES TO BE LITIGATED

The two primary questions of law remaining to be litigated are: (1) Are the asserted claims invalid as obvious under 35 U.S.C. § 103? (2) Are the asserted claims invalid under 35 U.S.C. § 112 for failure to satisfy the requirements for written description and enablement?

II. INVALIDITY

1. An invention that is patentable in the United States must satisfy the requirements for patentability, including 35 U.S.C. §§ 101, 102, 103 and 112.

2. Although 35 U.S.C. § 282 does not explicitly set forth a standard of proof for overcoming the presumption of validity, the patent challenger bears the burden of proving invalidity by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 95 (2011). Clear and convincing evidence is evidence that "could place in the ultimate factfinder an abiding conviction that the truth of [the] factual contentions are 'highly probable.'" *Colorado v. New Mexico*, 467 U.S. 310, 316 (1984); *see also Aventis Pharma S.A. v. Hospira, Inc.*, 743 F. Supp. 2d 305, 336 n.14 (D. Del. 2010).

A. Obviousness

3. "A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a).

4. A patent claim is invalid for obviousness under 35 U.S.C. § 103(a) if the differences between the subject matter of the claim and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the pertinent art." *In re Kahn*, 441 F.3d 977, 985 (Fed. Cir. 2006) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966)). The person of ordinary skill in the art is attributed with knowledge of all prior art references. *In re Sernaker*, 702 F.2d 989, 994 (Fed. Cir. 1983). The obviousness determination is made in view of the properly construed claims, the scope and content of the prior art, the differences between the prior art and the patent claim, and the level of ordinary skill in the pertinent art. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

5. Factors that may be considered in determining the level of ordinary skill in the art include: (1) the types of problems encountered in the art; (2) prior art solutions to those problems; (3) the rapidity with which innovations are made; (4) the sophistication of the technology involved; and (5) the educational level of active workers in the field. *Daiichi Sankyo Co., Ltd. v. Apotex Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007); *see also U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1564 (Fed. Cir. 1997).

6. A patent claim may be found obvious when there is a teaching, suggestion or motivation within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, select particular elements from those information sources, and combine them in the way they were combined by the inventor. *See KSR*, 550 U.S. at 418-20. Obviousness does not require an "absolute predictability of success," only a "reasonable expectation" that the combination will succeed. *See In re O'Farrell*, 853 F.2d 894, 903-04 (Fed. Cir. 1988). But, the obviousness inquiry is not limited to this teaching-suggestion-motivation ("TSM") test. *See KSR*, 550 U.S. at 419-20. "[T]he fact that a combination was obvious to try might show that it was obvious under § 103." *Id.* at 421. For example, "within the finite range of excipients disclosed to be suitable…, it would be obvious to try one such excipient characterized by the prior art" as having the desired property. *Senju Pharm Co. Ltd. v. Apotex, Inc.*, 717 F.Supp.2d 404, 422-23 (D. Del. 2010) (Robinson, J.).

7. In *KSR*, the Supreme Court held that rigid application of the TSM test for obviousness is inconsistent with 35 U.S.C. § 103 and Supreme Court precedent, particularly *Graham v. John Deere*. *KSR*, 550 U.S. at 413. The Supreme Court established that the subject matter of a patent claim can be proved obvious if there existed at the time of the alleged invention "a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 420. If "a person of ordinary skill can implement a predictable variation"

or if "a technique has been used to improve one device[] and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way," § 103 bars patentability. *Id.* at 417. "[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 420.

8. The framework established in *KSR* applies to formulation patents. *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1352 (Fed. Cir. 2008) ("The district court appropriately applied the *KSR* standard of whether the patents in suit represented an 'identified, predictable solution' and 'anticipated success,' the words of *KSR*, to the problem of producing extended release formulations having the pharmacokinetic properties in the claims."); *see also Novo Nordisk A/S v. Caraco Pharm. Labs.*, Ltd., 719 F.3d 1346, 1353 (Fed. Cir. 2013) (applying *KSR* to a combination product patent).

9. In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103. *KSR*, 550 U.S. at 420-21. The Court went on to explain: "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *Id.* at 421. "If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103." *Id.*

10. The Federal Circuit has held that "a suggestion, teaching, or motivation to combine the relevant prior art teachings to achieve the claimed invention does not have to be found explicitly in the prior art references sought to be combined, but rather may be found in any

number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself." *Pfizer v. Apotex*, 480 F.3d 1348, 1362 (Fed. Cir. 2007) (citation omitted). "It has long been the law that the motivation to combine need not be found in prior art references, but equally can be found in the knowledge generally available to one of ordinary skill in the art." *Cross Med. Prod., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1322 (Fed. Cir. 2005) (citations and quote marks omitted). "Evidence of a motivation to combine references need not be in the form of prior art. Evidence that a person of ordinary skill in the art recognized the same problem to be solved as the inventor and suggested a solution is, at the least, probative of a person of ordinary skill in the art's willingness to search the prior art in the same field for a suggestion on how to solve that problem." *Id.* (internal citation omitted); *see also In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("the understandings and knowledge of persons having ordinary skill in the art at the time of the invention" relevant to obviousness).

11. The Federal Circuit further reaffirmed that "case law is clear that obviousness cannot be avoided simply by a showing of some degree of unpredictability in the art so long as there was a reasonable probability of success." *Id.* at 1364. "[T]he expectation of success need only be reasonable, not absolute." *Id.* In other words, to establish a claim obvious, "[o]nly a reasonable expectation of success, not a guarantee, is needed." *Id.* The Federal Circuit further declared that "patentability is not imparted where 'the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success.'" *Id*. at 1369.

12. Additionally, "[t]he fact of near-simultaneous invention, though not determinative of statutory obviousness, is strong evidence of what constitutes the level of ordinary skill in the art." *Ecolochem, Inc. v. S. California Edison Co.*, 227 F.3d 1361, 1379 (Fed. Cir. 2000) (citation and quote marks omitted).

13. With respect to the formulation arts, the Federal Circuit has reversed a district court "finding that there was no reasonable expectation of success in view of the general unpredictability of the formulation arts and particularized, yet irrelevant, difficulties associated with the development of the drug product." *Allergan, Inc. v. Sandoz Inc.*, 726 F.3d 1286, 1292-93 (Fed. Cir. 2013).

14. Additionally, when a "claimed limitation [is] an 'inherent property' of a formulation that 'adds nothing of patentable consequence,' it is inherently disclosed by the prior art formulation." *PAR Pharmaceutical, Inc. v. TWI Pharmaceuticals, Inc.*, 773 F.3d 1186, 1195 (Fed. Cir. 2014) (quoting *In re Kao*, 639 F.3d 1057, 1070 (Fed. Cir. 2011)). If a challenging party shows that a claim limitation "necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art," then a finding of obviousness is appropriate. *Id.* at 1196.

15. The Federal Circuit has also held that where it "was common at the time of the invention to provide [two drugs] to a patient in serial fashion" and where it was "taught that by combining drugs in a fixed-combination formulation, patient compliance could be increased," then it is "clear error" to find that there was no motivation to combine. *Allergan*, 726 F.3d at 1292. Even where both drugs have potential side effects and where there are "different dosing regimens in commercially available forms" of the individual drugs, that is insufficient to render the invention nonobvious in light of such a clear motivation to combine. *Id.*

16. Additionally, the existence of alternative possible combination products does not render any particular combination non-obvious. As the Federal Circuit has explained: "Our cases have recognized the 'mere disclosure of more than one alternative' does not amount to teaching away from one of the alternatives where the reference does not 'criticize, discredit, or otherwise discourage the' solution presented by the disclosure." Moreover, "a motivation to use the

teachings of a particular prior art reference need not be supported by a finding that that feature be the 'preferred, or the most desirable.' Indeed, we have found a reference to not teach away when, for example, it described a particular composition 'as somewhat inferior to some other product for the same use.'" *Apple Inc. v. Samsung Electronics Co.*, Ltd., 816 F.3d 788, 801-02, 117 U.S.P.Q.2d (Fed. Cir. 2016).

17. Lead compound analysis applies in cases involving new chemical compounds. "A lead compound is considered the starting point for further development of a pharmaceutical *compound*[.]" *Endo Pharm. Inc. v. Mylan Pharm. Inc.*, 2014 WL 334178, at *18 (D. Del. Jan. 28, 2014) (emphasis added). "To establish obviousness in cases involving new chemical compounds, the accused infringer must identify some reason that would have led a chemist to modify a known compound. Generally, an obviousness inquiry concerning such 'known compounds' focuses on the identity of a 'lead compound.'" *Bristol-Myers Squibb Co. v. Teva Pharm. USA, Inc.*, 752 F.3d 967, 973 (Fed. Cir. 2014), *cert. denied*, 135 S. Ct. 2050, 191 L. Ed. 2d 956 (2015); *see also Eisai Co. v. Dr. Reddy's Labs., Ltd.*, 533 F.3d 1353, 1359 (Fed. Cir. 2008) ("[P]ost-KSR, a prima facie case of obviousness for a chemical compound still, in general, begins with the reasoned identification of a lead compound."); *Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1291 (Fed. Cir. 2012) ("Our case law demonstrates that whether a new chemical compound would have been prima facie obvious over particular prior art compounds ordinarily follows a two-part inquiry. First, the court determines whether a chemist of ordinary skill would have selected the asserted prior art compounds as lead compounds, or starting points, for further development efforts.").

18. However, "[i]n the context of a composition or formulation patent . . . the term 'reference composition' is more appropriate than 'lead compound' when considering obviousness for a chemical composition that the infringer deliberately imitates." *Unigene Labs.*,

Inc. v. Apotex, Inc., 655 F.3d 1352, 1361-62 (Fed. Cir. 2011); *id.* at 1362 (comparing the ingredients in a patented formulation to their functions as preservatives, absorption enhancers, and surfactants in a prior "reference composition").

B. Secondary Considerations

19. A prima facie case of invalidity based on obviousness can be rebutted by showing secondary considerations of nonobviousness. *Graham*, 383 U.S. at 17-18; *Geo M. Martin Co. v. Alliance Mach. Sys. Int'l*, 618 F.3d 1294, 1300, 1305 (Fed. Cir. 2010).

20. To weigh against a finding of obviousness, such "objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support." *See, e.g., Asyst Techs. v. Emtrak, Inc.*, 544 F.3d 1310, 1316 (Fed. Cir. 2008). Secondary considerations can also affirmatively support a finding of obviousness. *Graham*, 383 U.S. at 17-18 ("As indicia of obviousness or nonobviousness, these inquiries may have relevancy.") (emphasis added). In addition, secondary considerations must be commensurate in scope with the claimed subject matter. *See Kao*, 639 F.3d at 1068; *In re Hiniker*, 150 F.3d 1362, 1369 (Fed. Cir. 1998).

21. The patentee bears the burden of producing evidence to establish the existence of secondary considerations supporting non-obviousness. *See Novo Nordisk v. Caraco Pharms. Labs. Ltd.*, 719 F.3d 1346, 1353 (Fed. Cir. 2013) ("The presumption of validity does not relieve the patentee of any responsibility to set forth evidence in opposition to a challenger's prima facie case which, if left unrebutted, would be sufficient to establish obviousness"). In this regard, "argument and conjecture [by the patentee] are insufficient." *Demaco Corp. v. F. Von Langsdorff Licensing, Ltd.*, 851 F.2d 1387, 1393 (Fed. Cir. 1988) (quotations and citation omitted). "These legal inferences or subtests . . . focus attention on economic and motivational rather than

technical issues and are, therefore, more susceptible of judicial treatment than are the highly technical facts often present in patent litigation." *Graham*, 383 U.S. at 35-56.

22. A "nexus between the merits of the claimed invention and evidence of secondary considerations is required in order for the evidence to be given substantial weight in an obviousness decision." *Muniauction*, 532 F.3d at 1327 (citations omitted). "Where the offered secondary consideration actually results from something other than what is both claimed and novel in the claim, there is no nexus to the merits of the claimed invention." *Kao*, 639 F.3d at 1068 (quotations omitted); Even "impressive" evidence of secondary considerations is not "entitled to weight" unless "it is relevant to the claims at issue." *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994).

23. While evidence of these factors must be considered, such secondary considerations will not overcome a strong showing that the claimed invention was prima facie obvious. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) ("[G]iven the strength of the prima facie obviousness showing, the evidence on secondary considerations was inadequate to overcome a final conclusion that [the claim] would have been obvious."); *see, e.g., Agrizap, Inc. v. Woodstream Corp*., 520 F.3d 1337, 1344 (Fed. Cir. 2008) ("[O]bjective evidence of nonobviousness simply cannot overcome . . . a strong prima facie case of obviousness."); *Sundance, Inc. v. Demonte Fabricating Ltd.*, 550 F.3d 1356, 1368 (Fed. Cir. 2008) (same).

24. Evidence of unmet needs and commercial success (discussed in more depth below) are relevant to the obviousness analysis because if such a medical or financial incentive to practice the claimed invention existed as of the priority date, the fact that a person of ordinary skill in the art did not do so may tend to show the claimed invention is not obvious. *E.g.*, *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1376 (Fed. Cir. 2005) ("Commercial success is

relevant because the law presumes an idea would successfully have been brought to market sooner, in response to market forces, had the idea been obvious to persons skilled in the art."). Therefore, where at the time of invention a patent existed that would have "blocked" others from making the invention, evidence of unmet needs and commercial success are of limited probative value. *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 740 (Fed. Cir. 2013) ("Where 'market entry by others was precluded [due to blocking patents], the inference of non-obviousness of [the asserted claims], from evidence of commercial success, is weak.'" (quoting *Merck*, 395 F.3d at 1377) (brackets in original)); *see also Warner Chilcott Co, LLC. v. Teva Pharm. USA, Inc.*, 37 F. Supp. 3d 731, 739 (D. Del. 2014) (Stark, J.), *aff'd*, 594 F. App'x 630 (Fed. Cir. 2014).

i. Long-Felt But Unmet Need

25. Evidence that an invention "satisfied a long-felt and unmet need that existed on the patent's filing date is a secondary consideration of nonobviousness." *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1332 (Fed. Cir. 2009); *see also KSR*, 550 U.S. at 398-399 (termed "long felt but unsolved need"). Establishing long-felt need requires evidence that an art-recognized problem existed for a long period of time without a solution. *In re Gershon*, 372 F.2d 535, 539 (C.C.P.A. 1967). "[O]nce a long-felt need is established, evidence must show that the claimed invention satisfied that need." *In re Gardner*, 449 Fed. App'x 914, 918 (Fed. Cir. 2011) (citing *In re Cavanagh*, 436 F.2d 491, 496 (C.C.P.A. 1971)). It has also been recognized that "evidence of long-felt need can cut two ways: On the one hand, long-felt need might be considered evidence of nonobviousness, but on the other hand, to the extent that other factors support obviousness, the existence of 'market pressure to solve a problem' can support a finding of obviousness . . . ." *Shuffle Master, Inc. v. MP Games LLC*, 553 F. Supp. 2d 1202, 1225 (D. Nev. 2008) (citing *KSR*, 550 U.S. at 420-421).

26. Federal Circuit precedent "requires that the applicant submit actual evidence of long-felt need, as opposed to argument." *In re Kahn*, 441 F.3d at 990-91. "[A]bsent a showing of long-felt need or the failure of others, the mere passage of time without the claimed invention is not evidence of nonobviousness." *Id.* (citing *Iron Grip Barbell Co. v. USA Sports, Inc*., 392 F.3d 1317, 1325 (Fed. Cir. 2004)). A lack of demand because of general satisfaction with the prior art is contrary to a finding of long-felt need. *Nat'l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd*., 357 F.3d 1319, 1340 (Fed. Cir. 2004) ("finding of no customer demand is flatly contradictory with [the district court's] conclusion that a long-felt need existed"). Further, where the difference between the prior art and the claimed invention are minimal, "it cannot be said that any long-felt need was unsolved." *Geo. M. Martin*, 618 F.3d at 1304.

27. Long-felt need is analyzed as of the date of an articulated identified problem and evidence of efforts to solve that problem." *Tex. Instruments Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993). An assertion of long-felt need must be rejected where the patentee "provided no evidence to explain how long [any relevant] need was felt, . . . when the problem first arose," or how the "need [was] alleviated by the patent." *Perfect Web Techs*., 587 F.3d at 1332. Even if there is evidence that the "claimed [invention] may have been beneficial," that evidence is not probative if "others had previously solved the long-felt need." *In re PepperBall Techs., Inc*., 469 F. App'x 878, 882-83 (Fed. Cir. 2012); *see also Newell Co. v. Kenney Mfg. Co*., 864 F.2d 757, 768 (Fed. Cir. 1988) ("[O]nce another supplied the key element, there was no long-felt need . . . .").

ii. Unexpected Results

28. For a patentee to rely on unexpected results as secondary evidence of nonobviousness, "the results must be shown to be unexpected compared with the closest prior art." *Abbott Labs. v. Andrx Pharms., Inc*., 452 F.3d 1331, 1345 (Fed. Cir. 2006) (citing *In re*

Baxter Travenol Labs., 952 F.2d 388, 392 (Fed. Cir. 1991)); *see also In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997) (opining that the patentee must "show that the claimed invention exhibits some superior property or advantage that a person of ordinary skill in the relevant art would have found surprising or unexpected").) A party advancing evidence of unexpected results must, therefore, provide evidence of what would have been expected by a skilled artisan. *Pfizer*, 480 F.3d at 1371. Only by comparison to what would have been expected can the patentee then show that its claimed invention has superior properties that were unexpected. *Id.*

29. "It is well settled that unexpected results must be established by factual evidence." *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). "Mere argument or conclusory statements" by the patentee "do[] not suffice." *Id.*

30. "Unexpected results that are probative of non-obviousness are those that are different in kind and not merely in degree from the results of the prior art." *Galderma Labs*., 737 F.3d at 739 (citations omitted); *see also Iron Grip Barbell*, 392 F.3d at 1322-23 ("[E]ven though [a] modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art, unless the claimed [invention] produce[s] a new and unexpected result which is different in kind and not merely in degree from the results of the prior art.") (quotation omitted); *Bristol-Myers Squibb Co. v. Teva Pharm*., 752 F.3d 967, 977 (Fed. Cir. 2014) ("[A] 'mere difference in degree' is insufficient.").

31. Moreover, just as unexpected results may provide evidence of nonobviousness, "[e]xpected beneficial results" provide additional "evidence of obviousness." *Gershon*, 372 F.2d at 537.

iii. Industry Praise

32. Evidence of praise is probative evidence of non-obviousness where it is "linked to the patented invention." *Geo. M. Martin*, 618 F.3d at 1305; *Power-One, Inc. v. Artesyn Techs., Inc*., 599 F.3d 1343, 1352 (Fed. Cir. 2010); *Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1311 (Fed. Cir. 2010) (finding that "substantial industry praise for the claimed invention and the products covered by the claimed invention" constitutes additional proof of nonobviousness); *Kinetic Concepts*, 688 F.3d at 1367-68, 1370 (upholding jury's finding of "wide spread acceptance in the field" as evidence of nonobviousness). However, "industry praise of what [is] clearly rendered obvious by [prior-art] is not a persuasive secondary consideration." *Bayer Healthcare Pharm., Inc. v. Watson Pharm., Inc.*, 713 F.3d 1369, 1377 (Fed. Cir. 2013).

33. Identified evidence of praise must be objective, and not self-serving statements by the patentee or related entities. In *Geo M. Martin*, the Federal Circuit rejected evidence of industry praise when it was offered in the form of 1) "self-serving" statements made by the patentee's own president and 2) an email, drafted by an employee of the plaintiff. 618 F.3d at 1305.

34. Similarly, the Federal Circuit in *Bayer Healthcare Pharms., Inc. v. Watson Pharms, Inc*., found the industry praise and evidence of other secondary indicia of nonobviousness "legally insufficient." 713 F.3d at 1377. In Bayer, the patentee claimed that its invention "was widely praised by experts in the [relevant] field." *Id.* To support this statement, Bayer proffered journal citations that referenced information from Bayer's publications, and one article authored by the first-named inventor of the patent that described the claimed method as an "innovative strategy." *Id.* The court found that these "bare journal citations and self-referential commendation" fell well short of demonstrating true industry praise. *Id.*

35. For a patentee to rely on industry praise as secondary evidence of nonobviousness, the patentee "must establish a nexus between the industry praise and the

patented technology." *Cot'n Wash Inc. v. Henkel Corp*., 56 F. Supp. 3d 626, 650 (D. Del. 2014) (citing *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc*., 699 F.3d 1340, 1351 (Fed. Cir. 2012). Without such nexus, evidence of industry praise is accorded little weight. *See Merck & CIE v. Gnosis S.P.A*., 808 F.3d 829, 838 (Fed. Cir. 2015).

36. A statement intended to generate interest in a product also is not evidence of industry praise. *Richardson-Vicks*, 122 F.3d at 1484 n.3 ("This advertisement, according to RVI, represents 'industry acclaim' of the patented invention that constituted 'strong objective evidence of nonobviousness.' We fail to appreciate the significance of this statement which is intended to generate interest in the product, not prove its superiority.").

iv. Commercial Success

37. Commercial success is only relevant to an obviousness analysis if there is "some causal relation or 'nexus' between an invention and commercial success of a product embodying that invention." *Senju Pharm*, 717 F. Supp. 2d at 426 (citing *Merck & Co. v. Teva Pharms. USA, Inc*., 395 F.3d 1364, 1376 (Fed. Cir. 2005)).

38. Where a prior patent or other regulatory roadblock prohibits persons other than the patentee from commercializing ideas in the prior art that have later been patented, there is no causal relation between the claimed invention and the commercial success of a product embodying the invention. *Id.*

39. Where a prior patent blocked persons other than the patentee from making the claimed invention, the non-obviousness of the invention is not the explanation for why a rational economic actor failed to make the invention despite the economic incentives to do so. *Merck*, 395 F.3d at 1376-77; *Galderma Labs.*, 737 F.3d at 740; *Warner Chilcott*, 37 F. Supp. 3d at 739.

40. Where any commercial success is attributable to a patentee's marketing strategy rather than the features of the claimed invention, there is not a nexus between such commercial

success and the claimed invention. Where the commercial success of a product is attributable to an unclaimed feature of the product or a feature that was known in the prior art, such success is not pertinent to a legal analysis of obviousness. *Ormco Corp. v. Align Tech., Inc*., 463 F.3d 1299, 1312 (Fed. Cir. 2006).

41. Likewise, licensing activity is entitled to little weight for purposes of commercial success where the patentee cannot show a nexus between the licenses and the claimed invention. *In re GPAC, Inc*., 57 F.3d 1573, 1580 (Fed. Cir. 1995).

42. "A prima facie case of nexus is made when the patentee shows both that there is commercial success, and that the product that is commercially successful is the invention disclosed and claimed in the patent." *Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1310–11 (Fed. Cir. 2010). "Once the patentee demonstrates a prima facie nexus, the burden of coming forward with evidence in rebuttal shifts to the challenger." *Id.* at 1311; *see also Pfizer Inc. v. Teva Pharm. U.S.A., Inc*., 882 F. Supp. 2d 643, 671 (D. Del. 2012) (Sleet, J.).

v. Failure of Others

43. Evidence showing that others in the field tried and failed to develop inventions similar to the patentee's can support a finding of non-obviousness. *In re Cyclobenzaprine*, 676 F.3d at 1082.

44. When asserted as a secondary consideration of nonobviousness, "[t]he purpose of evidence of failure of others is to show `indirectly the presence of a significant defect in the prior art, while serving as a simulated laboratory test of the obviousness of the solution to a skilled artisan. '" *Id.* (quoting *Symbol Techs., Inc. v. Opticon, Inc*., 935 F.2d 1569, 1578-79 (Fed. Cir. 1991)). "This is particularly true when the evidence indicates that others found development of the claimed invention difficult and failed to achieve any success. " *In re Cyclobenzaprine*, 676 F.3d at 1081; *see also Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp*., 320 F.3d

1339, 1354 (Fed. Cir. 2003) (finding "there can be little better evidence negating an expectation of success than actual reports of failure").

45. "Longfelt need is closely related to the failure of others. Evidence is particularly probative of obviousness when it demonstrates both that a demand existed for the patented invention, and that others tried but failed to satisfy that demand." *In re Cyclobenzaprine*, 676 F.3d at 1082; *see also Mitsubishi Chem. Corp. v. Barr Labs., Inc.*, 718 Supp. 2d 382, 442 (S.D.N.Y. 2010, aff'd, 435 F. App'x 927 (Fed. Cir. 2011) (finding long felt unmet need where "previous alternatives for treating HIT proved unsuccessful in view of the fact that thrombotic event rates remained high in these patients together with the various disadvantages associated with these agents"). "This is particularly true when the evidence indicates that others found development of the claimed invention difficult and failed to achieve any success." *In re Cyclobenzaprine*, 676 F.3d at 1081; *see also Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp*., 320 F.3d 1339, 1354 (Fed. Cir. 2003) (finding "there can be little better evidence negating an expectation of success than actual reports of failure").

46. Even if a plaintiff can meet its burden of proving that others have tried to solve the same problem but failed, the failure of others is probative only where the evidence shows that the prior failure occurred because "the devices lacked the claimed features.'" *Ormco Corp. v. Align Tech., Inc*., 463 F.3d 1299, 1313 (Fed. Cir. 2006).

vi. Skepticism

47. "The potential for FDA approval also may properly be considered . . . in determining whether one of ordinary skill would be motivated to develop a drug product and whether there was skepticism regarding the efficacy of such a product." *Allergan*, 726 F.3d 1286, 1291–92 (Fed. Cir. 2013). Any skepticism, therefore, must be regarding the efficacy of a product and not some other element of a product's development program.

48. However, "[t]here is no requirement that one of ordinary skill have a reasonable expectation of success in developing [the FDA-approved commercialized product]" as of the priority date. *Allergan*, 726 F.3d at 1292; *Hoffmann-LaRoche*, 748 F.3d at 1331. Additionally, when there is "no evidence that [the skeptics] were persons of skill in the relevant art," that is not evidence of industry skepticism. *Warner Chilcott Co., LLC v. Teva Pharm. USA, Inc.*, 89 F. Supp. 3d 641, 671 (D.N.J. 2015), *aff'd*, 642 F. App'x 996 (Fed. Cir. 2016).

49. Industry skepticism, moreover, must be before the date of invention. "Objective evidence of nonobviousness can include copying, long felt but unsolved need, failure of others, commercial success, unexpected results created by the claimed invention, unexpected properties of the claimed invention, licenses showing industry respect for the invention, and *skepticism of skilled artisans before the invention*." *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1368 (Fed. Cir. 2013) (emphasis added); *see also AstraZeneca LP v. Breath Ltd.*, 88 F. Supp. 3d 326, 382–83 (D.N.J.) ("'[S]kepticism of skilled artisans before the invention' can demonstrate nonobviousness.") (citing cases)), *aff'd*, 603 F. App'x 999 (Fed. Cir. 2015)

50. Further, "skepticism expressed in a private communication is likely less considered and less self-scrutinized than statements of skepticism intended to be published to the scientific community." *ViiV Healthcare UK Ltd. v. Lupin Ltd.*, 6 F. Supp. 3d 461, 497 (D. Del. 2013), *aff'd*, 594 F. App'x 686 (Fed. Cir. 2015).

C. Written Description

51. The "written description" requirement of 35 U.S.C. § 112, paragraph 1 says that "[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make

and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

52. To satisfy the "written description" requirement, the specification must "clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharm., Inc. v. Eli Lilly & Co*., 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). "[T]he purpose of the written description requirement is to ensure that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor's contribution to the field of art as described in the patent specification." *Id.* at 1353-54 (citations omitted). Written description is "part of the quid pro quo of the patent grant and ensures that the public receives a meaningful disclosure in exchange for being excluded from practicing an invention for a period of time." *Id.* at 1354.

53. Courts apply an objective analysis for written description, evaluating the four corners of the specification from the perspective of a person having ordinary skill in the art. *Ariad*, 598 F.3d at 1351. "Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed." *Id.* "[A]ctual 'possession' or reduction to practice outside of the specification is not enough." *Id.* at 1352. "Rather, as stated above, it is the specification itself that must demonstrate possession." *Id*. A description that merely renders the claimed subject matter obvious does not satisfy the written description requirement. *Lockwood v. Am. Airlines, Inc*., 107 F.3d 1565, 1571-72 (Fed. Cir. 1997). Written description is a question of fact and "requires more than a generic statement of an invention's boundaries." *Ariad*, 598 F.3d at 1349, 1351.

D. Enablement

54. Section 112 contains an enablement requirement separate from the written description requirement. *See, e.g., Ariad*, 598 F.3d at 1351. A specification lacks enablement if it

fails to teach one of skill in the art "how to make and use the full scope of the claimed invention without 'undue experimentation.'" *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 723 F.3d 1363, 1370 (Fed. Cir. 2013) (citations omitted); *see also Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (citing *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)).

55. The knowledge of the person of skill in the art cannot substitute for the disclosure of the novel aspects of the invention, particularly in the pharmaceutical arts. *See Alza Corp. v. Andrx Pharms., LLC*, 603 F.3d 935, 941-42 (Fed Cir. 2010). Claims that depend from independent claims lacking enablement are also invalid. *Nat'l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1198 (Fed. Cir. 1999).

56. The factors used to determine whether a patent specification requires undue experimentation to practice the claims include "(1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims." *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

57. In order to satisfy the enablement requirement of section 112, an applicant must describe the manner of making and using the invention 'in such full, clear, concise, and exact terms as to enable any person skilled in the art ... to make and use the same ....'" *Rasmusson v. SmithKline Beecham Corp.*, 413 F.3d 1318, 1322 (Fed. Cir. 2005) (citing 35 U.S.C. § 112, para. 1). "In explaining what constitutes a sufficient showing of utility in the context of the enablement requirement, this court has stated that an applicant's failure to disclose how to use an invention may support a rejection under … section 112, paragraph 1 for lack of enablement … 'when there is a complete absence of data supporting the statements which set forth the desired results of the claimed invention.'" *Id.* at 1323 (citing cases). Thus, "where there is 'no indication that one

skilled in [the] art would accept without question statements [as to the effects of the claimed drug products] and no evidence has been presented to demonstrate that the claimed products do have those effects,' an applicant has failed to demonstrate sufficient utility and therefore cannot establish enablement." *Id.* (citing *Application of Novak*, 306 F.2d 924, 928 (C.C.P.A. 1962)).

Exhibit 6

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and CIPLA LTD., Plaintiffs, v. APOTEX INC and APOTEX CORP., Defendant.	C.A. No. 14-1453-LPS

WITNESSES PLAINTIFFS INTEND TO CALL
IN PERSON OR BY PRIOR SWORN TESTIMONY

I. EXPERT WITNESSES

Plaintiffs intend to call the following witnesses in person in their case-in-chief or in rebuttal during the upcoming trial. To the extent permitted by the Federal Rules of Evidence, Plaintiffs also reserve the right to introduce prior sworn testimony (e.g., deposition testimony) of any witness named below:

1. Dr. Michael Kaliner, M.D.
   Institute for Asthma and Allergy
   2 Wisconsin Circle, Suite 250
   Chevy Chase, MD 20815
2. Dr. Warner Carr, M.D.
   Allergy & Asthma Associates of Southern California
   27800 Medical Center Road. Suites 240 & 244
   Mission Viejo, CA 92691
3. Hugh David Charles Smyth, Ph.D.
   The University of Texas at Austin
   College of Pharmacy, Division of Pharmaceutics
   University Avenue
   1 University Station
   Austin, TX 78712
4. John Jarosz
   Analysis Group, Inc.
   800 17th Street, NW
   Suite 400
   Washington, DC 20006

Plaintiffs may call the following witnesses in person in their case-in-chief or in rebuttal during the upcoming trial. To the extent permitted by the Federal Rules of Evidence, Plaintiffs also reserve the right to introduce prior sworn testimony (e.g., deposition testimony) of any witness named below:

1. Matthew Herpin, Ph.D.
   The University of Texas at Austin
   College of Pharmacy, Division of Pharmaceutics
   University Avenue
   1 University Station
   Austin, TX 78712
2. Stephan Ogenstad, Ph.D.

Statogen Consulting LLC
Zebulon, NC 27597

II. NON-EXPERT WITNESSES

Plaintiffs intend to call the following witnesses in person in their case-in-chief or in rebuttal during the upcoming trial. To the extent permitted by the Federal Rules of Evidence, Plaintiffs also reserve the right to introduce prior sworn testimony (e.g., deposition testimony) of any witness named below:

1. Geena Malhotra
   Cipla Limited
   Lal Bahadur Shastri Marg,
   HMPL Surya Nagar, Vikhroli West
   Mumbai, Maharashtra 400079, India
2. Alexander D'Addio, Ph.D.
   Meda Pharmaceuticals, Inc.
   265 Davidson Avenue,
   Somerset, NJ 08873

Plaintiffs may call the following witnesses in person in their case-in-chief or in rebuttal during the upcoming trial. To the extent permitted by the Federal Rules of Evidence, Plaintiffs also reserve the right to introduce prior sworn testimony (e.g., deposition testimony) of any witness named below:

3. Patsy Jeffrey
   Cipla Limited
   Lal Bahadur Shastri Marg,
   HMPL Surya Nagar, Vikhroli West
   Mumbai, Maharashtra 400079, India
4. Ying Long, Ph.D
   Avomeen Analytical Services
   4840 Venture Dr.
   Ann Arbor, MI 48108

In addition, Plaintiffs may introduce the deposition testimony of one or more of the following fact or Rule 30(b)(6) witnesses, or call them live if available and if time permits:

1. Wan Jiang, Ph.D.
   Apotex Inc.

150 Signet Dr.
Toronto, Ontario
M9L 1T9
Canada

Exhibit 7

APOTEX WITNESS LIST

Apotex identifies the following witnesses whom it may call live or by deposition at trial. This list is not a commitment that Apotex will call any particular witness at trial, or a representation that any of the witnesses listed are available or will appear at trial. With respect to Plaintiffs' witnesses, Apotex reserves the right to introduce testimony through deposition or live examination, as appropriate. Apotex also reserves the right to call any witnesses listed or called by Plaintiff, and to revise this list in light of further rulings by the Court or any other changed circumstances. Apotex further reserves the right to call one or more additional witnesses whose testimony is necessary to establish authenticity or admissibility of any trial exhibit if the admissibility of the exhibit is challenged by Plaintiffs.

I. FACT WITNESSES

A. Third-Party Witnesses Who May Be Called To Testify

1. Donald Acetta (live or by deposition)
   Allergy & Allergy Care
   101 Industrial Park Road
   Suite 307
   Taunton, MA 02780

B. Defendants' Witnesses Who May Be Called to Testify

1. Wan Jiang (live or by deposition)
   Apotex, Inc.
   150 Signet Drive
   Toronto, Ontario
   M9L 1T9

C. Plaintiffs' Witnesses Who May Be Called To Testify

1. Nikhil Chopra (live or by deposition)
   Cipla Ltd.
   Lal Bahadur Shastri Road
   HMPL Surya Nagar, Vikhroli West
   Mumbai, Maharashtra 400079, India

2. Alexander D. D'Addio (live or by deposition)
Meda Pharmaceuticals
265 Davidson Ave.
Somerset, NJ 08873

3. Dennis Fuge (live or by deposition)
Meda Pharmaceuticals
265 Davidson Ave.
Somerset, NJ 08873

4. Jeffrey Hostler (live or by deposition)
Meda Pharmaceuticals
265 Davidson Ave.
Somerset, NJ 08873

5. Patsy Jeffery (live or by deposition)
Cipla Ltd.
Lal Bahadur Shastri Road
HMPL Surya Nagar, Vikhroli West
Mumbai, Maharashtra 400079, India

6. Geena Malhotra (live or by deposition)
Cipla Ltd.
Lal Bahadur Shastri Road
HMPL Surya Nagar, Vikhroli West
Mumbai, Maharashtra 400079, India

7. Joachim Maus (live or by deposition)
Meda Pharma GmbH & Co.
Benzstraße 1, 61352
Bad Homburg vor der Höhe, Germany

8. Sujeet Rajan (live or by deposition)
Cipla Ltd.
Lal Bahadur Shastri Road
HMPL Surya Nagar, Vikhroli West
Mumbai, Maharashtra 400079, India

II. EXPERT WITNESSES

Apotex identifies the following experts whom it expects to call as live witnesses at trial.[1] Apotex also incorporates by reference the above-listed fact witnesses as expert witnesses, to the extent the testimony of those fact witnesses may be considered hybrid fact/expert testimony.

1. Maureen D. Donovan (live)
   University of Iowa
   College of Pharmacy
   115 S. Grand Ave.
   Iowa City, IA 52242

2. Ramprakash Govindarajan (live)
   University of Iowa
   College of Pharmacy
   115 S. Grand Ave.
   Iowa City, IA 52242

3. Charles E. McCulloch (live)
   University of California, San Francisco
   Box 0569
   550 16th St.
   San Francisco, CA 941143

4. Glenn Newman (live)
   Baker Tilly
   One Liberty Place
   1650 Market Street, Suite 4500
   Philadelphia, PA 19103

5. Robert P. Schleimer (live)
   Northwestern University Feinberg School of Medicine
   Department of Medicine/Division of Allergy-Immunology
   240 E. Huron, Rm M-318
   Chicago, IL 60611

6. H. James Wedner (live)
   660 South Euclid
   Campus Box 8122
   St. Louis, MO 63110

[1] For all expert witnesses whom Plaintiffs have identified that they will call "live," Apotex reserves the right to introduce deposition testimony in the event that Plaintiffs inform Apotex that the witness will not be called live.

7. Jeffery Press (may call live or by deposition)
Baker Tilly
One Liberty Place
1650 Market Street, Suite 4500
Philadelphia, PA 19103

Exhibit 8

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and CIPLA LTD., Plaintiffs, v. APOTEX INC and APOTEX CORP., Defendant.	C.A. No. 14-1453-LPS

PLAINTIFFS' DEPOSITION DESIGNATIONS

ABBREVIATION AND FEDERAL RULE OF EVIDENCE
KEY TO THE OBJECTIONS

ABBREVIATION	OBJECTION	APPLICABLE RULE(S)
A	Requires authentication or identification	FRE 901
B	Best evidence rules prohibit introduction	FRE 1001-1002
C	Improper compilation of separate documents	FRE 403, 901
D	Improper designation (designation is neither a question or testimony)	FRE 401, 402
E	Improper examination (vague, ambiguous, loaded, leading, etc.)	FRE 402, 403, 602, 611
F	Lack of foundation/personal knowledge (including calls for speculation)	FRE 402, 403, 602, 611
H	Hearsay if offered for the truth of the matter asserted	FRE 801, 802
I	Incomplete document or testimony	FRE 106, 403
M	Offer or discussion for settlement or compromise	FRE 408
N	Exhibit not produced in discovery	FRE 403
O	Improper opinion testimony	FRE 701-704
P	Privileged or attorney work product	FRE 501, 502
R	Lack of relevance	FRE 401, 402
S	Summary requiring underlying data or information	FRE 1006
T	Beyond the scope of the Rule 30(b)(6) topic for which a witness has been designated	FRE 602, FRCP 30(b)(6)
U	Unduly prejudicial, wasteful, confusing, misleading or cumulative	FRE 403

Wan Jiang May 25, 2016			
Plaintiffs' Designations	**Apotex's Objections**	**Apotex's Counter-Designations**	**Plaintiffs' Objections to Apotex's Counter-Designations**
6:1-11			
16:8-11	R		
20:20-21:7			
24:7-15	F, A, MC		
29:9-30:7	F, E, MD		
33:12-18	F, E, R		
33:20-34:12	F, R		
35:13-36:4	F		
38:3-8	F, E, R		
38:14-19	F, E, R		
39:15-40:2	F, T, O		
40:5-14*	O, F		
50:13-21	O, F, E, T		
51:1-11	E, R		
57:18-58:11	F, R, MC		
65:13-21	F, R, MC		
67:9-68:10	F, E		
71:4-21	F, MC, R, O		
72:22-73:11	F, H, E, MC		
81:7-15	F		
83:7-17	F		

*Includes testimony from June 16, 2016 errata

Exhibit 9

The following abbreviations are used for Plaintiffs' objections to Apotex's Deposition Designations.

Abbreviation	Objection	Applicable Rule(s)
A	Argumentative	
AT	Attorney objections not removed	
C	Compound	
D	Duplicative/Cumulative	
F	Lack of Foundation	FRE 602
H	Hearsay/Improper Use of Deposition	FRE 801-802; FRCP 32
I	Improper/Incomplete Designation	FRE 106; FRCP 32(a)(6)
IC	Improper Counter-Designation	FRE 106; FRCP 32(a)(6)
ID	Improper Designation of a Witness To Be Called Live	
IO	Improper Lay or Expert Opinion	FRE 701-703
K	Lack of Personal Knowledge/Incompetent	FRE 602
LC	Improper Legal Conclusion	FRE 403
M	Misleading/Mischaracterizes Prior Testimony	
MD	Mischaracterizes Underlying Document	FRE 401-403
NR	Nonresponsive	
P	Prejudice/Confusion/Delay/Waste of Time	FRE 403
PR	Privilege	
R	Relevance	FRE 401-402
S	Calls for Speculation	FRE 602
SC	Beyond the Scope of the Witness's Testimony as a Corporate Representative	

V	Vague/Ambiguous/Overbroad	

Plaintiffs reserve the right to make additional objections to any exhibit, including objections as to foundation, depending on the testimony Apotex seeks to introduce.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and CIPLA LTD.,	)	
Plaintiffs,	)	
v.	)	C.A. No. 14-1453-LPS
APOTEX INC. and APOTEX CORP.,	)	
Defendants.	)	

DEFENDANTS' DEPOSITION DESIGNATIONS

Donald Accetta [May 6, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
8:22-9:14	R, ID		
9:24-10:2	R, ID		
10:8-12:21	R, ID, L		
13:18-14:22	R, LC, K, IO, ID, V, L		
15:1-22:13	R, P, LC, K, IO, ID, S, D, V, L, M		
22:15-23	R, P, L, IO, M, ID, S	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
23:1-20	R, P, L, IO, LC, M, ID, S, V, K, H	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
23:23-35:1	R, P, L, IO, LC, M, ID, S, V, K, H, MD	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
35:9-11	R, P, L, I, D, MD, H, ID, V	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E

Donald Accetta [May 6, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
35:14-16	R, P, L, I, D, MD, H, ID, V	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
35:18-19	R, P, L, I, D, MD, H, ID	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
35:22-23	R, P, L, I, D, MD, H, ID, V, IO, M	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
36:1-25	R, P, L, I, D, MD, H, S, ID, IO, V, M	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
37:23-49:4	R, P, L, I, D, MD, H, ID, C, F, S, K, V, IO, M	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
49:7-57:13	R, P, L, I, D, MD, H, ID, C, F, S, K, IO, M, V	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
57:16-58:18	R, P, L, I, D, S, H, ID, F, N, IO, F, K, V	64:25-67:7; 69:21-70:11; 72:6-9; 73:13-74:3; 76:2-11	R, F, O, E
70:19-71:15	R, P, S, H	71:16-72:1; 72:6-9	F
75:2-20	R, P, S, H, V	76:2-11	F, R, E
76:25-79:9	AT, L, R, S, H		

Nikhil Chopra [April 6, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objections to Counter-Designation
6:8-24			
8:2-8			
9:22-10:9	R, C, V, D		
10:12-13:24	R, F, C, D, V, I, MD	14:1	

Nikhil Chopra [April 6, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objections to Counter-Designation
14:8-16:24	R, F, C, D, V, MD		
17:9-18:12	R, V, C, MD		
18:19-19:22	C, D, V, R		
20:4-23:4	V, C, D, R		
25:18-27:4	V, R, MD, M		
33:2-15	SC, M, R, I	33:16, 33:20-34:4, 34:8	
34:9-17	SC, M, R, I	33:16, 33:20-34:4, 34:8	
35:2-5	R, V, C, SC		
35:8-11	R, V, C, SC		
37:6-8	R, V, SC,		
37:11-12	R, V, SC,		
46:4-10	V, SC, R		
46:12-19	V, SC, R		
47:8-17	V, SC, S, R		
47:20-21	V, SC, S, R		
48:10-23	SC, M, R, V	47:23 – 48:1, 48:4 - 9	
49:15-50:4	MD, SC, R, V, I, H		
50:7-51:11	V, SC, I, MD, R, H		
52:11-14	SC, C, R, V, H		
52:17	SC, C, R, V, H		
52:19-22	V, SC, R, H		

Nikhil Chopra [April 6, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objections to Counter-Designation
52:24-55:3	M, MD, C, V, R, H		
56:3-58:18	M, MD, R		
63:24-64:2	R, M, V, MD, LC, IO		
64:5-65:7	R, MD, LC, IO, H	189:1 – 190:6	F, H, O
66:11-15	R, M, MD, I , LC, IO		
67:11-15	R, C, IO, LC, SC, M, MD		
67:18-68:8	R, C, IO, LC, SC, M, MD		
72:7-10	R, V, C		
72:13-19	R, V, C		
75:2-5	R, LC, IO, MD, SC		
75:9-10	R, LC, IO, MD, SC	75:11-18	
75:23-76:1	R, LC, IO, M, S, SC		
76:4	R, LC, IO, M, S, SC		
77:15-21	R, LC, IO, M, S, SC, MD		
77:24-78:4	R, LC, IO, S, SC, M, MD		
78:8-13	R, LC, IO, S, SC, M, MD		
81:3-9	R, MD, M, V	81:10-17, 81:20-24, 82:1-4, 82:7-12	H, R, U
82:15-18	R. SC, MD, H, K, M, V		
82:21	R. SC, MD, H, K, M, V		
88:4-90:2	R. SC, MD, H, K, M, V	90:7-18	R
90:5	R. SC, MD, H, K, M, V		

Nikhil Chopra [April 6, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objections to Counter-Designation
94:17-23	R, M, K, H, SC, M	93:10-12, 93:15-21	F, U
95:8-9	R, V, I, SC, K, M		
95:12-96:9	R, V, SC, K, I, M	79:20 – 80:15	U
98:18-99:1	M, SC, K, R	92:6-7, 92:10-15	H, R, F
99:5-16	M, SC, K, R		
109:22-110:9	R, C, V, M, K, SC	110:11-19, 110:22-111:3	U, R, F
116:24-117:1	SC, IO, S, R	118:14-17, 118:20	R
117:4-5	SC, IO, S, R	118:22-23, 119:2-3	
120:2-3	SC, R, V, MD	118:14-17, 118:20	R
120:6-9	SC, V, MD, R		
120:12	SC, V, MD, R		
120:22-24	SC, R, V, MD		
121:3-7	SC, V, MD, R		
121:10	SC, V, MD, R		
121:16-17	SC, V, R, K		
121:20-21	SC, V, R, K		
122:17-18	MD, SC, V, I, R, F		
123:8-16	SC, MD, R, V, H, R, S, F	104:5-7, 104:11-12	R, H, F, U
123:20	SC, MD, R, V, H, R, S, F	104:5-7, 104:11-12	R, H, F, U
123:23-124:1	MD, V, R, SC	104:5-7, 104:11-12	R, H, F, U
124:4	MD, V, R, SC	104:5-7, 104:11-12	R, H, F, U

Nikhil Chopra [April 6, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objections to Counter-Designation
126:9-17	I, C, MD, R		
127:3-6	V, MD, R		
156:14-159:20	R, C, MD, S, SC, IO, H, LC, IO		
159:24-161:8	R, MD, S, SC, IO, H, LC		
161:12-20	R, MD, S, SC, IO, H, LC		
165:14-166:16	R, M, MD, SC, IO, H, LC		
173:14-175:6	R, MD, SC, IO, S, H, LC		
175:9-176:2	R, MD, SC, IO, S, H, LC		
207:12-209:19	R, MD, SC, S, V, H	212:13-17, 212:20-213:8	U, F
209:21-210:12	R, SC, S, V, MD, H	212:13-17, 212:20-213:8	U, F
210:15-23	R, SC, S, V, MD, H	212:13-17, 212:20-213:8	U, F
233:6-10	R, S, SC, V		
234:6-17	SC, R, S, V		
236:10-14	V, SC, IO, S, R		
236:18-19	V, SC, IO, S, R		
240:20-21	V, SC, R		
240:24-241:11	V, SC, R		

Dennis Fuge [April 14, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
9:4-17			
12:18-13:8			
15:6-16:4	R, MD, SC, F, V		
16:12-17:22	R, MD, SC, F, V		
18:2-22:15	R, MD, SC, F, V		
23:9-35:9	R, V, SC, F, V		
37:16-39:7	R, M, SC, MD, V		
39:13-22	R, SC, V		
40:2-41:14	R, SC, V, F		
42:12-43:7	SC, S, R, V, F		
43:10-44:9	SC, S, R, V, F		
44:12	SC, S, R, V, F		
44:17-45:4	SC, S, M, R, V, F		
45:7-11	SC, M, R, V, F, S		
45:14-23	SC, S, M, R, H, V		
46:3-7	SC, S, M, R, H, V		
46:9-47:7	SC, S, M, R, V		
47:16-48:15	R, S, SC, V		
50:9-51:24	R, V, M, C		
52:3-56:8	S, V, R, MD, H, SC		
57:5-58:1	R, S, MD, M, V, SC		

Dennis Fuge [April 14, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
58:8-59:4	R, MD, SC		
60:22-61:15	R, S, V, I, MD, H, SC	61:16-19; 61:22-62:7	
63:17-20	R, S, V, I, MD, H, SC	62:8-15; 62:18-63:1; 63:4-16	F
63:23-64:2	R, V, SC, F		
64:21-65:14	R, S, SC, V, H, F		
66:2-20	R, S, SC, V, F		
68:12-16	R, S, V, C, SC		
68:19-69:12	R, S, SC, V		
69:15-20	R, S, SC, V, M		
69:23-70:7	R, S, SC, V, M		
70:10-17	R, S, SC, V, M		
70:20-21	R, S, SC, V, M		
72:11-16	R, S, SC, V, F		
72:20-73:3	R, S, SC, V, F		
73:6-10	R, S, SC, V, F		
73:12-15	R, S, SC, V, H, F		
73:19-24	R, S, SC, V, H, F		
76:10-78:3	R, S, V, M, MD, H, SC		
81:9-15	R, M, MD, V, F, H, S, SC		
81:18-85:14	R, S, V, M, MD, F, H, SC		
85:15-88:17	R, M, MD, V, F, H, SC, S		

Dennis Fuge [April 14, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
93:7-94:2	R, MD, V, F, H, SC, S		
94:13-99:24	R, S, V, M, MD, V, F, SC		
100:15-102:12	S, R, MD, V, SC		
103:13-105:8	R, S, SC, V, I, MD, F, IO, LC, H	105:11-19; 1-5:22-106:4; 106:7-107:5; 107:8-14; 107:17-19	R
107:21-108:4	R, SC, V, MD, F, M		
108:10-23	R, MD, S, I, V, M, H, F, SC, IO, LC	108:5-9	F
109:4-14	R, MD, S, I, V, M, H, F, SC, IO, LC		
109:21-111:11	R, MD, S, D, V, M, H, F, SC, IO, LC		
111:19-21	R, S, V, M, H, F, MD, SC, IO, LC		
111:24-112:4	R, S, V, M, H, MD, F, SC, IO, LC		
112:20-23	R, S, V, H, SC, F, IO, LC		
113:3-111	R, SC, LC, V, H, SC, F, IO, S		
113:14-114:6	R, SC, LC, M, V, F, D, S		
114:11-16	R, SC, LC, S, D, M, V, F, IO, S		
114:20-115:10	R, SC, LC, S, D, M, V, F, IO, S		
115:16-19	R, SC, S, IO, V, F		
115:23-116:7	R, S, M, IO, V, F		
116:11-21	R, S, M, IO, V, F, H		
117:3-10	R, S, D, M, H, V, F, SC		
117:13-23	R, S, V, M, H, V, F, SC		

Dennis Fuge [April 14, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
118:2-13	R, S, V, M, F, SC		
118:16-22	R, S, V, M, F, SC		
120:16-126:20	R, S, M, AT, I, MD, V, SC, F, H	126:21-127:4	R
128:14-135:10	R, MD, V, F, H, SC		
136:6-11	R, V, S, SC, F, IO		
136:14-19	R, V, SC, F		
136:22-137:7	R, V, SC		
137:9-141:4	R, V, MD, M, H, SC		
141:9-143:2	R, V, MD, M, IO, SC		
143:5-14	R, SC, S, V		
143:17-22	R, V, S, SC		
144:8-10	R, V, S, SC		
144:13-18	R, V, S, SC, H, F		
144:20-145:16	R, LC, V, S, SC, F		
145:19-146:10	R, LC, V, S, I, SC, F		
146:16-147:15	R, S, V, SC, F		
147:18-20	R, S, V, SC, F		
148:14-150:7	R, M, MD, V, SC, F		
154:14-16	R, SC, S, V, F		
154:19	R, SC, S, V, F		
155:19-24	R, V, F, M		

Dennis Fuge [April 14, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
156:3-17	R, V, F, M		
164:8-23	R, MD, V		
167:1-168:13	R, MD, V, F, M		
168:16-169:15	R, MD, V, M, F, SC		
170:3-171:13	R, MD, V, M, F, SC		
171:17-172:8	R, MD, V, M, F, SC		

Jeffrey Hostler [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
8:8-15			
8:22-9:9			
11:21-13:16	R, V, PR, SC, MD		
13:20-23	R, V, PR, C		
14:3-19:17	R, V, PR, I, SC, MD		
20:4-21:3	R, V, C		
21:24-22:24	R, V, F, I		
24:10-14	R, IO, F, V, LC, SC		
24:17-25:10	R, IO, V, LC, SC, F		
25:13-15	R, V, IO, F, SC		
25:23-26:6	R, F, V, M, SC, S		
28:14-17	R, IO, LC, V, F, SC, S		

Jeffrey Hostler [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
28:20-24	R, IO, LC, V, F, SC, S		
29:2-6	V, R, M, F		
31:19-32:15	R, S, C, V, SC, F		
32:18-33:6	R, S, V, M, F, SC		
33:24-34:23	R, LC, F, V, IO, S, M, SC, V		
35:2-10	R, LC, M, F, IO, SM, SC, V		
36:8-12	R, IO, LC, SC, F, V, M		
36:16-18	R, IO, LC, SC, F, V, M		
36:20-37:2	R, IO, LC, F, SC, M, F, V		
37:6-8	R, IO, LC, V, F, SC, M		
37:10-15	R, IO, LC, V, SC, F		
37:19	R, IO, LC, V, SC, F, M		
38:23-39:3	R, M, IO, LC, V, SC, F		
39:6-12	R, M, IO, LC, V, SC, F		
46:15-19	R, IO, LC, C, V, SC		
46:23-47:7	R, IO, LC, C, V, SC		
55:12-59:14	R, V, MD, S, I, F, C, H	59:15-60:4, 60:7-9, 60:20-62:3	R
63:4-22	R, IO, M, LC S, MD, F, SC		
64:1-4	R, IO, M, LC, F, S, MD, SC		
69:14-20	R, M, S, F, I, MD, SC		
70:17-71:20	R, M, V, F, I, MD, H, SC, S	71:21-72:20, 73:1-4, 73:7-22, 74:1-7	

Jeffrey Hostler [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
82:21-83:4	R, V, I, H, SC, D, M, MD		
87:10-22	V, F, S, M, C, R, I, IO, SC, MD		
89:22-92:12	R, MD, V, SC, F, H, SC		
97:12-98:2	R, S, V, F, M, MD, SC, H	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R
98:5-99:11	R, S, V, F, M, MD, SC, H	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R
99:14-19	R, S, V, F, M, MD, SC, H	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R
98:1-2	R, S, V, F, M, MD, SC, H	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R
98:5-99:11	R, S, V, F, M, MD, SC, H	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R
99:14-19	R, S, V, F, M, MD, SC, H	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R
109:19-111:24	R, S, V, C, MD, F, SC, H		
112:3-113:7	R, S, V, C, MD, I, F, SC, H	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R
114:15-117:10	R, S, V, C, MD, I, F, SC, H		
120:16-20	R, SC, S, M, V, I	117:11-118:8; 118:12-21	F
120:24-121:3	R, SC, S, M, V, I	117:11-118:8; 118:12-21	F
121:18-19	R, S, V, F, SC		
121:22-23	R, S, V, F, SC		
125:12-126:13	R, S, V, F, MD, SC, IO		

Jeffrey Hostler [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
126:17-128:12	R, V, S, C, MD, SC, IO		
128:15-131:8	R, V, S, C, MD, H, SC, IO		
131:11-133:14	R, V, S, M, MD, H, SC, IO		
133:17-138:4	R, V, F, S, MD, H, SC, IO		
138:10-139:11	R, S, M, IO, V, SC	139:22-140:10	
139:14-20	R, S, M, IO, V, SC		
141:8-144:23	R, MD, S, F, SC, V		
146:10-149:12	R, S, C, V, MD, F, M		
149:15-156:5	R, S, MD, C, V, SC, H		
156:8-157:8	R, S, SC, M, V		
157:11-159:7	R, F, S, SC, V, M		
159:10-160:4	R, F, S, SC, V, M		
160:7-161:1	R, V, IO, S, I, M		
161:4-14	R, IO, V, S, M, I		
164:7-11	R, V, I, SC, IO	162:23-163:24; 164:3-5	
164:14-165:6	R, V, I, SC, IO	162:23-163:24; 164:3-5	
167:21-169:13	R, M S, MD, V, C, F, H, SC		
169:16-170:7	M, R, S, MD, V, C, F, H, SC		
170:13-173:6	R, AT, F, S, MD, V, C, F, H, SC		
173:9-21	R, F, SC, MD, V, S, H		
173:24-174:15	R, SC, MD, V, F, H		

Jeffrey Hostler [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
174:18-175:12	R, F, MD, SC, S, H		
177:1-23	R, F, M, V, MD, SC, M		
178:3-179:9	R, M, V, S, F, SC, H		
179:13-180:3	R, M, MD, V, F, S, H, SC		
182:15-184:4	R, M, MD, V, F, S, H, SC	104:21-24; 105:4-9; 105:15-17; 105:20-107:2; 113:19-24	F, R

Patsy Jeffrey [April 22, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
7:18-25			
8:11-20			
10:24-11:25	R, I, V, F		
12:7-14:8	R, PR, AT, SC, V, F, MD		
14:11-16:16	R, PR, SC, V, MD		
16:20-17:1	R, PR, SC, V		
17:11-18:4	R, V, P, SC		
18:17-22:9	R, V, P, SC		
24:1-5	V, F, I, R, PR		
28:24-29:10	F, V, C, R		
45:15-46:15	R, F, V, C, SC		
47:6-25	R, S, F, V, SC		

Patsy Jeffrey [April 22, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
48:3-4	R, S, F, V, SC		
55:15-25	R, F, V, I, C, M, MD	73:14-74:7; 74:9-10	F, H, R
56:3-5	R, F		
56:11-20	R, SC, I, M, V		
57:2-59:6	R, SC, IO, S, C, V, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
59:10-18	R, IO, S, D, V, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
59:20-25	R, IO, S, D, V, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
60:4-12	R, IO, S, D, V, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
60:20-61:17	R, V, MD, I, F		
61:20-21	R, V, F, MD		
61:23-62:6	R, V, IO, SC, S, F, I, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
62:12-16	R, V, IO, SC, S, F, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
62:18-22	R, V, IO, SC, S, F, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
63:2-13	R, V, IO, SC, S, F, D, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
63:17-23	R, V, IO, SC, S, F, D, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
64:1-10	V, IO, SC, S, F, D, R, M, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
64:14-19	S, V, F, R, SC, D, MD, M	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
64:22	S, V, F, R, SC, D, MD, M	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
69:5-7	R, V, IO, SC, S, F, D, MD, M	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
69:10-12	R, V, IO, SC, S, F, D, MD, M	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H

Patsy Jeffrey [April 22, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
73:10-13	R, S, F, V, I, M	73:14-74:7; 74:9-10	F, H, R
74:12-24	R, S, F, V, I, IO	73:14-74:7; 74:9-10	F, H, R
75:1-76:2	R, V, C, F, MD, M, S	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
76:4-8	R, V, F, C, MD, M, S	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
76:14-77:13	R, IO, S, MD, F, V, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
77:16-19	R, IO, S, F, V, SC, MD	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
77:23-78:11	R, IO, F, V, SC, D, S, IO	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
78:14-20	R, IO, F, SC, V, P, S	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
78:24-79:1	R, SC, V, F, IO, P, S	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
79:3-80:3	SC, V, F, MD, R	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
91:12-14	R, V, F, I, MD, IO, SC	71:6-7; 71:10-72:1; 73:14-74:7; 74:9-10	F, R, H
92:2-8	R, SC, F, I, V		
93:5-12	R, SC, F, I, V		
93:17-20	R, SC, F, I, V		
97:14-16	R, SC, F, I, V, MD		
99:4-7	R, SC, F, I, V, MD		
99:10-13	R, SC, F, I, V, MD		
99:19-23	R, SC, F, I, V, MD		
100:1	SC, F, I, R, V, MD		
100:6-15	SC, R, MD		
100:20-101:3	SC, MD, V, R, F		

Patsy Jeffrey [April 22, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
101:7-14	SC, MD, V, R, F		
101:17-22	SC, MD, V, R, F		
101:24	SC, MD, V, R, F		
102:1-2	SC, MD, V, R, F, M		
102:4-6	SC, MD, V, R, F, M		
102:8-24	SC, MD, V, R, M		
103:4-15	SC, MD, V, R, F, M		
103:18-19	SC, MD, V, R, F, M		
104:1-10	V, SC, R, MD		
104:15-24	V, SC, R, MD, F		
105:1-8	V, SC, R, MD, M		
105:18-106:1	V, SC, R, MD, M		
106:20-107:12	I, SC, R, MD, V, M		
107:24-108:3	SC, R, V, F, D		

Joachim Maus [May 19, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
7:5-9:18			
10:4-19			
15:20-18:15	R, SC, P, I		
21:7-18	R, SC, P, I		

Joachim Maus [May 19, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
22:3-27:13	R, SC, P, V, C		
28:24-29:3	R, V, SC, P, I		
29:10-30:3	R, V, SC, P, I		
30:15-33:1	R, F, I, P, SC		
37:9-14	F, I, P, K, R	37:21-23	
38:2-15	MD, R, V, P	37:21-23	
38:19-39:6	MD, R, V, P		
39:22-40:9	MD, R, V, P		
40:14-41:14	MD, R, V, P		
42:12-15	MD, R, V, P		
43:13-52:3	K, SC, MD, R, V, P		
54:1-9	R, I, P, F, SC	54:11-24	
55:1-58:15	K, SC, R, F, V	54:11-24	
58:18-59:17	K, SC, R, F, V		
59:23-60:21	K, SC, R, F, V		
60:24-61:21	SC, R, V		
67:22-68:13	R, I, MD		
71:12-19	R, P		
74:20-75:6	R, P, V	75:17-77:9	F, H, I
81:11-83:6	SC, R, V, P, IO		
83:10-84:14	R, SC, IO, C, F		

Joachim Maus [May 19, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
85:7-90:8	R, SC, IO, C, F, V		
91:5-9	SC, IO, V, R		
91:12-92:10	SC, IO, V, R		
92:13-94:3	SC, IO, V, R, K, MD	94:17-24	U
95:2-96:2	SC, IO, V, R, P	94:17-24	U
96:9-19	I, NR, P, R		
97:1-8	P, I, K, R		
98:24-100:17	I, AT, R, D		
101:8-23	R, I, V		
102:2-103:21	R, V, I, P		
103:24-111:5	R, V, I, P		
111:10-17	R, I, F		
111:22-113:1	R, I, V, F		
113:5-115:1	R, SC, F, I		
116:14-22	R, I, V		
117:1-6	R, V, I		
118:2-10	I		
120:12-121:6	R, I, SC, V		
121:17-125:7	V, SC, I, F		
125:14-22	V, SC, I, F		
126:3-127:6	V, SC, I, F		

Joachim Maus [May 19, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
127:11-23	V, SC, I, F		
128:9-129:16	V, SC, I, F		
129:24-130:5	V, SC, I, F		
130:8-19	V, SC, I, F	130:23-24; 130:4-7; 131:9-15	
132:2-5	V, SC, I, F	130:23-24; 130:4-7; 131:9-15	
132:8-23	V, SC, I, F		
133:11-134:15	V, SC, I, F	135:7-13	U, F
135:14-138:1	R, V, P, F, SC	135:7-13	U, F
138:5-139:21	R, V, P, F, SC		
140:4-23	R, V, P, F, SC		
141:16-144:18	R, V, P, F, SC		
145:12-146:10	R, V, P, F, SC		
146:17-149:8	R, V, P, F, SC		
149:16-19	R, V, P, F, SC		
151:2-15	R, SC, V, P		
152:12-155:15	R, SC, V, P		
155:22-159:16	R, SC, V, P		
160:17-24	R, SC, V, P		
161:3-162:23	R, SC, V, P		
163:5-164:6	I, V, R, P		
166:21-169:9	R, SC, V, F, P		

Joachim Maus [May 19, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
169:12-170:21	R, SC, V, F, P		
171:8-172:24	R, V, P		
173:8-18	R, V, P		
175:15-176:19	D, V, P, SC, R		
176:22-177:4	D, V, P, SC, R		
177:7-14	D, V, P, SC, R, I		
179:6-180:6	R, SC, V, P		
180:8-181:17	R, SC, V, P		
181:21-184:13	R, SC, V, P	185:15-18; 185:22-23	F
186:1-13	R, F, V, SC, P, I	185:15-18; 185:22-23	F
186:21-187:12	R, F, V, SC, P, I		
190:11-191:7	P, V		
191:12-15	V, P		
191:24-195:16	V, F, P		
195:21-196:14	R, V, P		
196:23-197:9			
198:4-203:8	R, SC, V, P		
203:11-204:15	R, SC, V, P		
204:23-2015:13	R, SC, V, P		
206:1-207:22	R, SC, V		
208:2-209:8	R, SC, V, P, I	209:9-17	F

Joachim Maus [May 19, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
220:13-23	R, V, F, P		
226:2-227:15	SC, V, F, P, R, I		
228:21-229:2	SC, V, F, P, R, I		
229:6-232:16	SC, V, F, P, R, I		
232:19-233:17	R, SC, P, F, V		
237:14-238:9	R, F, V, P, I	239:15-23	F
239:24-241:23	R, V, F, P	239:15-23	F

Sujeet Rajan [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
6:6-12			
6:20-7:7			
17:4-16	R, I		
18:4-6	R, I, SC, V, C		
18:9-21:18	R, I, SC, V, S, IO, P		
21:22-24:1	R, I, P, SC, IO, S		
24:24-25:18	R, I, P, SC, IO, S		
25:21-27:15	R, I, P, SC, IO, S		
28:4-15	R, I, P, SC, IO, S, V	28:16-22; 29:1-3	F, R
29:4-18	R, I, P, SC, IO, S, V, F, H		
31:7-24	R, I, P, SC, IO, S, V, H, C, M	32:1-4; 32:7-33:15	U, R

Sujeet Rajan [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
34:23-35:9	R, I, P, SC, S, M, V	35:12-16; 35:19-36:3	D, F
37:20-38:6	R, I, P, SC, S, M, V	38:14-19; 41:23-42:2; 42:6-15; 43:23-44:12;	
38:9-12	R, I, P, SC, S, M, V	38:14-19; 41:23-42:2; 42:6-15; 43:23-44:12; 44:14-15	
39:16-40:14	R, I, P, SC, S, M, C, V	38:14-19; 41:23-42:2; 42:6-15; 43:23-44:12; 44:14-15	
40:17-21	R, I, P, SC, S, M, C, V	38:14-19; 41:23-42:2; 42:6-15; 43:23-44:12; 44:14-15	
42:17-20	R, I, P, SC, IO, S, V, F	46:5-7	
47:4-6	R, I, P, SC, S, C, V, F	48:18-20; 48:23-49:12	F
47:9-20	R, I, P, SC, S, C, V, F	48:18-20; 48:23-49:12	F
49:14-22	R, I, P, SC, S, C, V, F	48:18-20; 48:23-49:12	F
55:3-10	R, I, V, MD, SC, IO, S, P, H		
55:14-57:18	R, I, V, MD, SC, IO, S, P, H		
59:2-10	R, I, V, MD, SC, IO, S, P, C		
59:14-60:7	R, I, V, MD, SC, IO, S, P, C		
69:10-16	R, I, P, D, V, S		
72:1-9	R, I, V, MD, SC, IO, S, P, M, H	72:12-13	
72:15-19	R, I, V, MD, SC, IO, S, P, M, H	72:22-73:2	
73:7-74:5	R, I, V, MD, SC, IO, LC, S, P, PR, F, M, H		
77:10-78:13	R, I, V, MD, SC, IO, S, P, F, H, M		
80:14-82:14	R, I, V, MD, S, P, D, F, ID, H, IO, LC		

Sujeet Rajan [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
82:17-21	R, I, V, S, P, D, F, MD, ID, H, IO, LC		
85:16-20	R, I, V, S, P, D, F, H, MD, M, IO, LC		
85:23-86:9	R, I, V, S, P, D, F, H, MD, M, IO, LC		
86:12-24	R, I, V, SC, IO, S, P, D, F, H, MD, M, LC		
87:3-9	R, I, V, SC, IO, S, P, D, F, H, MD, M, LC		
94-21-95:1	R, I, V, SC, IO, S, P, D, F, MD, M		
95:4-12	R, I, SC, IO, S, P, D, F, V, MD, M		
95:15-96:4	R, I, SC, IO, S, P, D, F, V		
96:7-10	R, I, SC, IO, S, P, D, F, V, MD		
140:17-141:3	R, I, SC, IO, S, P, D, F, V		
141:7-20	R, I, SC, IO, S, P, D, F, V, MD		
141:24-142:7	R, I, SC, IO, S, P, D, F, V		
142:11-17	R, I, SC, IO, S, P, D, F, V, MD		
142:20-143:3	R, I, SC, IO, S, P, D, F, V, MD		
143:7-20	R, I, SC, IO, S, P, D, F, V, MD		
143:24-144:1	R, I, SC, IO, S, P, D, F, V		
147:3-150:3	R, I, SC, IO, S, P, D, F, V, MD, M, H, MD	150:4-16	
152:13-22	R, I, SC, IO, S, P, D, F, V, H		
153:1-10	R, I, SC, IO, S, P, D, F, V, H		
153:13-154:8	R, I, SC, IO, S, P, D, F, V		

Sujeet Rajan [April 27, 2016]			
Defendants' Designation	Plaintiffs' Objections	Plaintiffs' Counter-Designation	Defendants' Objection to Counter-Designation
154:11-20	R, I, SC, IO, S, P, D, F, V, H, MD, M		
155:1-156:22	R, I, SC, IO, S, P, D, F, V, MD, H, M		
167:11-21	R, I, SC, IO, S, P, D, F, V		

Exhibit 10

ABBREVIATION AND FEDERAL RULE OF EVIDENCE
KEY TO THE OBJECTIONS

ABBREVIATION	OBJECTION	APPLICABLE RULE(S)
A	Requires authentication or identification	FRE 901
B	Best evidence rules prohibit introduction	FRE 1001-1002
C	Improper compilation of separate documents	FRE 403, 901
D	Improper designation (designation is neither a question or testimony)	FRE 401, 402
E	Improper examination (vague, ambiguous, loaded, leading, etc.)	FRE 402, 403, 602, 611
F	Lack of foundation/personal knowledge (including calls for speculation)	FRE 402, 403, 602, 611
H	Hearsay if offered for the truth of the matter asserted	FRE 801, 802
I	Incomplete document or testimony	FRE 106, 403
M	Offer or discussion for settlement or compromise	FRE 408
N	Exhibit not produced in discovery	FRE 403
O	Improper opinion testimony	FRE 701-704
P	Privileged or attorney work product	FRE 501, 502
R	Lack of relevance	FRE 401, 402
S	Summary requiring underlying data or information	FRE 1006
T	Beyond the scope of the Rule 30(b)(6) topic for which a witness has been designated	FRE 602, FRCP 30(b)(6)
U	Unduly prejudicial, wasteful, confusing, misleading or cumulative	FRE 403

PTX	Bates Range	Document Description	Defendants' Objections
1	MED_DYM_00018026-041	Lulla, U.S. Patent No. 8,168,620	
2	MED_DYM_00018010-025	Lulla, U.S. Patent No. 8,163,723	
3	MEDA_APTX03490513-529	Lulla, U.S. Patent No. 9,259,428	
4	MEDA_APTX03502400	U.S. Patent 9,259,428 Certificate of Correction	
5	MED_DYM_00000001-9274	File History for U.S. Patent No. 8,168, 620	
6	MED_DYM_00009275-18009	File History for U.S. Patent No. 8,163,723	
7	MEDA_APTX03490530-501811	File History for U.S. Patent No. 9,259,428	
8	MEDA_APTX03502657-662	Aberg, N. et al. "Increase of asthma, allergic rhinitis and eczema in Swedish schoolchildren between 1979 and 1991." Clin. Experimental Allergy, 25: 815-819; 1995.	R, U
9	MEDA_APTX03504716-724	Aerobiology and inhalant allergens in Allergy: Principles and Practice, 493-498 (E. Middleton, Jr., C. Reed, E. Ellis, N. Adkinson, J. Yunginger, and W. Busse eds., vol 1., 4th ed. 1993.)	
10	APOTEX_AZFL0059476-483	Astelin Label, 2011.	R
11	MEDA_APTX03502754-770	2000 Astelin Label and Sept. 15, 2000 Letter Enclosing 2000 Astelin Label	
12	MEDA_APTX02173909-917	Barnes, M. et al. "Effects of levocetirizine as add-on therapy to fluticasone in seasonal allergic rhinitis." J. Clin. And Experimental Allergy, 36: 676-684; 2006.	R
13	MEDA_APTX03227075-083	Benincasa, C. et al. "Evaluation of fluticasone propionate aqueous nasal spray taken alone and in combination with cetirizine in the prophylactic treatment of seasonal allergic rhinitis." Drug Invest., 8(4): 225-233; 1994.	
14	MEDA_APTX01689244-252	Berger, William E. "MP29-02 for the treatment of seasonal allergic rhinitis: a review of clinical pharmacology, efficacy and safety." Expert Rev. Clin. Immunol., 9(9): 803-811; 2013.	
15	MEDA_APTX01675508-521	Bernstein, J. "MP29-02: a breakthrough for the treatment of allergic rhinitis." Expert Opin. Pharmacother., 14(15); 2013.	R, U
16	MEDA_APTX03502786-795	Carr, Warner W. "Pediatric Allergic Rhinitis: Current and Future State of the Art." Allergy Asthma Proc., 29(1): 14-23; 2008.	
17	MEDA_APTX03502667-685	Cauwenberge, P. "Consensus statement on the treatment of allergic rhinitis." Allergy, Vol. 55, 116-134. 2000.	
18	CIP_DYM_00085371-379	Cipla, "100 weeks of Duonase: Ideal pharmacotherapy for allergic rhinitis."	R, U, S, B
19	MEDA_APTX03502686-692	Crystal-Peters, J. et al. "The Cost of productivity losses associated with allergic rhinitis." Am. J. Manag. Care, 6:373-378; 2000.	R

PTX	Bates Range	Document Description	Defendants' Objections
20	MEDA_APTX03502693-701	Demoly, P. et al. "ERASM, a pharmacoepidemiologic survey on management of intermittent allergic rhinitis in every day general medical practice in France." Allergy, 57: 546-554; 2002.	R
21	MEDA_APTX02477551-559	Di Lorenzo, G. et al. "Randomized placebo-controlled trial comparing fluticasone aqueous nasal spray in mono-therapy, fluticasone plus cetirizine, fluticasone plus montelukast, and cetirizine plus montelukast for seasonal allergic rhinitis." Clin. Exp. Allergy, 34:259-267; 2004.	R
22	MEDA_APTX03140805-845	Dykewicz, M. "Diagnosis and management of rhinitis: Complete guidelines of the Joint Task Force on Practice Parameters in Allergy, Asthma, and Immunology." Ann. Allergy Asthma Immunol., 81: 478-518; 1998.	
23	MEDA_APTX03502781-785	Dykewicz, M. et al. "Joint task force algorithm and annotations for diagnosis and management of rhinitis." Am. Allergy Asthma Immunol., 81: 469-473; 1998.	
24	MEDA_APTX02180630-666	Dymista Prescribing Information, 2015.	R, S
25	MEDA_APTX03502727-745	FDA, Center for Drug Evaluation and Research. "Allergic Rhinitis: Clinical Development Programs for Drug Products." Guidance for Industry, 2000.	
26	MEDA_APTX03502796-829	Imitator Product Labels	
27	MEDA_APTX03504666-715	Kaliner, Michael A. Curriculum vitae, 2016.	
28	MEDA_APTX03502746-747	Larnholt, Anders. "MEDA: Dymista -- could be the drug of choice." Business Wire, 2012.	R, U, F, H
29	MEDA_APTX02845997-998	Leung et al. "The Editors' Choice: MP29-02: A Major Achievement in the treatment of allergic rhinitis." J. Allergy Clin. Immunol., 129(5): 1216; 2012.	R, U, F, H
30	MEDA_APTX03502748-753	Mabry, R. "Recent advances in pharmacotherapy of allergic rhinitis." Curr. Opin. Otolaryngol. Head Neck Surg, 7: 375-378; 1999.	
31	MEDA_APTX03502715-721	Maurer, M. et al. "Under-treatment of rhinitis symptoms in Europe: findings from a cross-sectional questionnaire survey." Allergy, 62:1057-1063; 2007.	R
32	MEDA_APTX03502722-726	Meltzer, E. et al. "The economic impact of allergic rhinitis and current guidelines for treatment." Ann. Allergy, Asthma, and Immunol., 106: S12- S16; 2011.	R

PTX	Bates Range	Document Description	Defendants' Objections
33	MEDA_APTX02476974-982	Meltzer, E. et al. "MP29-02 (a novel intranasal formulation of azelastine hydrochloride and fluticasone propionate) in the treatment of seasonal allergic rhinitis: A randomized, double-blind, placebo-controlled trial of efficacy and safety." Allergy Asthma Proc., 33: 324-332; 2012.	
34	MEDA_APTX02821042-050	Meltzer, E. et al. "Clinically relevant effect of a new intranasal therapy (MP29-02) in allergic rhinitis assessed by responder analysis." Int. Arch. Allergy Immunol., 161: 369-377; 2013.	
35	MEDA_APTX03502771-780	Naclerio, Robert M. "Drug Therapy: Allergic Rhinitis." New England J. Med., 325(12): 860-869; 1991.	
36	CIP_DYM_00002719-738	Nielsen, L. "Intranasal corticosteroids for allergic rhinitis." Drugs, Vol. 61. No. 11, 1563-1579. 2001.	
37	MEDA_APTX01596418-517	Pippins, Jennifer R. "Clinical Review for NDA 202-236." DPARP/ODE II, 2012.	
38	MEDA_APTX01864079-085	Ridolo, E. et al. "A role for the intranasal formulation of azelastine hydrochloride/fluticasone propionate in the treatment of allergic rhinitis." Ther. Deliv., 2015.	R, U, F, H
39	MED_DYM_00001366-373	Simpson, R. "Budesonide and terfenadine, separately and in combination, in the treatment of hay fever." Annals of Allergy, 73(6): 497-502; 1994.	
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41	APOTEX_AZFL 0061786-787	Spector, S. "Ideal pharmacotherapy for allergic rhinitis." J. Allergy Clin. Immunol., Vol 103 No. 3, 386-387. 1999.	
42	MEDA_APTX03502663-666	Storms, W. et al. "Allergic rhinitis: the patient's perspective." J. Allergy Clin. Immunol., 99: S825-S828; 1997.	
43	MEDA_APTX02174007-013	Sur, D.K. et al. "Treatment of allergic rhinitis." SA Fam. Pract., 52(5): 398- 403; 2010.	R, U
44	MEDA_APTX03502708-714	Verlato, Giuseppe et al. "Is the prevalence of adult asthma and allergic rhinitis still increasing? Results of an Italian study." J. Allergy Clin. Immunol., 111(6): 1232-1238; 2003.	R
45	MEDA_APTX03502702-707	Wang, D. "Treatment of allergic rhinitis: H1-Antihistamines and intranasal steroids." Current Drug Targets -Inflammation & Allergy, Vol. 1. No. 3., 215-220. 2002.	

PTX	Bates Range	Document Description	Defendants' Objections
46	MEDA_APTX03071206-210	2008.01.31 Memorandum of Facsimile Correspondence from FDA to Dr. Fosko	R, F
47	MEDA_APTX00421980-988	2008.04.14 Azelastine/Fluticasone Combination Nasal Spray Information Package for Type-A Meeting; submitted by Dr. Fosko to FDA	R, F
48	MEDA_APTX03071244-440	2010.07.19 Letter re Information Package for Pre-NDA Meeting on 2010.08.17	R, F
49	MEDA_APTX01596418-517	Clinical Review for NDA 202-236, FDA, March 27, 2012	R, F
50	MEDA_APTX00421955-961	Information Package for Type-A Meeting, April 29, 2008,	R, F
51	APOTEX_AZFL 0059181-242	Advair Diskus Prescribing Information, 2000.	
52	MEDA_APTX03504815-820	Aharony, D. "Pharmacology of Leukotriene Receptor Antagonists." Am. J. Crit.Care Med., 157: S214-S219; 1998.	
53	CIP_DYM_00202264-286	Akerlund, A. et al. "Clinical trial design, nasal allergen challenge models, and considerations of relevance to pediatrics, nasal polyposis, and different classes of medication." J. Allergy Clin. Immunol., 115(3): S460-S482; 2005.	R
54	MEDA_APTX 03504783	Andy, C. et al. "How effective are nasal steroids combined with nonsedating antihistamines for seasonal allergic rhinitis?" J. Fam. Pract., 51(7): 616; 2002.	R
55	CIP_DYM_00204331-338	Backhouse, C. et al. "Treatment of Seasonal Allergic Rhinitis with Flunisolide and Terfenadine." J. International Med. Research, 14(1): 35-41; 1986.	
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58	MEDA_APTX03504761-768	Blaiss, M. "Efficacy, Safety, and Patient Preference of Inhaled Corticosteroids: A Review of Pertinent Published Data." Allergy and Asthma Proc., 22(6): S5-S10; 2001.	
59	APOTEX_AZFL 0060185-207	Center for Drug Evaluation and Research, Application Number: 20-121/S009 Flonase® Final Printed Label, 1998.	
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61	APOTEX_AZFL 0132004-012	Ciprandi, G,. et al. "Topical Azelastine Reduces Eosinophil Activation and Intercellular Adhesion Molecule-1 Expression on Nasal Epithelial Cells: An Antiallergy Activity." J. Allergy Clin. Immunol., 98(6): 1088-1096; 1996.	
62	APOTEX_AZFL 0052951-960	Cramer, R., European Patent Application No. 0 780 127 (1997)	
63	APOTEX_AZFL 0061946-964	Cyan, E., CRC Handbook of Chemistry and Physics	
64	MEDA_APTX00015637-648	D'Addio Declaration Exhibit No. 11 -- "Commercial Product Technical Support," MedPointe Product & Process Development 2002.	
65	APOTEX_AZFL 0132024-029	Dunsky, E., et al. "Histologic Responses in Human Skin Test Reactions to Ragweed, IV. Effects of a Single Intravenous Injection of Steroids." J. Allergy Clin. Immunol., 59(1): 142-146; 1977.	
66	MEDA_APTX03504828-836	Falser, N., et al. "Comparative Efficacy and Safety of Azelastine and Levocabastine Nasal Sprays in Patients with Seasonal Allergic Rhinitis." Arzneim-Forsch./Drug Res., 51(1): 387-393; 2001.	
67	MEDA_APTX03504837-839	Feinberg, S., et al. "Relief of Dermographism and Other Urticarias of Histamine Origin by a Synthetic Benzhydryl Alkamine Ether." J. Allergy, 1945.	
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69	APOTEX_AZFL 0132580-583	Fischer, B., et al. "Inhibition by Azelastine of the Immunologically Induced Histamine Release from Isolated Guinea Pig Mast Cells."Arzneimittle Forschung/Dru. Res., 8:1193-1195; 1981.	
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71	CIP_DYM_00003452-457	Hampel, F., et al. "Double-blind, Placebo-Controlled Study of Azelastine and Fluticasone in a Single Nasal Spray Delivery Device." Annals of Allergy, Asthma, & Immunology, 105: 168-173; 2010.	
72	APOTEX_AZFL 0132034-040	Hancox, RJ et al. "Randomised Trial of An Inhaled B2 Agonist, Inhaled Corticosteroid and Their Combination in the Treatment of Asthma." Thorax, 54: 482-487; 1999.	
73	APOTEX_AZFL 0054360-365	Hettche, Helmut, U.S. Patent No. 5,164,194; 1992.	
74	APOTEX_AZFL 0132082-092	Hide, I., et al. "Suppression of TNF-a Secretion by Azelastine in a Rat Mast (RBL-2H3) Cell Line, Evidence for Differential Regulation of TNF-a Release, Transcription, and Degranulation." J. Immunol., 159(6): 2932-2940; 1997.	

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75	APOTEX_AZFL 0132093-099	Honda, M. et al. "Effect of Azelastine Hydrochloride on Macrophage Chemotaxis and Phagocytosis in Vitro." Allergy, 37: 41-47; 1982.	
76	APOTEX_AZFL 0132818-842	Imitrex Prescribing Information, 2013.	
77	APOTEX_AZFL 0132100-104	Jacobi, H., et al. "Histamine and Tryptase in Nasal Lavage Fluid After Allergen Challenge: effect of 1 week of Pretreatment with Intranasal Azelastine of Systemic Cetirizine." J. Allergy Clin. Immunol., 103(5): 768-772; May 1999.	
78	APOTEX_AZFL 0132692-699	Katayama, S. et al. "Effect of Azelastine on the Release and Action of Leukotriene C4 and D4." Int. Archs Allergy Appl. Immun., 83: 284-289; 1987.	
79	APOTEX_AZFL 0132700-707	Kusters, S., et al. "Effects of Antihistamines on Leukotriene and Cytokine Release from Dispersed Nasal Polyp Cells." Arzneim-Forsch./Drug Res., 52(2): 97-102; 2002.	
80	APOTEX_AZFL 0060544-547	Lieberman, P. "Treatment Update: Nonallergic Rhinitis." Allergy and Asthma Procedure, 22(4): 199-202; 2001.	
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82	APOTEX_AZFL 0132106-132	Markham, A., et al. "Inhaled Salmeterol-Fluticasone Propionate Combination, A Review of its Use in Persistent Asthma." Drugs, 60(5): 1207-1233; 2000.	
83	MEDA_APTX03504821-826	Meltzer, E. et al. "Concomitant montelukast and Loratadine as treatment for seasonal allergic rhinitis: A randomized, placebo-controlled clinical trial." J. Allergy Clin. Immunol., 105(5): 919-922; 2000.	
84	APOTEX_AZFL 0132142-146	Mosges, R., et al. "Azelastine Reduces Mediators of Inflammation in Patients with Nasal Polyps." Allergy and Asthma Proc., 19(6): 379-383; 1998.	
85	CIP_DYM_00004052-064	Nielsen, Lars P. and Dahl, R. "Comparison of Intranasal Corticosteroids and Antihistamines in Allergic Rhinitis, A Review of Randomized, Controlled Trials." Am. J. Respir. Med., 2(1): 55-65; 2003.	R
86	APOTEX_AZFL 0132226-231	Schleimer R., et al. "Effects of Dexamethasone on Mediator Release from Human Lung Fragments and Purified Human Lung Mast Cells." J. Clin. Invest., 71: 1830-1835; 1983.	

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87	APOTEX_AZFL 0132257-263	Schulman, E. et al. "Human Lung Mast Cells: Purification and Characterization." J. Immunol., 129(6): 2662-2667; 1982.	
88	APOTEX_AZFL 0059025-037	Segal, Catherine. PCT Publication No. WO 98/48839	
89	APOTEX_AZFL 0061929-944	Sherman, W.B., "Antihistamine Drugs," in The Uses and Abuses of Antihistamine Drugs, 309-324; 1951.	
90	APOTEX_AZFL 0132264-271	Slott, R., et al. "A Controlled Study of the Effect of Corticosteroids on Immediate Skin Test Reactivity." J. Allergy Clin. Immunol., 54(1): 229-234; 1974.	
91	APOTEX_AZFL 0132272-281	Slott, R., et al. "Histologic Studies of Human Skin Test Responses to Ragweed and Compound 48/80." J. Allergy Clin. Immunol., 55(4): 232-240; 1975.	
92	APOTEX_AZFL 0132289-303	Stoloff, R., et al. "Combination Therapy with Inhaled Long-Acting ß2-Agonists and Inhaled Corticosteroids: A Paradigm Shift in Asthma Management." Pharmacotherapy, 22(2): 212-226; 2002.	
93	APOTEX_AZFL 0132326-332	Togias, A., et al. "In vivo and in vitro Effects of Antihistamines on Mast Cell Mediator Release: A Potentially Important Property in the Treatment of Allergic Disease." Annals of Allergy, 63: 465-469; 1989.	
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95	N/A	Wihl, J-A et al. "Effect of nonsedative H1-receptor antagonist astemizole in perennial allergic and nonallergic rhinitis." J. Allergy Clin. Immunol., 75(6): 720-727; 1985.	
96	MEDA_APTX03504769-782	Zyrtec Prescribing Information, 2002	R, U
97	MEDA_APTX03505562-567	Advil Allergy and Congestion Approval Letter	R, U
98	MEDA_APTX03505576-729	Datamonitor, "Commercial and Stakeholder Perspectives: Allergic Rhinitis." 09.2004	R
99	APOTEX_AZFL 0060307-317	Galant, S. and Wilkinson, R., "Clinical Prescribing of Allergic Rhinitis Medication in the Preschool and Young School-Age Child." BioDrugs, 15(7): 453-463; 2001.	
100	APOTEX_AZFL 0133058-060	Erffmeyer, J. et al. "Efficacy of Phenylephrine-Phenylpropanolamine in the Treatment of Rhinitis." Southern Med. Journal, 75(5): 562-564; 1982.	

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101	CIP_DYM_00003452-457	Hampel, F., et al. "Double-blind, Placebo-Controlled Study of Azelastine and Fluticasone in a Single Nasal Spray Delivery Device." Annals of Allergy, Asthma, & Immunology, 105: 168-173; 2010.	
102	APOTEX_AZFL 0132078-081	Harris, A.S. et al. "Intranasal Administration of Peptides: Nasal Deposition, Biological Response, and Absorption of Desmopressin." J. Pharm. Sciences, 75(11):1085-1088; 1986.	
103	MEDA_APTX03505790-793	Optivar Label, 2000	R, U
104	APOTEX_AZFL 0133019-041	U.S. Patent No. 4,335,121 (Phillips 1982)	
105	APOTEX_AZFL 0086172-209	Dymista Prescribing information, 2015. [redline]	R, U, S
106	MEDA_APTX03071227-231	2007.04.17 Letter to Dr. Chowdhury, FDA, from Dr. Fosko, MedPointe, with ANDA attached	R, F, H
107	MEDA_APTX03071491-493	2007.05.21 Facsimile from FDA to Dr. Fosko, MedPointe	R, F, H
108	MEDA_APTX03071154-158	2007.07.10 Facsimile to Dr. Fosko, MedPointe	R, F, H
109	MEDA_APTX03071159-174	2007.07.31 Letter from MedPointe to FDA, Division of Pulmonary and Allergy Drug Products	R, F, H
110	MEDA_APTX03071175-180	2007.09.07 Facsimile from FDA to MedPointe	R, F, H
111	MEDA_APTX03071181-194	2007.10.01 Letter from Dr. Fosko to Dr. Chowdhury, FDA	R, F, H
112	MEDA_APTX03071195-205	2007.10.04 Facsimile from FDA to MedPointe	R, F, H
113	MEDA_APTX00421966-972	2008.02.29 Letter from Dr. Fosko to Dr. Chowdhury	R, F, H
114	MEDA_APTX03071217-226	2008.05.19 Facsimile from FDA to Dr. Fosko Re: SPA Meeting Minutes.	R, F, H
115	MEDA_APTX03071232-235	2009.04.23 Meda Pharmaceuticals FDA Contact Report: Summary of Clinical Development Teleconference with DPAP for IND 77,363 Azelastine-Fluticasone Combination Nasal Spray	R, F, H
116	MEDA_APTX03071236-243	2010.04.21 Letter re Azelastine fluticasone Nasal Spray Request for Pre-NDA Meeting	R, F, H
117	MEDA_APTX03071442-449	2010.08.16 Facsimile from FDA re Pre-Meeting Q & A for 2010.08.17	R, F, H
118	MEDA_APTX02059230-245	2010.09.10 Meeting Minutes from 2010.08.17. Type B, Pre-NDA Meeting re IND 77363 Azelastine Fluticasone Nasal Spray	R, F, H
119	MEDA_APTX03071466-468	2010.09.22 Facsimile re Nonclinical Request for Information from FDA	R, F, H
120	MEDA_APTX00549280-285	2010.11.24 Letter from Meda re Request for M3 CMC Clarification - Follow Up to Pre-NDA Meeting	R, F, H
121	MEDA_APTX03071471-477	2010.11.30 Letter from FDA re Follow Up to Pre-NDA Meeting (CMC Clarification)	R, F, H

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122	MEDA_APTX03071478-483	2010.12.10 Letter from Meda re Clarification of the FDA Meeting Minutes from the 2010.08.17 Pre-NDA Meeting	R, F, H
123	MEDA_APTX01729387-601	IND 77,363 filed April 2, 2007	R, F, H
124	N/A	Exhibit 1: Carr Materials Reviewed	
125	N/A	Exhibit 2: Carr CV	
126	MEDA_APTX 03505096-159	Allegra-D Approval Letter, 12.24.1997	
127	MEDA_APTX 03504858-860	Claritin-D FDA Label and Approval History	
128	MEDA_APTX 03505091-095	Zyrtec-D Label, approved 1994	
129	MEDA_APTX03504739-759	06.30.16 Confidential Avomeen Analytical Services Report	F, H
130	MEDA_APTX03502830-882	Boylan, J. et al. "Parenteral Products" in Modern Pharmaceutics, 424-454 (Gilbert S. Banker & Christopher T. Rhodes eds., 3rd ed., rev. 1996.)	
131	CIP_DYM_00472250	Cipla Nasal Spray Sales Data	
132	CIP_DYM_00002843-846	Duonase Density Stability Testing Form	R
133	CIP_DYM_00085671	Duonase Nasal Spray - 2003.12.29 Packaging Development Checklist	R
134	CIP_DYM_00000791-793	Duonase Nasal Spray - Prescribing Information	
135	CIP_DYM_00469863-864	Duonase Original Formulation Manufacturing Guide	
136	CIP_DYM_00084163-222	Duonase Particle Size Distribution Report	
137	CIP_DYM_00068484-512	Dymista Density Data Report	
138	MEDA_APTX00401697	Dymista Formulation Report	
139	MEDA_APTX03502947-968	Handbook of Pharmaceutical Excipients, 56-58, 134-135, 242-244, 283-286, 490-491, 549-553 (Raymond C. Crowe, Paul J. Sheskey & Marian E. Quinn eds., 6th ed. 2009.)	
140	MEDA_APTX03502883-946	Hecht, G. et al. "Design and Evaluation of Ophthalmic Pharmaceutical Products" in Modern Pharmaceutics, 489-546 (Gilbert S. Banker & Christopher T. Rhodes eds., 3rd ed., rev. 1996).	
141	MEDA_APTX02129718-764	Meda Investigation Report: Dymista 6.4 g Nasal Spray Stability Results	R
142	MEDA_APTX03470948-970	MedPointe Laboratory Notebook No. 1044 - Select Pages	
143	MEDA_APTX00015578-588	MedPointe Product & Process Development Program Priorities and Issues - September 9 , 2002	
144	MEDA_APTX01604890-901	MedPointe Product & Process Development Program Priorities and Issues - November 18, 2002	
145	CIP_DYM_00005241-346	Pharmaceutical Development Report for Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray	

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146	MEDA_APTX03470940	2003.11.11 E-mail Attachment from Lehr Mary to Balwani Gul et al. re: Wednesday Cough/Cold Meeting	
147	MEDA_APTX03470939	2003.11.11 E-mail from Lehr Mary to Balwani Gul et al. re: Wednesday Cough/Cold Meeting	
148	MEDA_APTX03094552-557	2005.05.16 Email from Fuge Dennis to Tony Consigilio et al. re: Proposal - Radius Product Development Proposal	
149	MEDA_APTX01884280	2006.02.06 E-mail from Edick Paul to Fuge Dennis Re: Pfeiffer Bi Dose Nasal Spray System	
150	MEDA_APTX03470974-975	2006.02.06 E-mail from Richard Spivey to Alex D'Addio Re: Pfeiffer Bi Dose Nasal Spray System	
151	MEDA_APTX01645705-707	2006.03.21 E-mail from Kale Kalidas to Alex D'Addio re: Astelin - Flonase Combination Product Feasibility Assessment Plan	
152	CIP_DYM_00201119-123	2010 Duonase Nasal Spray Manufacturing Guide	
153	CIP_DYM_00085756-760	2010 Sucralose Reformulation Manufacturing Guide	
154	MEDA_APTX02330761-797	2015 Meda Highlights of Prescribing Information	R, S
155	N/A	Exhibit 1: List of Materials Reviewed	
156	N/A	Exhibit 2: Curriculum Vitae	
157	N/A	Exhibit 3: Claim Charts for Dymista®	
158	N/A	Exhibit 4: Claim Charts for Duonase	
159	N/A	Exhibit 6: Claim Charts for Duonase Imitator Combinase-AQ	F, H
160	N/A	Exhibit 7: Claim Charts for Duonase Imitator Azeflo	F, H
161	N/A	Exhibit 8: Claim Charts for Duonase Imitator Nazomac-AF	F, H
162	N/A	Exhibit 9: Claim Charts for Duonase Imitator Floresp-AZ	F, H
163	N/A	Exhibit 10: Claim Charts for Duonase Imitator Ezicas-AZ	F, H
164	N/A	Exhibit 11: Claim Charts for Duonase Imitator Nasocom-AZ	F, H
165	MEDA_APTX01815132-133	2/6/2007 Email from G. Balwani to R. Spivey re formulation information (attachment: Astelin vs. Duonase vs. Fluonase.doc)	
166	MEDA_APTX03505160-259	Allen, Jr., The Art, Science, and Technology of Pharmaceutical Compounding, American Pharmaceutical Association, chs. 9-11 and 15-19 (1998)	
167	APOTEX_AZFL 0132304-325	Allen, Jr., The Art, Science, and Technology of Pharmaceutical Compounding, American Pharmaceutical Association, ch. 20 (1998)	

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168	APOTEX_AZFL 0132747-780	Ansel, et al., Pharmaceutical Dosage Forms and Drug Delivery Systems, ch. 7 (6th ed. 1995)	
169	MEDA_APTX03505260-459	Ansel et al., Pharmaceutical Dosage Forms and Drug Delivery Systems chs. 4, 7, 12, 13 (7th ed. 1999)	
170	MEDA_APTX03505557-558	Benadryl Drug Details - NDA005845 (http://www.access.fda.gov)	R, U
171	MEDA_APTX03505559-561	Benadryl Label and Approval History - NDA005845 (http://www.access.fda.gov)	
172	MED_DYM_00001321-325	Block et al, Inorganic Medicinal and Pharmaceutical Chemistry, 100 (Indian ed. 1986)	
173	MEDA_APTX03505460-556	MODERN PHARMACEUTICS, chs. 6-7, 9 (Gilbert S. Banker & Christopher T. Rhodes eds., 3rd ed., rev. 1996)	
174	MEDA_APTX03502830-882	MODERN PHARMACEUTICS, ch. 12 (Gilbert S. Banker & Christopher T. Rhodes eds., 3rd ed., rev. 1996)	
175	MEDA_APTX03502883-946	MODERN PHARMACEUTICS, ch. 13 (Gilbert S. Banker & Christopher T. Rhodes eds., 3rd ed., rev. 1996)	
176	APOTEX_AZFL 0132818-842	Imitrix Label, Nov. 2013	
177	MEDA_APTX03504873-908	Lieberman et al., Pharmaceutical Dosage Forms: Disperse Systems, vol. 2 ch. 4 (2nd ed., Revised and Expanded 1996)	
178	MEDA_APTX03504909-985	Martin, Physical Pharmacy, chs. 10 & 18 (Fourth Ed., 1993)	
179	MEDA_APTX03505071-080	Michael et al., Characterisation of the aggregation behavior in a salmeterol and fluticasone propionate inhalation aerosol system, International Journal of Pharmaceutics 221: 165-174 (2001)	
180	MEDA_APTX03505081-090	Michael et al., The physico-chemical properties of salmeterol and fluticasone propionate in different solvent environments, International Journal of Pharmaceutics 200: 279-288 (2000)	
181	MEDA_APTX03504986-5006	Onrust et al., Mometasone Furoate: A Review of its Intranasal Use in Allergic Rhinitis, Drugs 56(4): 725-745 (1998)	
182	APOTEX_AZFL 0132974-992	Remington: The Science and Practice of Pharmacy, Chapter 16, (2000)	
183	APOTEX_AZFL 0130673-689	Remington: The Science and Practice of Pharmacy, Chapter 18 (2000)	
184	MEDA_APTX03505007-029	Remington: The Science and Practice of Pharmacy, Chapter 22 (2000)	
185	MEDA_APTX03502947-968	Rowe et al., Handbook of Pharmaceutical Excipients, (excerpts) Pharmaceutical Press (6th ed. 2009)	R, U
186	MEDA_APTX03504861-872	Shin Etsu Pharmacoat USP Hypromellose Brochure (2005)	

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187	APOTEX_AZFL 0132333-337	The United States Pharmacopeia: 24 National Formulary 19, 1809-1811 (1999)	
188	MEDA_APTX03505030-055	The United States Pharmacopeia: 24 National Formulary 19, 2107-2130 (1999)	
189	APOTEX_AZFL 0132041-077	Wade et al., Handbook of Pharmaceutical Excipients, (excerpts) Pharmaceutical Press (2nd ed. 1994)	
190	MEDA_APTX03505056-070	Wingrave, Oxide Surfaces, Surfactant Science Series vol. 103, 184-192 (2001)	
191	MEDA_APTX0350591-595	Zyrtec-D Extended Release Tablets Label, Approved Aug. 10, 2001	
192	MEDA_APTX03505662-723	Lieberman et al., Pharmaceutical Dosage Forms: Disperse Systems, vol. 2 ch. 5 (2nd ed., Revised and Expanded 1996)	
193	MEDA_APTX03505611-616	British Pharmaceutical Codex, The Pharmaceutical Press, 232 & 252-255 (1973)	
194	MEDA_APTX03505633-654	Khan et al., Pharmaceutical and Clinical Calculations, CRC Press 149-167 (2nd ed. 2000)	
195	MEDA_APTX03505724-748	Remington: The Science and Practice of Pharmacy, Chapters 19 & 52 (2000)	
196	MEDA_APTX03505562-610	Ansel et al., Pharmaceutical Dosage Forms and Drug Delivery Systems ch. 3 (7th ed. 1999)	
197	MEDA_APTX03504769-782	Zyrtec Tablets and Syrup for Oral Use Label, 2002	R, U
198	MEDA_APTX03505655-661	Kibbe, Handbook of Pharmaceutical Excipients, Pharmaceutical Press 252-255 (3rd ed. 2000)	
199	MEDA_APTX03505617-632	Elghobashy et al., Application of Membrane Selective Electrodes for the Determination of Azelastine Hydrochloride in the Presence of its Alkaline Degradant in Eye Drops and Plasma, Analytical & Bioanalytical Electrochemistry, vol. 5(3): 325-340 (2013)	R
200	MEDA_APTX03505749-792	Lund, The Pharmaceutical Codex: Principles and Practice of Pharmaceutics, The Pharmaceutical Press, 41-47 & 311-321 (12th ed. 1994)	
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202	APOTEX_AZFL 0000823-943	[redacted]	R
203	MEDA_APTX01645706-707	Astelin-Flonase Combination Product: Feasibility Assessment Plan	
204	CIP_DYM_00477274	Dymista competitor products February MAT, 2005-2016	S
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206	APOTEX_AZFL 0135169-182	Millard, Jeffrey W., "Solubilization by cosolvents Establishing useful constants for the log-linear model," International J. of Pharmaceutics, 245:153-166; 2002.	
207	MEDA_APTX03505868-874	Optical Microscopy, in The United States Pharmacopeia: National Formulary, 1965-67 (1999) at 1965	
208	APOTEX_AZFL 0115714-747	[redacted]	R
209	APOTEX_AZFL 0097514-516	[redacted]	R
210	APOTEX_AZFL 0107701-706	[redacted]	R
211	APOTEX_AZFL 0110211-216	[redacted]	R
212	MEDA_APTX03505829-867	Remington: The Science and Practice of Pharmacy, Chapter 77: Hormones and Hormone Antagonists 1358-94, at 1369 (2000)	
213	APOTEX_AZFL 0093246-247	[redacted]	R
214	APOTEX_AZFL 0096128-134	[redacted]	R
215	APOTEX_AZFL 0075224-227	[redacted]	R
216	APOTEX_AZFL 0093195-197	[redacted]	R
217	APOTEX_AZFL 0103779-780	[redacted]	R
218	APOTEX_AZFL 0103139-144	[redacted]	R
219	APOTEX_AZFL 0000823-943	[redacted]	R
220	APOTEX_AZFL 0125304-308	[redacted]	R
221	APOTEX_AZFL 0084625-629	[redacted]	R
222	N/A	Notice of deposition of Wan Jiang	R
223	N/A	Notice of deposition of Apotex Inc. and Apotex Corp.	R
224	APOTEX_AZFL 00095177-179	[redacted]	R
225	N/A	Notice of Deposition of Jachim Maus	
226	N/A	Plaintiffs' Objections and Responses to Apotex's Notice of Rule 30 (b) (6) Deposition	
227	MEDA_APTX02429132-149	Carr, W. "A novel intranasal therapy of azelastine with fluticasone for the treatment of allergic rhinitis." J. Allergy Clin. Immunol., 2012.	
228	APOTEX_AZFL 0052951-960	EP 0780127, "A Nasal Spray Containing a Steroid and a Antihistamine" to Ronald Cramer	

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229	MEDA_APTX02429157-165	Meltzer, E. et al. "MP29-02 (a novel intranasal formulation of azelastine hydrochloride and fluticasone propionate) in the treatment of seasonal allergic rhinitis: A randomized, double-blind, placebo-controlled trial of efficacy and safety." Allergy Asthma Proc., 33: 324-332; 2012.	
230	MEDA_APTX02308986-991	Hampel, F., et al. "Double-blind, Placebo-Controlled Study of Azelastine and Fluticasone in a Single Nasal Spray Delivery Device." Annals of Allergy, Asthma, & Immunology, 105: 168-173; 2010.	
231	ACCETTA 000057-58	Curriculum vitae of Donald Accetta, M.D. MP	
232	APOTEX_AZFL 0060185-207	Final printed labeling for application #20-121/S009 "FLONASE"	
233	APOTEX_AZFL 0059081-097	Approval letter for application #20-114/S006 "ASTELIN"	
234	ACCETTA 000002	03.26.2001 medical record	
235	ACCETTA 000001	04.24.2001 medical record	
236	ACCETTA 000004	07.25.2000 medical record	
237	ACCETTA 000005	12.18.2000 medical record	
238	ACCETTA 000006	04.28.1997 medical record	
239	ACCETTA 000007	03.06.2000 medical record	
240	ACCETTA 000008	04.11.2002 medical record	
241	ACCETTA 000009	02.20.2002 medical record	
242	ACCETTA 000010	03.24.1999 medical record	
243	ACCETTA 000012	05.30.2002 medical record	
244	ACCETTA 000013	08.31.1998 medical record	
245		Intentionally Left Blank	
246		Intentionally Left Blank	
247	MEDA_APTX00008898-913	August 17, 2010 FDA Meeting Minutes	R, U, F
248	MEDA_APTX01893256, MEDA_APTX01893313	E-mail and attachment from spikulin@comcast.com to Alexander D'Addio 12.08.2010	
249	MEDA_APTX01609337-339, MEDA_APTX01609453	E-mail chain from Alexander D'Addio to Ilana Kaufman 01.04.2011	
250	MEDA_APTX01609434	3.2.P.1 Composition of Azelastine/Fluticasone Nasal Spray	
251	MEDA_APTX01631375-380	E-mail chain from Alexander D'Addio to Joachim Maus 06.16.2011	
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253	MEDA_APTX00015649-656	MedPointe Product & Process Development Program Priorities & Issues: Commercial Product Technical Support 09.02.2002	

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254	MEDA_APTX00015637-648	MedPointe Product & Process Development Program Priorities & Issues: Commercial Product Technical Support 09.30.2002	
255	MEDA_APTX03470939-940	E-mail and attachment from Mary Lehr to Gul Balwani 11.11.2003	
256	MEDA_APTX03470942-945	D'Addio self-evaluation 04.21.2004	
257	MEDA_APTX03470947	Astelin & Improved formulation Astelin project tracker spreadsheets	
258	MEDA_APTX00015443-456	Dymista White Paper, "Dymista: The Importance of Formulation in Developing a Combination Intranasal Spray for the Treatment of Allergic Rhinitis," Oct. 12, 2012	
259	MEDA_APTX01608808-810	Dymista Nasal Cast Study - Single Sprays, April 24, 2014	
260	MEDA_APTX00017340-350	Next Breath LLC Report: "Method Development for the Determination of Posterior Deposition of Dymista versus Sequential Administration of Fluticasone Propionate Nasal Spray and Azelastine Hydrochloride Nasal Spray via Nasal Cast Deposition"	
261	MEDA_APTX01642782-783	E-mail chain from Larry Gever to Ashwini Dumaswala 02.13.2002	
262	MEDA_APTX01618783-797	Draft Formulation Internal Communique	
263	MEDA_APTX01616889-891	E-mail chain from Alexander D'Addio to Nancy Ruiz 07.16.2013	
264	MEDA_APTX01608672-680	E-mail chain from Larry Gever to John Karafilidis 06.20.2014	
265	APOTEX_AZFL 0060307-317	Galant et al., Clinical Prescribing of Allergic Rhinitis Medication in the Preschool and Young School-Age Child, Biodrugs, Vol. 15, No. 7, pp. 453-463 (2001)	
266	MEDA_APTX00034325	E-mail and attachment from Jeffrey Hostler to Stuart Loesch 04.14.2015	
267	MEDA_APTX01774595-637	E-mail chain and attachment from Ashwini Dumaswala to Bryan Roecklein 11.02.2011	
268	MEDA_APTX01663422-423	E-mail chain and attachment from Dennis Fuge to Jeffrey Hostler 06.04.2013	
269	MEDA_APTX00028978-986	E-mail and attachment from Bryan Roecklein to Stuart Loesch 03.09.2015	
270	MEDA_APTX00035036-044	E-mail chain and attachment from Joseph Evans to Jeffrey Hostler 05.16.2014	
271	MEDA_APTX02486008-075	E-mail and attachment from Stuart Loesch to Betsy Orrison 11.14.2014	
272	MEDA_APTX02482904-909	E-mail string and attachment from Maria Carell to Stuart Loesch 03.31.2014	
273	N/A	Apotex Inc. and Apotex Corp.'s Notice of Deposition to Geena Malhotra	
274	CIP_DYM_00060301-350	Declaration of Geena Malhotra, August 12, 2011	
275	MED_DYM_00000378-389	UK Patent Application, GB 2389530A	

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276	CIP_DYM_00087834-857	Declaration of Geena Malhotra, 07.03.2009	
277	MED_DYM_00000654-682	Declaration of Geena Malhotra, 09.23.2010	
278	MED_DYM_00001334-433	Declaration of Joachim Maus, M.D.	
279	CIP_DYM_00388925-926	E-mail from geena@cipla.com to Patsy 03.28.2011	
280	CIP_DYM_00226663-691	Fax from Corey Fishman at Medpointe to Patsy Jeffrey at Cipla, 11.13.2006	
281	CIP_DYM_00392601-602	Email from Amar Lulla to Patsy Jeffrey 08.11.2006	
282	MEDA_APTX03490423-433	2011 First Amendment to Cipla-Meda Agreement	
283	CIP_DYM_00400689-691	E-mail from Manish Venkatachalapathy to Geena Malhotra 04.02.2013	
284	MEDA_APTX02411737-739	02.19.2008 Letter from Sharon Clarke to Amar Lulla re: Right of First Refusal	
285	CIP_DYM_00392333	E-mail from Patsy Jeffrey to Jeff Bauer 03.17.2008	
286	CIP_DYM_00392334	E-mail from Patsy Jeffrey to Richard Rumbold 03.17, 2008	
287	CIP_DYM_00392335	E-mail from Patsy to Len Holmes 03.17.2008	
288	CIP_DYM_00392336	E-mail from Patsy Jeffery to Michael Jung 03.17.2008	
289	CIP_DYM_00392739	E-mail from Prashant Savle to Patsy Jeffery 03.25.2008	
290	CIP_DYM_00392226	E-mail from al@cipla.com to Patsy Jeffrey 02.02.2009	
291	MEDA_APTX01663695-699	E-mail and attachment from Dennis Fuge to Corey Fishman 08.04.2006	
292	MEDA_APTX02452943-947	E-mail from Dennis Fuge to Corey Fishman 08.14.2006	
293	N/A	Apotex Inc. and Apotex Corp.'s Notice of Deposition to Dennis Fuge	
294	N/A	International Publication No. WO 03/105856	
295	MEDA_APTX01660507	E-mail from Brian Lawrence to Dennis Fuge 07.27.2006	
296	MEDA_APTX01660508-516	Azelastine HCL + Fluticasone Propionate FDC Nasal Spray Product, R&D Meeting, July 20, 2006	
297	MEDA_APTX01660557	E-mail from Dennis Fuge to Anders Lamholt 08.22.2012	
298	MEDA_APTX01663365	E-mail from Kate Flannery to Dennis Fuge 07.28.2016	
299	MEDA_APTX01663366-367	Dennis Fuge Itinerary Newark to London To India, 07.31.2006 to 08.05.2006	
300	MEDA_APTX01663695	E-mail from Dennis Fuge to Corey Fishman 08.04.2006	
301	MEDA_APTX01663696-699	Cipla August 3 & 4, 2006 Executive Summary	
302	MEDA_APTX02441750	E-mail from Corey Fishman to Richard Spivey 08.08.2006	
303	MEDA_APTX02441751-764	MedPointe Pharmaceuticals Combo Development & Technuical Review, August 2006	

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304	MEDA_APTX02452355-360	Draft Letter to Amar Lulla 08.14.2006	
305	MEDA_APTX02452943-947	E-mail from Dennis Fuge to Corey Fishman 08.14.2006	
306	CIP_DYM_00348701-736	Azelastine Combination Product Agreement	
307	MEDA_APTX03435970-973	Summary of the Azelastine Combination Product Agreement between Cipla and Meda, 06.05.2013	
308	N/A	Apotex, Inc., and Apotex Corp.'s Notice of Deposition to Sujeet Rajan	
309	MED_DYM_00001434-453	Declaration of Dr. Sujeet Rajan	
310	CIP_DYM_00201781-792	New Drugs Azelastine entry, Aust. Prescr. 2002; 25: 44-7	
311	MEDA_APTX00589866-873	NDA #20-115, Vol. 125 of 482. Wallace Laboratories, Cranbury, NJ	
312	CIP_DYM_00201741-761	Allergic Rhinitis (Market Watch & WE)	
313	MED_DYM_00001454-461	Declaration of Mr. Nikhil Chopra	
314	CIP_DYM_ 00477275	Marketing & sales data 2013-Feb. 2016	
315	CIP_DYM_00000644-692	Cipla Duonase Marketing Presentation	
316	N/A	Duonase, Combinase-AQ, Nezalast, Azeflo, Azenate, Sarnase, Ezicas-AZ, and Nasocom-AZ Prescriptions Chart	
317	CIP_DYM_00408508	Composition, prescription, and market share of Duonase, Azeflo, Combinase-AQ, Nazomac-AF, Floresp-AZ, Nezalast, Ezicas-AZ, Flublock-AZ, Nasocom-AZ, Azenate, and Duospray	
318	CIP_DYM_00146333-338	Cipla Overview of Respiratory Team Allergic Rhinitis 08.05.2011	
319	CIP_DYM_00413345-355	Team 2 A.R. Basket (Nasal Spray), from Vipul Ranjan to Mr. Nikhil Chopra 04.26.2011	
320	N/A	Apotex, Inc., and Apotex Corp.'s Notice of Deposition of Nikhil Chopra	
321	APOTEX_AZFL 0132708-713	Pipkorn, U. et al. "Inhibition of Mediator Release in Allergic Rhinitis by Pretreatment with Topical Glucocorticosteroids." N. Engl. J. Med., 316(24): 1506-1510; 1987	
322	APOTEX_AZFL 0132232-256	Schleimer, R. " Chapter 46 Glucocorticosteroids: Their Mechanisms of Action and Use in Allergic Diseases." Allergy Principles & Practice, 1:638-660; 1998.	
323	N/A	Schleimer, R. " Chapter 52 Glucocorticosteroids" Allergy Principles & Practice, 1:870-913; 2003.	
324	APOTEX_AZFL 0132133-141	Martin, R., et al. "Systemic Effect Comparisons of Six Inhaled Corticosteroid Preparations." Am. J. Resp. Critical Care Med., 165: 1377-1383; 2002	

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325	APOTEX_AZFL 0132282-288	Stellato, C., et al. "An in vitro Comparison of Commonly Used Topical Glucocorticoid Preparations." J. Allergy Clin. Immunol., 104(1): 623-629; 1999.	
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327	APOTEX_AZFL 0133061-068	Greiff et al, "Topical azelastine has a 12-hour duration of action as assessed by histamine challenge-induced exudation of ?2- macroglobulin into human nasal airways." Clin. Exper. Allergy, 27(4): 438-444; April 1997.	
328	APOTEX_AZFL 0059666-672	Berger, W., et al. "Double-blind Trials of Azelastine Nasal Spray Monotherapy Versus Combination Therapy with Loratadine Tablets and Beclomethasone Nasal Spray in Patients with Seasonal Allergic Rhinits." Ann. Allergy Asthma Immunol, 82: 535-541; 1999.	
329	N/A	Weiler, John M., et al. "Azelastine nasal spray as adjunctive therapy to azelastine tablets in the management of seasonal allergic rhinitis." ." Ann. Allergy Asthma Immunol, 79: 327-332; 1997.	
330	CIP_DYM 00050955-00050962	Ratner, P., et al. "Combination Therapy with Azelastine Hydrochloride Nasal Spray and Fluticasone Propionate Nasal Spray in the Treatment of Patients with Seasonal Allergic Rhinitis." Annals of Allergy, Asthma, & Immunology, 100:74-81; 2008.	
331	MED_DYM_00001355-364	Ratner, P. "A Comparison of the Efficacy of Fluticasone Propionate Aqueous Nasal Spray and Loratadine, Alone and in Combination, for the Treatment of Seasonal Allergic Rhinitis." J. Fam. Prac., 47(2); 1998.	
332	MEDA_APTX02173918-924	Brooks, C. et al. "Spectrum of Seasonal Allergic Rhinitis Symptom Relief with Topical Corticoid and Oral Antihistamine Given Singly or in Combination." Am. J. Rhinol., 10:193-196; 1996.	
333	APOTEX_AZFL 0060084-093	Drouin, M., et al. "Adding Loratadine to Topical Nasal Steroid Therapy Improves Moderately Severe Seasonal Allergic Rhinoconjunctivitis." Advances in Therapy, 12(6): 340-349; 1995.	
334	N/A	L.H. Block and R.N. Patel, Solubility and Dissolution of Triamcinolone Acetonide, 62 J. of Pharmaceutical Sciences 617, 617-621 (April 1973)	
335	MEDA_APTX00540768-772	2008.04.28 Memorandum of Facsimile Correspondence, from Philantha Bowen to Richard Fosko	R, F

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336	MED_DYM_00001345-00001353	Juniper, E F., et al., "Comparison of beclomethasone dipropionate aqueous nasal spray, astemizone, and the combination in the prophylactic treatment of ragweed pollen-induced rhinoconjunctivitis." J. Allergy Clin. Immunol., 83(3): 627-633.	
337	APOTEX_AZFL 0060403-408	Howarth, P. H. "A comparison of the anti-inflammatory properties of intranasal corticosteroids and antihistamines in allergic rhinitis." Allergy, 62: 6-11; 2000.	
338	APOTEX-AZFL 0060888-904	Nielsen, Lars P. "Review Article, Intranasal Corticosteroids for Allergic Rhinitis -Superior Relief?" Am. J. Respir Med., 2(1): 55-65; 2001.	
339	APOTEX_AZFL 0133783-785	Charu Chhibber, "Lack of awareness among patients ails Jan Aushadhi stores" The Tribune, (May 1, 2016, 2:10 AM) http://www.tribuneindia.com/news/chandigarh/community/lack-of-awareness-among-patients-ails-jan-aushadhi-stores/230353.html	
340	APOTEX_AZFL 0105470-494	[redacted]	
341	APOTEX_AZFL 0107000-010	[redacted]	
342	APOTEX_AZFL 0106352-353	[redacted]	
343	CIP_DYM_00452218	U.S. Patent No. 5,164,194 ("Hettche")	
344	N/A	Formulation Matrix	
345	N/A	Malhotra Preparations	
346	N/A	Cramer Example I	
347	N/A	Dr. Govindarajan Process	
348	N/A	7 Day pH results	
349	N/A	7 Day appearance	
350	N/A	Sprayability after 7 days	
351	N/A	Mal-A delivered dose uniformity and assay	
352	N/A	Mal-C delivered dose uniformity and assay	
353	N/A	delivered dose uniformity	
354	N/A	Mal-A (bundled)	
355	N/A	Mal-B (bundled)	
356	N/A	Mal-C (bundled)	
357	N/A	Mal-D (bundled)	
358	N/A	HS-D (bundled)	
359	N/A	X-Form (bundled)	

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360	N/A	Exhibit Q video	
361		Exhibit Q video	
362	N/A	pump delivery shot weight raw data & sprayability check	
363	N/A	14-day stability photos (bundled)	
364	N/A	14-day stability appearance notebook pages	
365	N/A	Appendix A: CV	
366	N/A	Appendix B: Cramer Example I Method and the Malhotra Method	
367	N/A	Exhibit 1--CV	
368		Intentionally Left Blank	
369	MEDA_APTX03505573-575	Burgher, Phillip. "Data Aggregation and Normalization for Population Health Management," in Wellcentive, www.wellcentive.com/blog/data-aggregation-andnormalization, 2012.	
370	MEDA_APTX03505730-766	European Medicines Agency, ICH Topic E, Note for Guidance on Statistical Principles for Clinical Trials, September 1998.	R, U
371	MEDA_APTX03505568-572	Hollis, Sally and Campbell, Fiona, "What is meant by intention to treat analysis? Survey of published and randomized controlled trials," BMJ, 319:670-674; 1999.	R, U
372	MEDA_APTX03505767-789	Lachin, John M. "Statistical Considerations in the Intent-to-Treat Principle," Control. Clin. Trials., 21:167-189; 2000.	R, U
373	MEDA_APTX03505876-878	Onset of action, in Mosby's Medical, Nursing, & Allied Health Dictionary, 6th ed., 1220; 2002.	
374	MEDA_APTX03502992-993	About Meda - meda.com	
375	MEDA_APTX03504070-211	Meda Annual Report 2015, March 22, 2016,	
376	MEDA_APTX03504726	Meda Pharmaceuticals - About	
377	MEDA_APTX03503140-141	Meda Pharmaceuticals Inc. Private Company Profile	
378	MEDA_APTX03504068-069	Meda: Strategic Acquisition of MedPointe Inc. Completed	
379	MEDA_APTX03503148-150	f, "At a Glance"	
380	MEDA_APTX03503151-154	Cipla - Respiratory Business Unit - Inhalation devices by Cipla	
381	MEDA_APTX03503155-350	Cipla Annual Report 2014-15, July 9, 2015,	
382	MEDA_APTX03503142	Apotex Careers	
383	MEDA_APTX03502991	About Apotex	
384	MEDA_APTX03504725	Historical Currency Converter - OANDA Solutions for Business	
385	MEDA_APTX03504212	Apotex - NAFTA Tribunal Decision Supports FDA and Its Actions	R

PTX	Bates Range	Document Description	Defendants' Objections
386	MEDA_APTX03504276-278	Meda Respiratory Products	R, U, F
387	MEDA_APTX03503401-437	Highlights of Dymista Prescribing Info, 2015	R, U, S
388	MEDA_APTX03504028-031	Meda Adds Spacer-Integrated Inhaler with $135m Acquisition	R, U
389	MEDA_APTX03503067-073	Allergy Medications Explained, by Dr. Christopher Chang	R, U
390	MEDA_APTX03503438-447	NHS Grampian Minute of Forumlary Group Meeting held on Tuesday 19th May 2015	R, U, F
391	MEDA_APTX03490470-512	Azelastine Combination Product Agreement between Cipla Ltd. and Meda AB, dated June 5, 2013,	
392	MEDA_APTX03503393-394	Drug Approval Package: Dymista	R, U
393	MEDA_APTX03504046-065	Meda AB (publ) Interim report Jan-Sept. 2012	
394	MEDA_APTX03504515-551	IMS Health National Sales Perspectives	
395	MEDA_APTX03504512-514	Robert Steinbrook, M.D., "For Sale: Physicians' Prescribing Data," The New England Journal of Medicine, Vol. 354, No. 26, June 2006, 2745-47	
396	MEDA_APTX03502401-653	DataMonitor - Pipeline and Commercial Insight: Allergic Rhinitis, July 2010	
397	MEDA_APTX03503458-738	Allergic Rhinitis - Global Drug Forecast and Market Analysis to 2024, GlobalData, September 2015,	
398	MEDA_APTX03504582-583	Drugs@FDA: FDA Approved Drugs - Nasonex	R, U
399	MEDA_APTX03504213-223	Nasonex Prescribing Information, 2013	R, U
400	MEDA_APTX02486008-075	Email & 2015 Dymista Marketing Plan	
401	MEDA_APTX03503456-457	GSK - Flonase	R, U
402	MEDA_APTX03504269-270	Orange Book - Fluticasone Propionate	
403	MEDA_APTX03504497-509	GSK Flonase Prescribing Information, 2004	
404	MEDA_APTX03504510-511	FDA Approves First Generic Version of Flonase, 2006	
405	MEDA_APTX03504020	GSK Launches Flonase OTC	
406	MEDA_APTX03502115-167	Meda - 2016 Dymista Brand Plan	
407	MEDA_APTX03502994-997	Prescription to OTC Switch list	
408	MEDA_APTX03504729	Rhinocort Now Available OTC	
409	MEDA_APTX03503075	Apotex Launches First Generic Version of Merck's Nasonex	R
410	MEDA_APTX03503448-455	VeryWell - Flonase OTC for Allergies	R, U
411	MEDA_APTX03504275	Blue Cross Blue Shield - Pharmacy Update: Flonase and Fluticasone no longer covered	R, F
412	CIP_DYM_00053314-370	Meda/Cipla Powerpoint - Complete Picture	

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413	MEDA_APTX03504224-266	Natalie A. Thomas, "Secondary Considerations in Nonobviousness Analysis: The Use of Objective Indicia Following KSR v. Teleflex," New York University Law Review, 2011, 2070-112,	
414	MEDA_APTX03503131-139	John C. Jarosz and Robert L. Vigil, "Assessing Commercial Success at the U.S. Patent Trial and Appeal Board," International In-House Counsel Journal, Summer 2015, 1-9,	
415	MEDA_APTX03504279	Paul A. Samuelson and William D. Nordhaus, ECONOMICS, 19th Edition, (McGraw-Hill 2010) ("Paul Samuelson and William Nordhaus"), at 49.	
416	MEDA_APTX03503143-147	Dennis W. Carlton and Jeffrey M. Perloff, Modern Industrial Organization, Second Edition, (Addison-Wesley, 1994), at 16	
417	MEDA_APTX03503375-92	Orange Book - Preface	
418	MEDA_APTX03504431-496	Richard E. Caves, Michael D. Whinston, and Mark A. Hurwitz, "Patent Expiration, Entry, and Competition in the U.S. Pharmaceutical Industry," Brookings Papers on Economic Activity: Microeconomics, 1991, 1-66,	
419	MEDA_APTX03503360-372	David Reiffen and Michael R. Ward, "Generic Drug Industry Dynamics," The Review of Economics and Statistics, Vol. 87, No. 1, February 2005, 37-49	
420	MEDA_APTX03503045-066	All Products - Apotex Products: United States	
421	APOTEX_AZFL 0125195	[redacted]	R
422	APOTEX_AZFL 0107352-354	[redacted]	R, F, H
423	APOTEX_AZFL 0118149-152	[redacted]	R, F, H
424	MEDA_APTX03503074	First-Time Generic Drug Approvals - March 2016	R
425	MEDA_APTX03504280-283	Technavio Expects the Global AR Drug Market to Exceed USD 12 billion by 2020	R, U, F
426	MEDA_APTX03502335-352	Renavatio Presentation & Meda Presentation - Dymista Phase I Exploratory Research	R, U, F, H, S
427	MEDA_APTX03502353-371	Dymista Phase I - Exploratory Research, June 2011	R, U, F, H, S
428	MEDA_APTX03502381-399	Meda Presentation - Dymista Phase III Sales Aid Elements	R, U, F, H, S
429	MEDA_APTX03504284-287	The Difference Between AR and Sinusitis, Drs. Miller & Alt	R, U, H
430	MEDA_APTX03504022-024	Family Allergy & Asthma Care of Montana - If one is good, 2 are better…A nasal spray containing 2 medications!	R, U, F, H

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431	MEDA_APTX03503395-400	Dymista: in a class of its own for treatment of AR - Key Opinions; Jean Bousquet, David Price, Massimo Triggiani, Ludger Klimek	R, U, F, H
432	MEDA_APTX03504410-415	Kyle Bagwell, "The Economic Analysis of Advertising" in Handbook of Industrial Organization, Vol. 3, eds. M. Armstrong and R. Porter, Elsevier B.V., 2007, 1703-1844, at 1705-1706.	
433	MEDA_APTX03502998-3044	Andrew Ching and Masakazu Ishihara, "Measuring the Informative and Persuasive Roles of Detailing on Prescribing Decisions," April 27, 2010 Working Paper,	
434	MEDA_APTX03504416-430	Ernst R. Berndt, "The U.S. Pharmaceutical Industry: Why Major Growth In Times of Cost Containment?" Health Affairs, Vol. 20, No. 2, 2001, at 110-11	R, U, F, H, S
435	MEDA_APTX03504290-333	USDA - Regulation of Prescription Drug Promotion	
436	MEDA_APTX03503131-139	John C. Jarosz and Robert L. Vigil, "Assessing Commercial Success at the U.S. Patent Trial and Appeal Board," International In-House Counsel Journal, Summer 2015, 1-9, at 1.	
437	MEDA_APTX02486590-598	US Sales Force Effectiveness, Aug 2014	
438	MEDA_APTX03501812-886	Dymista Marketing Plan 2016	
439	MEDA_APTX01972009-016	Meda Dymista Sales & AR Market Sales through Nov. 2010	
440	MEDA_APTX03490384-411	2006 Cipla-Meda License Agreement without Quality Agreement	
441	MEDA_APTX03506339	Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations, Product Details for NDA 077538, http://www.accessdata.fda.gov/scripts/cder/ob/results_product.cfm?Appl_Type=A&Appl_No=077538	
442	MEDA_APTX03506340	Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations, Product Details for NDA 077954 http://www.accessdata.fda.gov/scripts/cder/ob/results_product.cfm?Appl_Type=A&Appl_No=077954	
443	MEDA_APTX03506341-363	Apotex Product List, http://www.apotex.com/us/en/products/search.asp?qt=All&qs=&t=All%20Products	
444	MEDA_APTX03506364-381	Preference Hypothesis and Strong Ordering (Explained with Diagram) http://www.economicsdiscussion.net/demand/preference-hypothesis-and-strong-ordering-explained-with-diagram/1248	R, U, F, H
445	MEDA_APTX02482055-059	Dymista Contracting Strategy - Executive Summary Apr. 2015	F

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446	MEDA_APTX02482904-909	March 2014 Email Chain & Dymista briefing document	
447	MEDA_APTX01921748-749	Meda Memorandum re: CVS Caremark Formulary Decisions 2015	
448	MEDA_APTX03506110	Capital IQ, Income Statement	
449	APOTEX_AZFL 0106383-384	[redacted]	
450	APOTEX_AZFL 0106840-843	[redacted]	R
451	APOTEX_AZFL 0107137-138	[redacted]	R
452	APOTEX_AZFL 0108561-562	[redacted]	R
453	APOTEX_AZFL 0115326	[redacted]	R
454	APOTEX_AZFL 0115500	[redacted]	R
455	APOTEX_AZFL 0116103-104	[redacted]	R
456	APOTEX_AZFL 0118049	[redacted]	R
457	APOTEX_AZFL 0118050	[redacted]	R
458	APOTEX_AZFL 0118846-854	[redacted]	R
459	APOTEX_AZFL 0123251-259	[redacted]	R
460	APOTEX_AZFL 0126241-242	[redacted]	R
461	CIP_DYM_00002377	Indian IMS FlutiProp-Azelastine Combination, 09.08-09.09	
462	CIP_DYM_00002379	Indian IMS FlutiProp-Azelastine Combination, 12.09-12.10	
463	CIP_DYM_00002391	Indian IMS FlutiProp-Azelastine Combination, 04.08-04.09	
464	CIP_DYM_00002393	Indian IMS FlutiProp-Azelastine Combination, 08.08-08.09	
465	CIP_DYM_00002395	Indian IMS FlutiProp-Azelastine Combination, 12.08-12.09	
466	CIP_DYM_00002397	Indian IMS FlutiProp-Azelastine Combination, 02.08-02.09	
467	CIP_DYM_00002399	Indian IMS FlutiProp-Azelastine Combination, 07.08-07.09	
468	CIP_DYM_00002401	Indian IMS FlutiProp-Azelastine Combination, 03.08-03.09	
469	CIP_DYM_00002403	Indian IMS FlutiProp-Azelastine Combination, 05.08-05.09	
470	CIP_DYM_00002406	Indian IMS FlutiProp-Azelastine Combination, 11.08-11.09	
471	CIP_DYM_00002408	Indian IMS FlutiProp-Azelastine Combination, 10.08-10.09	
472	CIP_DYM_00002410	Indian IMS FlutiProp-Azelastine Combination, 04.09-04.10	
473	CIP_DYM_00002411	Indian IMS FlutiProp-Azelastine Combination, 08.09-08.10	
474	CIP_DYM_00002413	Indian IMS FlutiProp-Azelastine Combination, 02.09-02.10	
475	CIP_DYM_00002415	Indian IMS FlutiProp-Azelastine Combination, 01.09-01.10	
476	CIP_DYM_00002417	Indian IMS FlutiProp-Azelastine Combination, 07.09-07.10	
477	CIP_DYM_00002419	Indian IMS FlutiProp-Azelastine Combination, 06.09-06.10	
478	CIP_DYM_00002421	Indian IMS FlutiProp-Azelastine Combination, 03.09-03.10	

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479	CIP_DYM_00002423	Indian IMS FlutiProp-Azelastine Combination, 05.09-05.10	
480	CIP_DYM_00002424	Indian IMS FlutiProp-Azelastine Combination, 11.09-11.10	
481	CIP_DYM_00002426	Indian IMS FlutiProp-Azelastine Combination, 10.09-10.10	
482	CIP_DYM_00002428	Indian IMS FlutiProp-Azelastine Combination, 09.09-09.10	
483	CIP_DYM_00002430	Indian IMS FlutiProp-Azelastine Combination, 04.10-04.11	
484	CIP_DYM_00002431	Indian IMS FlutiProp-Azelastine Combination, 08.10-08.11	
485	CIP_DYM_00002435	Indian IMS FlutiProp-Azelastine Combination, 02.10-02.11	
486	CIP_DYM_00002436	Indian IMS FlutiProp-Azelastine Combination, 01.10-01.11	
487	CIP_DYM_00002438	Indian IMS FlutiProp-Azelastine Combination, 07.10-07.11	
488	CIP_DYM_00002439	Indian IMS FlutiProp-Azelastine Combination, 06.08-06.09	
489	CIP_DYM_00002441	Indian IMS FlutiProp-Azelastine Combination, 06.10-06.11	
490	CIP_DYM_00002443	Indian IMS FlutiProp-Azelastine Combination, 03.10-03.11	
491	CIP_DYM_00002444	Indian IMS FlutiProp-Azelastine Combination, 05.10-05.11	
492	CIP_DYM_00002448	Indian IMS FlutiProp-Azelastine Combination, 10.10-10.11	
493	CIP_DYM_00002450	Indian IMS FlutiProp-Azelastine Combination, 02.11-02.12	
494	CIP_DYM_00002517	Indian IMS FlutiProp-Azelastine Combination, FY 2008	
495	CIP_DYM_00002692	Indian IMS FlutiProp-Azelastine Combination, 05.08-05.09	
496	CIP_DYM_00003236	Indian IMS FlutiProp-Azelastine Combination, 03.10-03.11	
497	CIP_DYM_00003719	Indian IMS Fluticasone-Azelastine Combination, 02.2010	
498	CIP_DYM_00053494-572	May 2010 Duonase Doctor Training	
499	CIP_DYM_00054575	Indian IMS FlutiProp-Azelastine Combination, 02.09-02.10	
500	CIP_DYM_00054577	Indian IMS Fluticasone-Azelastine Combination, 02.2010-2011 by region	
501	CIP_DYM_00054581	Indian IMS Fluticasone-Azelastine Combination, 04.10-04.11	
502	CIP_DYM_00054582	Indian IMS Fluticasone-Azelastine Combination, 06.10-06.11 by region	
503	CIP_DYM_00054583	Indian IMS Fluticasone-Azelastine Combination, 06.09-06.10	
504	CIP_DYM_00054590	Indian IMS Fluticasone-Azelastine Combination, 12.09 by region	
505	CIP_DYM_00054591	Indian IMS Fluticasone-Azelastine Combination, 12.09 & 02.10	
506	CIP_DYM_00054955	Indian IMS FlutiProp-Azelastine Combination, 06.10-06.11	
507	CIP_DYM_00054956	Indian IMS FlutiProp-Azelastine Combination, 05.10-05.11	
508	CIP_DYM_00054957	Indian IMS FlutiProp-Azelastine Combination, 01.10-01.11	
509	CIP_DYM_00055705	Indian IMS FlutiProp-Azelastine Combination, MAT 12.2006-12.2010	
510	CIP_DYM_00055947-970	Duonase Campaign -- Approach, 2010.	
511	CIP_DYM_00056100	Indian IMS FlutiProp-Azelastine Combination, 02.12-02.13	

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512	CIP_DYM_00056101	Indian IMS FlutiProp-Azelastine Combination, 05.13-05.14	
513	CIP_DYM_00056108	Indian IMS FlutiProp-Azelastine Combination, 10.11-10.12	
514	CIP_DYM_00056111	Indian IMS Fluticasone Furoate, 09.11-09.12	
515	CIP_DYM_00056149	Indian IMS FlutiProp-Azelastine Combination, 02.13-02.14	
516	CIP_DYM_00056496	Indian IMS Fluticasone Furoate & Azelastine Combo, 08.12-08.13	
517	CIP_DYM_00056499	Indian IMS Fluticasone Furoate & Azelastine Combo, 05.11-05.12	
518	CIP_DYM_00056500	Indian IMS FlutiProp-Azelastine Combination, 12.13-12.14	
519	CIP_DYM_00056501	Indian IMS FlutiProp-Azelastine Combination, 12.13-12.14	
520	CIP_DYM_00056502	Indian IMS Fluticasone Furoate & Azelastine Combo, 12.13-12.14	
521	CIP_DYM_00056504	Indian IMS FlutiProp-Azelastine Combination, 01.14-01.15	
522	CIP_DYM_00056505	Indian IMS FlutiProp-Azelastine Combination, 01.14-01.15	
523	CIP_DYM_00056506	Indian IMS FlutiProp-Azelastine Combination -- Various Products, 01.14-01.15	
524	CIP_DYM_00056507	Indian IMS FlutiProp-Azelastine Combination -- Various Products, 01.14-01.15	
525	CIP_DYM_00056508	Indian IMS Fluticasone Furoate & Azelastine Combo, 01.14-01.15	
526	CIP_DYM_00056510	Indian IMS FlutiProp-Azelastine Combination, 05.13-05.14	
527	CIP_DYM_00056511	Indian IMS FlutiProp-Azelastine Combination, 08.13-08.14	
528	CIP_DYM_00056513	Indian IMS Fluticasone Furoate & Azelastine Combo, 08.13-08.14	
529	CIP_DYM_00056514	Indian IMS FlutiProp-Azelastine Combination, 10.13-10.14	
530	CIP_DYM_00056516	Indian IMS Fluticasone Furoate & Azelastine Combo, 10.13-10.14	
531	CIP_DYM_00056518	Indian IMS FlutiProp-Azelastine Combination, 05.14-05.15	
532	CIP_DYM_00056519	Indian IMS FlutiProp-Azelastine Combination, 05.14-05.15	
533	CIP_DYM_00056520	Indian IMS FlutiProp-Azelastine Combination, 12.08-12.09	
534	CIP_DYM_00056521	Indian IMS FlutiProp-Azelastine Combination, 11.08-11.09	
535	CIP_DYM_00056522	Indian IMS FlutiProp-Azelastine Combination, 03.09-03.10	
536	CIP_DYM_00056523	Indian IMS FlutiProp-Azelastine Combination, 10.08-10.09	
537	CIP_DYM_00056524	Indian IMS FlutiProp-Azelastine Combination, 02.10-02.11	
538	CIP_DYM_00056525	Indian IMS FlutiProp-Azelastine Combination, 01.10-01.11	
539	CIP_DYM_00056526	Indian IMS FlutiProp-Azelastine Combination, 01.09-01.10	
540	CIP_DYM_00056527	Indian IMS FlutiProp-Azelastine Combination, 07.09-07.10	
541	CIP_DYM_00056528	Indian IMS FlutiProp-Azelastine Combination, 03.10-03.11	
542	CIP_DYM_00056529	Indian IMS FlutiProp-Azelastine Combination, 05.09-05.10	

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543	CIP_DYM_00056530	Indian IMS FlutiProp-Azelastine Combination ,11.09-11.10	
544	CIP_DYM_00056531	Indian IMS FlutiProp-Azelastine Combination ,10.09-10.10	
545	CIP_DYM_00056532	Indian IMS FlutiProp-Azelastine Combination , 09.09-09.10	
546	CIP_DYM_00056533	Indian IMS FlutiProp-Azelastine Combination, 04.09-04.10	
547	CIP_DYM_00056534	Indian IMS FlutiProp-Azelastine Combination , 08.09-08.10	
548	CIP_DYM_00056535	Indian IMS FlutiProp-Azelastine Combination, 02.09-02.10	
549	CIP_DYM_00056536	Indian IMS FlutiProp-Azelastine Combination, 06.09-06.10	
550	CIP_DYM_00056537	Indian IMS FlutiProp-Azelastine Combination, 08.10-08.11	
551	CIP_DYM_00056538	Indian IMS Fluticasone Furoate & Azelastine Combo, 08.10-08.11	
552	CIP_DYM_00056542	Indian IMS Fluticasone Furoate & Azelastine Combo, 12.10-12.11	
553	CIP_DYM_00056544	Indian IMS FlutiProp-Azelastine Combination, 02.11-02.12	
554	CIP_DYM_00056548	Indian IMS FlutiProp-Azelastine Combination, 07.10-07.11	
555	CIP_DYM_00056549	Indian IMS FlutiProp-Azelastine Combination, 06.10-06.11	
556	CIP_DYM_00056550	Indian IMS FlutiProp-Azelastine Combination, 11.10-11.11	
557	CIP_DYM_00056552	Indian IMS FlutiProp-Azelastine Combination, 04.10-04.11	
558	CIP_DYM_00056729	Indian IMS FlutiProp-Azelastine Combination, 06.13-06.14	
559	CIP_DYM_00056821	Indian IMS Levocetirizine-Montelukast Combination, FY 2008, 2009	
560	CIP_DYM_00056822	Indian IMS Montelukast, MAT 11.09	
561	CIP_DYM_00056823	Indian IMS Fluticasone MAT Nov. 2009	
562	CIP_DYM_00056824	Indian IMS Fluticasone-Azelastine Combination, 06.09-11.09	
563	CIP_DYM_00056837-839	Duonase Brand Plan for the 1st Quarter of financial year 2010-11	
564	CIP_DYM_00056897	Indian IMS Fluticasone MAT Apr. 2010	
565	CIP_DYM_00056898	Indian IMS Montelukast, MAT 04.10	
566	CIP_DYM_00056902	Indian IMS Fluticasone-Azelastine Combination, 04.09-04.10	
567	CIP_DYM_00056904	Indian IMS Levocetirizine-Montelukast Combination, 04.09-04.10	
568	CIP_DYM_00056967	Indian IMS Fluticasone-Azelastine Combination, 05.10 by region	
569	CIP_DYM_00056968	Indian IMS Fluticasone-Azelastine Combination, 05.09-05.10	
570	CIP_DYM_00056969	Indian IMS Fluticasone MAT May 2010	
571	CIP_DYM_00056972	Indian IMS Montelukast, Market shares 03-05, 2010	
572	CIP_DYM_00056973	Indian IMS Levocetirizine-Montelukast Combination, 05.09-05.10	
573	CIP_DYM_00057175-178	Duonase Club, 2009.	
574	CIP_DYM_00084794	Duonase Combines Azelastine and Fluticasone, Duonase Promotional Materials.	

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575	CIP_DYM_00085042	Duonase Combines Azelastine and Fluticasone, Duonase Promotional Materials.	
576	CIP_DYM_00085321-323	It takes two to see-saw. Duonase Promotional Materials.	
577	CIP_DYM_00085324-328	It takes two to strike a target. Duonase Promotional Materials.	
578	CIP_DYM_00085333-334	Multiple purpose. Duonase Promotional Materials.	
579	CIP_DYM_00085366-370	It takes two to light up a flame. Duonase Promotional Materials.	
580	CIP_DYM_00085371-379	100 Weeks of Complete Rhinitis Control; Duonase Industry Praise.	R, U, F, H
581	CIP_DYM_00085384-387	It takes two to cut cloth. Duonase Promotional Materials.	
582	CIP_DYM_00085388-391	It takes two to strike a target. Duonase Promotional Materials.	
583	CIP_DYM_00085396-397	Multiple purpose. Duonase Promotional Materials.	
584	CIP_DYM_00091390	Indian IMS FlutiProp-Azelastine Combination, 03.10-03.11	
585	CIP_DYM_00091391	Indian IMS Fluticasone, MAT 03.10-03.11	
586	CIP_DYM_00143475	Indian IMS FlutiProp-Azelastine Combination, 03.10-03.11	
587	CIP_DYM_00143476	Indian IMS Fluticasone, 03.10-03.11	
588	CIP_DYM_00145269	2014.04.23 Email regarding Cipla Launch Dates	
589	CIP_DYM_00145277	Indian IMS FlutiProp-Azelastine Combination, 05.13-05.14	
590	CIP_DYM_00146818	Indian IMS FlutiProp-Azelastine Combination, 08.13-08.14	
591	CIP_DYM_00148467-470	March 2013 Duonase competitor pricing	
592	CIP_DYM_00201693	Indian IMS FlutiProp-Azelastine Combination, 11.09-11.10	
593	CIP_DYM_00201762	Indian IMS FlutiProp-Azelastine Combination, MTH 03.2011	
594	CIP_DYM_00202150	Indian IMS Fluticasone, 03.10-03.11	
595	CIP_DYM_00202263	Indian IMS Fluticasone, 03.10-03.11	
596	CIP_DYM_00238739-743	Analysis of Imitator Product	
597	CIP_DYM_00406101-198	Nov. 2010 AR Oral Nasal	
598	CIP_DYM_00406336-340	Feb. 2013 Oral Nasal	
599	CIP_DYM_00408062-108	Jan. 2010 Duonase marketing to doctors against competitors	
600	CIP_DYM_00408608	Indian IMS Fluticasone, 05.13-05.14	
601	CIP_DYM_00408609	Indian IMS Fluticasone Furoate & Azelastine Combo, 04.11-04.12	
602	CIP_DYM_00408613	Indian IMS Fluticasone Furoate & Azelastine Combo, 07.11-07.12	
603	CIP_DYM_00408615	Indian IMS Fluticasone Furoate & Azelastine Combo, 06.11-06.12	
604	CIP_DYM_00408618	Indian IMS Fluticasone Furoate & Azelastine Combo, 10.11-10.12	
605	CIP_DYM_00408620	Indian IMS Fluticasone Furoate & Azelastine Combo, 09.11-09.12	
606	CIP_DYM_00408780	Indian IMS FlutiProp-Azelastine Combination, 02.13-02.14	

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607	CIP_DYM_00408783	Indian IMS Fluticasone Furoate & Azelastine Combo, 02.13-02.14	
608	CIP_DYM_00408784	Indian IMS Fluticasone Furoate & Azelastine Combo, 03.13-03.14	
609	CIP_DYM_00409335	Indian IMS FlutiProp-Azelastine Combination, 08.13-08.14	
610	CIP_DYM_00409337	Indian IMS Fluticasone, 05.14-05.15	
611	CIP_DYM_00409354	Indian IMS Fluticasone Furoate, 01.11-01.12	
612	CIP_DYM_00409356	Indian IMS Fluticasone Furoate & Azelastine Combo, 01.11-01.12	
613	CIP_DYM_00409359	Indian IMS Fluticasone Furoate, 01.11-06.11	
614	CIP_DYM_00409360	Indian IMS Fluticasone Furoate & Azelastine Combo, 06.10-06.11	
615	CIP_DYM_00409363	Indian IMS Fluticasone Furoate, 01.11-06.11 MTH	
616	CIP_DYM_00409364	Indian IMS Fluticasone Furoate & Azelastine Combo, 01.11-06.11	
617	CIP_DYM_00409367	Indian IMS Fluticasone Furoate, 05.10-05.11	
618	CIP_DYM_00409368	Indian IMS Fluticasone Furoate & Azelastine Combo, 01.11-05.11 MATs	
619	CIP_DYM_00409374	Indian IMS Fluticasone Furoate & Azelastine Combo, 11.10-11.11	
620	CIP_DYM_00409377	Indian IMS Fluticasone Furoate & Azelastine Combo, 09.10-09.11	
621	CIP_DYM_00409379	Indian IMS Fluticasone Furoate, 09.10-09.11	
622	CIP_DYM_00409383	Indian IMS Fluticasone Furoate, 03.13-03.14	
623	CIP_DYM_00409387	Indian IMS Fluticasone, 06.13-06.14	
624	CIP_DYM_00409388	Indian IMS Fluticasone Furoate & Azelastine Combo, 06.13-06.14	
625	CIP_DYM_00409390	Indian IMS Fluticasone Furoate, 06.13-06.14	
626	CIP_DYM_00409633	Indian IMS FlutiProp-Azelastine Combination, 09.09-09.10	
627	CIP_DYM_00409636	Indian IMS FlutiProp-Azelastine Combination, 11.09-11.10	
628	CIP_DYM_00409675	Indian IMS Multiple Nasal Sprays, MAT 04.11	
629	CIP_DYM_00412082	Indian IMS Fluticasone-Azelastine Combination, 06.09-06.10	
630	CIP_DYM_00412098	Indian IMS Fluticasone-Azelastine Combination, 07.09-07.10	
631	CIP_DYM_00412104	Indian IMS FlutiProp-Azelastine Combination, 06.10-06.11 by region	
632	CIP_DYM_00412107	Indian IMS Fluticasone Furoate & Azelastine Combo, 06.10-06.11	
633	CIP_DYM_00462504-507	Competitor Product Characterization	U
634	CIP_DYM_00462509	Indian IMS FlutiProp-Azelastine Combination, 03.2005-03.2011	
635	CIP_DYM_00462510-513	Comparative Composition Data of Azelastine with steroids/Comparative Stablility Data of Azelastine with steroid compositions charts	
636	CIP_DYM_00462540	Indian IMS Fluticasone, 03.10-03.11	
637	CIP_DYM_00466611	Indian IMS All Allergic Rhinitis Data, 03.10-03.11	
638	CIP_DYM_00466860-907	March 2011 Market Insight	

PTX	Bates Range	Document Description	Defendants' Objections
639	CIP_DYM_00467125	Indian IMS Fluticasone, 02.12-02.13	
640	CIP_DYM_00467126	Indian IMS Fluticasone, 04.11-04.12	
641	CIP_DYM_00467127	Indian IMS Levocetirizine-Ambroxol Combination, 04.11-04.12	
642	CIP_DYM_00467128	Indian IMS Fluticasone, 08.11-08.12	
643	CIP_DYM_00467129	Indian IMS Levocetirizine-Ambroxol Combination, 08.11-08.12	
644	CIP_DYM_00467131	Indian IMS Levocetirizine-Ambroxol Combination, 07.11-07.12	
645	CIP_DYM_00467132	Indian IMS Levocetirizine-Ambroxol Combination, 07.11-07.12	
646	CIP_DYM_00467134	Indian IMS Levocetirizine-Ambroxol Combination, 06.11-06.12	
647	CIP_DYM_00467135	Indian IMS Levocetirizine-Ambroxol Combination, 06.11-06.12	
648	CIP_DYM_00467136	Indian IMS Fluticasone, 10.11-10.12	
649	CIP_DYM_00467137	Indian IMS Fluticasone, 09.11-09.12	
650	CIP_DYM_00467146	Indian IMS FlutiProp-Azelastine Combination, 03.13-03.14	
651	CIP_DYM_00467559	Indian IMS FlutiProp-Azelastine Combination, 01.13-01.14	
652	CIP_DYM_00467560	Indian IMS Fluticasone, 01.13-01.14	
653	CIP_DYM_00467562	Indian IMS FlutiProp-Azelastine Combination, 06.12-06.13	
654	CIP_DYM_00467563	Indian IMS Fluticasone, 06.12-06.13	
655	CIP_DYM_00467564	Indian IMS Fluticasone, 06.12-06.13	
656	CIP_DYM_00467565	Indian IMS FlutiProp-Azelastine Combination, 11.12-11.13	
657	CIP_DYM_00467566	Indian IMS FlutiProp-Azelastine Combination, 11.12-11.13	
658	CIP_DYM_00467567	Indian IMS Fluticasone, 11.12-11.13	
659	CIP_DYM_00467568	Indian IMS Fluticasone, 11.12-11.13	
660	CIP_DYM_00467569	Indian IMS Fluticasone, 08.12-08.13	
661	CIP_DYM_00467570	Indian IMS Fluticasone, 12.13-12.14	
662	CIP_DYM_00467572	Indian IMS Levocetirizine-Ambroxol Combination, 08.10-08.11	
663	CIP_DYM_00467573	Indian IMS Levocetirizine-Ambroxol Combination, 08.10-08.11	
664	CIP_DYM_00467574	Indian IMS Levocetirizine-Ambroxol Combination, 12.10-12.11	
665	CIP_DYM_00467575	Indian IMS Levocetirizine-Ambroxol Combination, 12.10-12.11	
666	CIP_DYM_00467576	Indian IMS Fluticasone, 02.11-02.12	
667	CIP_DYM_00467577	Indian IMS Levocetirizine-Ambroxol Combination, 02.11-02.12	
668	CIP_DYM_00467578	Indian IMS Levocetirizine-Ambroxol Combination, 02.11-02.12	
669	CIP_DYM_00467579	Indian IMS Fluticasone, 01.11-01.12	
670	CIP_DYM_00467580	Indian IMS Fluticasone, 01.11-01.12	
671	CIP_DYM_00467581	Indian IMS Levocetirizine-Ambroxol Combination, 01.11-01.12	

PTX	Bates Range	Document Description	Defendants' Objections
672	CIP_DYM_00467582	Indian IMS Levocetirizine-Ambroxol Combination, 01.11-01.12	
673	CIP_DYM_00467583	Indian IMS Fluticasone, 07.10-07.11	
674	CIP_DYM_00467584	Indian IMS Fluticasone, 07.10-07.11	
675	CIP_DYM_00467585	Indian IMS Fluticasone, 06.10-06.11	
676	CIP_DYM_00467586	Indian IMS Fluticasone, 06.10-06.11	
677	CIP_DYM_00467587	Indian IMS Levocetirizine-Ambroxol Combination, 06.10-06.11	
678	CIP_DYM_00467588	Indian IMS Levocetirizine-Ambroxol Combination, 06.10-06.11	
679	CIP_DYM_00467589	Indian IMS Fluticasone, 06.10-06.11	
680	CIP_DYM_00467590	Indian IMS Fluticasone, 06.10-06.11	
681	CIP_DYM_00467591	Indian IMS Levocetirizine-Ambroxol Combination, 06.10-06.11	
682	CIP_DYM_00467592	Indian IMS Fluticasone, 05.10-05.11	
683	CIP_DYM_00467593	Indian IMS Fluticasone, 05.10-05.11	
684	CIP_DYM_00467594	Indian IMS Levocetirizine-Ambroxol Combination, 05.10-05.11	
685	CIP_DYM_00467595	Indian IMS Levocetirizine-Ambroxol Combination, 05.10-05.11	
686	CIP_DYM_00467596	Indian IMS Levocetirizine-Ambroxol Combination, 05.10-05.11	
687	CIP_DYM_00467598	Indian IMS Levocetirizine-Ambroxol Combination, 11.10-11.11	
688	CIP_DYM_00467599	Indian IMS Levocetirizine-Ambroxol Combination, 11.10-11.11	
689	CIP_DYM_00467600	Indian IMS Fluticasone, 09.10-09.11	
690	CIP_DYM_00467601	Indian IMS Fluticasone, 09.10-09.11	
691	CIP_DYM_00467602	Indian IMS Levocetirizine-Ambroxol Combination, 09.10-09.11	
692	CIP_DYM_00467603	Indian IMS Levocetirizine-Ambroxol Combination, 09.10-09.11	
693	CIP_DYM_00467628	Indian IMS Fluticasone, 03.13-03.14	
694	CIP_DYM_00467629	Indian IMS Fluticasone, 06.13-06.14	
695	CIP_DYM_00467712	Indian IMS All Allergic Rhinitis Data, 11.2007-2010	
696	CIP_DYM_00467791	Indian IMS Fluticasone-Azelastine Combination, 09.09-09.10	
697	CIP_DYM_00467802	Indian IMS Fluticasone-Azelastine Combination, 10.09-10.10	
698	CIP_DYM_00467817	Indian IMS Fluticasone-Azelastine Combination, 11.09-11.10	
699	CIP_DYM_00467824	Indian IMS Fluticasone-Azelastine Combination, 02.10-02.11	
700	CIP_DYM_00467834	Indian IMS Fluticasone-Azelastine Combination, 03.10-03.11	
701	CIP_DYM_00467846	Indian IMS Fluticasone-Azelastine Combination, 04.10-04.11	
702	CIP_DYM_00469086	Indian IMS Fluticasone, 03.10-03.11	
703	CIP_DYM_00471907-975	Indian IMS All Allergic Rhinitis Information	R, U, F
704	CIP_DYM_00472108	Indian IMS Fluticasone Furoate, 04.11-04.12	

PTX	Bates Range	Document Description	Defendants' Objections
705	CIP_DYM_00472109	Indian IMS Levocetirizine-Pseudophedrine Combination, 04.11-04.12	
706	CIP_DYM_00472110	Indian IMS Levocetirizine, 04.11-04.12	
707	CIP_DYM_00472111	Indian IMS Mometasone, 04.11-04.12	
708	CIP_DYM_00472112	Indian IMS Montelukast-Fexofenadine Combination, 04.11-04.12	
709	CIP_DYM_00472113	Indian IMS Fluticasone Furoate, 08.11-08.12	
710	CIP_DYM_00472114	Indian IMS Levocetirizine-Ambroxol Combination, 08.11-08.12	
711	CIP_DYM_00472115	Indian IMS Levocetirizine-Pseudophedrine Combination, 08.11-08.12	
712	CIP_DYM_00472116	Indian IMS Levocetirizine, 08.11-08.12	
713	CIP_DYM_00472117	Indian IMS Mometasone, 08.11-08.12	
714	CIP_DYM_00472118	Indian IMS Montelukast-Fexofenadine Combination, 08.11-08.12	
715	CIP_DYM_00472119	Indian IMS Levocetirizine-Pseudophedrine Combination, 07.11-07.12	
716	CIP_DYM_00472120	Indian IMS Levocetirizine, 07.11-07.12	
717	CIP_DYM_00472122	Indian IMS Montelukast-Fexofenadine Combination, 05.11-05.12	
718	CIP_DYM_00472123	Indian IMS Levocetirizine-Pseudophedrine Combination, 06.11-06.12	
719	CIP_DYM_00472124	Indian IMS Levocetirizine, 06.11-06.12	
720	CIP_DYM_00472125	Indian IMS Mometasone, 06.11-06.12	
721	CIP_DYM_00472126	Indian IMS Montelukast-Fexofenadine Combination, 06.11-06.12	
722	CIP_DYM_00472127	Indian IMS Fluticasone Furoate, 10.11-10.12	
723	CIP_DYM_00472128	Indian IMS Levocetirizine-Pseudophedrine Combination, 10.11-10.12	
724	CIP_DYM_00472129	Indian IMS Levocetirizine, 10.11-10.12	
725	CIP_DYM_00472130	Indian IMS Mometasone, 10.11-10.12	
726	CIP_DYM_00472131	Indian IMS Montelukast-Fexofenadine Combination, 10.11-10.12	
727	CIP_DYM_00472225	Indian IMS Allergic Rhinitis Data, 12.2010-12.2014	
728	CIP_DYM_00472132	Indian IMS Levocetirizine-Ambroxol Combination, 09.11-09.12	
729	CIP_DYM_00472133	Indian IMS Levocetirizine-Pseudophedrine Combination, 09.11-09.12	
730	CIP_DYM_00472134	Indian IMS Levocetirizine, 09.11-09.12	
731	CIP_DYM_00472135	Indian IMS Mometasone, 09.11-09.12	
732	CIP_DYM_00472136	Indian IMS Montelukast-Fexofenadine Combination, 09.11-09.12	
733	CIP_DYM_00472137	Indian IMS - Top 5 monthly trend, 04.2014-07.2014	R
734	CIP_DYM_00472138	Indian IMS Fluticasone Furoate, 08.12-08.13	
735	CIP_DYM_00472139	Indian IMS Levocetirizine-Pseudophedrine Combination, 08.12-08.13	
736	CIP_DYM_00472140	Indian IMS Levocetirizine-Pseudophedrine Combination, 08.12-08.13	
737	CIP_DYM_00472141	Indian IMS Mometasone, 08.12-08.13	

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738	CIP_DYM_00472142	Indian IMS Montelukast-Fexofenadine Combination, 08.12-08.13	
739	CIP_DYM_00472143	Indian IMS Fluticasone Furoate, 05.12-05.13	
740	CIP_DYM_00472144	Indian IMS Levocetirizine, 05.12-05.13	
741	CIP_DYM_00472145	Indian IMS Montelukast-Fexofenadine Combination, 05.12-05.13	
742	CIP_DYM_00472146	Indian IMS Fluticasone Furoate, 12.13-12.14	
743	CIP_DYM_00472147	Indian IMS Levocetirizine, 12.13-12.14	
744	CIP_DYM_00472148	Indian IMS Levocetirizine-Pseudophedrine Combination, 12.13-12.14	
745	CIP_DYM_00472149	Indian IMS Mometasone, 12.13-12.14	
746	CIP_DYM_00472150	Indian IMS Montelukast-Fexofenadine Combination, 12.13-12.14	
747	CIP_DYM_00472151	Indian IMS Montelukast, 12.13-12.14	
748	CIP_DYM_00472153	Indian IMS Fluticasone Furoate, 01.14-01.15	
749	CIP_DYM_00472154	Indian IMS Levocetirizine-Pseudophedrine Combination, 01.14-01.15	
750	CIP_DYM_00472155	Indian IMS Levocetirizine, 01.14-01.15	
751	CIP_DYM_00472156	Indian IMS Mometasone, 01.14-01.15	
752	CIP_DYM_00472157	Indian IMS Montelukast-Fexofenadine Combination, 01.14-01.15	
753	CIP_DYM_00472158	Indian IMS Montelukast, 01.14-01.15	
754	CIP_DYM_00472160	Indian IMS Fluticasone Furoate, 08.13-08.14	
755	CIP_DYM_00472161	Indian IMS Levocetirizine-Pseudophedrine Combination, 08.13-08.14	
756	CIP_DYM_00472162	Indian IMS Levocetirizine, 08.13-08.14	
757	CIP_DYM_00472163	Indian IMS Mometasone, 08.13-08.14	
758	CIP_DYM_00472164	Indian IMS Montelukast-Fexofenadine Combination, 08.13-08.14	
759	CIP_DYM_00472165	Indian IMS Fluticasone Furoate, 10.13-10.14	
760	CIP_DYM_00472166	Indian IMS Levocetirizine-Pseudophedrine Combination, 10.13-10.14	
761	CIP_DYM_00472167	Indian IMS Levocetirizine, 10.13-10.14	
762	CIP_DYM_00472168	Indian IMS Mometasone, 10.13-10.14	
763	CIP_DYM_00472169	Indian IMS Montelukast, 10.13-10.14	
764	CIP_DYM_00472170	Indian IMS Montelukast-Fexofenadine Combination, 10.13-10.14	
765	CIP_DYM_00472171	Indian IMS Fluticasone Furoate, 08.10-08.11	
766	CIP_DYM_00472172	Indian IMS Levocetirizine, 08.10-08.11	
767	CIP_DYM_00472173	Indian IMS Mometasone, 08.10-08.11	
768	CIP_DYM_00472174	Indian IMS Montelukast-Fexofenadine Combination, 08.10-08.11	
769	CIP_DYM_00472175	Indian IMS Fluticasone Furoate, 12.10-12.11	
770	CIP_DYM_00472176	Indian IMS Levocetirizine, 12.10-12.11	

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771	CIP_DYM_00472177	Indian IMS Mometasone, 12.10-12.11	
772	CIP_DYM_00472178	Indian IMS Montelukast-Fexofenadine Combination, 12.10-12.11	
773	CIP_DYM_00472179	Indian IMS Fluticasone Furoate, 02.11-02.12	
774	CIP_DYM_00472180	Indian IMS Fluticasone Furoate & Azelastine Combo, 02.11-02.12	
775	CIP_DYM_00472181	Indian IMS Levocetirizine-Pseudophedrine Combination, 02.11-02.12	
776	CIP_DYM_00472182	Indian IMS Levocetirizine, 02.11-02.12	
777	CIP_DYM_00472183	Indian IMS Mometasone, 02.11-02.12	
778	CIP_DYM_00472184	Indian IMS Montelukast-Fexofenadine Combination, 02.11-02.12	
779	CIP_DYM_00472185	Indian IMS Levocetirizine, 01.11-01.12	
780	CIP_DYM_00472186	Indian IMS Mometasone, 01.11-01.12	
781	CIP_DYM_00472187	Indian IMS Montelukast-Fexofenadine Combination, 01.11-01.12	
782	CIP_DYM_00472188	Indian IMS Montelukast-Fexofenadine Combination, 07.10-07.11	
783	CIP_DYM_00472189	Indian IMS Levocetirizine, 06.10-06.11	
784	CIP_DYM_00472190	Indian IMS Mometasone, 06.10-06.11	
785	CIP_DYM_00472191	Indian IMS Montelukast-Fexofenadine Combination, 06.10-06.11	
786	CIP_DYM_00472192	Indian IMS Mometasone, 06.10-06.11	
787	CIP_DYM_00472193	Indian IMS Montelukast-Fexofenadine Combination, 06.10-06.11	
788	CIP_DYM_00472194	Indian IMS Mometasone, 05.10-05.11	
789	CIP_DYM_00472195	Indian IMS Montelukast-Fexofenadine Combination, 05.10-05.11	
790	CIP_DYM_00472196	Indian IMS Fluticasone Furoate, 11.10-11.11	
791	CIP_DYM_00472197	Indian IMS Levocetirizine, 11.10-11.11	
792	CIP_DYM_00472198	Indian IMS Mometasone, 11.10-11.11	
793	CIP_DYM_00472199	Indian IMS Montelukast-Fexofenadine Combination, 11.10-11.11	
794	CIP_DYM_00472200	Indian IMS Levocetirizine, 09.10-09.11	
795	CIP_DYM_00472201	Indian IMS Mometasone, 09.10-09.11	
796	CIP_DYM_00472202	Indian IMS Montelukast-Fexofenadine Combination, 09.10-09.11	
797	CIP_DYM_00472203	Indian IMS Mometasone, 03.13-03.14	
798	CIP_DYM_00472204	Indian IMS Montelukast-Fexofenadine Combination, 03.13-03.14	
799	CIP_DYM_00472205	Indian IMS Levocetirizine-Pseudophedrine Combination, 06.13-06.14	
800	CIP_DYM_00472206	Indian IMS Levocetirizine, 06.13-06.14	
801	CIP_DYM_00472207	Indian IMS Mometasone, 06.13-06.14	
802	CIP_DYM_00472208	Indian IMS Montelukast-Fexofenadine Combination, 06.13-06.14	
803	CIP_DYM_00472211	IMS Data 01.2008-01.2011	

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804	CIP_DYM_00472222	Indian IMS Multiple Nasal Sprays, 12.08-12.09	
805	CIP_DYM_00472224	Units and Volume (L) of Duonase™ Sold by Cipla per year	R, U
806	CIP_DYM_00472225	Indian IMS Allergic Rhinitis Data, 12.2010-12.2014	
807	CIP_DYM_00472227	Indian IMS Multiple Nasal Sprays, MAT FY 2013, 2014	
808	CIP_DYM_00472255	Indian IMS Fluticasone-Azelastine Combination, 02.10-02.11	
809	CIP_DYM_00472256	Indian IMS Fluticasone, 02.10-02.11	
810	CIP_DYM_00472258	Indian IMS Levocetirizine-Montelukast Combination, 02.10-02.11	
811	CIP_DYM_00472260	Indian IMS Montelukast, MAT 02.11	
812	CIP_DYM_00472267	Dec. 2011 Competitor Update	F
813	CIP_DYM_00472299	Indian IMS Multiple Nasal Sprays, MAT 04.11	
814	CIP_DYM_00472399	2015.07.21 Email to Cipla regarding Respiratory AR 2nd flash brand	
815	CIP_DYM_00472524-529	Sales Budget Meeting FY 2013-2014	
816	CIP_DYM_00477274	MAT Nasal Sprays 2005-2016	
817	CIP_DYM_00477275	Cipla Net Sales and Marketing Expenses, 2013-2016. (Chopra Ex. 2)	
818	CIP_DYM_00477276-280	Rationale for the combination of Azelastine HCl and Fluticasone Propionate Nasal Spray	
819	CIP_DYM_00477281	Invoice for Removal of Excisable Goods from a Factory, 2004.	R
820	CIP_DYM_00477282	Invoice for Duonase from Cipla to Virender Medical, 2004.	R
821	CIP_DYM_00477283	Invoice for Duonase from Cipla to Jay Agencies Om Group Co-Op, 2004.	R
822	CIP_DYM_00477284-285	Invoices for Duonase from Cipla to Shyam Drug Agency, 2004.	R
823	CIP_DYM_00477286	IMS Data 12.2010-12.2014	
824	MEDA_APTX03504271-272	Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations - Mometasone Furoate, FDA	
825	MEDA_APTX03504558-559	Beconase AQ, Drugs@FDA: FDA Approved Drug Products	R
826	MEDA_APTX00028088-095	Dymista Market Performance, Week Ending 04.18.14	
827	MEDA_APTX00028135-142	Dymista Market Performance, Week Ending 04.18.14	U
828	MEDA_APTX00028419-426	Dymista Market Performance, Week Ending 05.30.14	
829	MEDA_APTX00033804-811	Dymista Market Performance, Week Ending 03.28.14	
830	MEDA_APTX00037055-062	Dymista Market Performance, Week Ending 06.06.14	
831	MEDA_APTX00038834-841	Dymista Market Performance, Week Ending 04.25.14	
832	MEDA_APTX01134173-181	Letter to Cindy Yayac from Office of Drug Evaluation II	R
833	MEDA_APTX01644282-283	2012.07.23 Email to Meda Core Sales Team	
834	MEDA_APTX01663838-843	Dymista Market Performance, Week Ending 07.26.13	

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835	MEDA_APTX01775275-282	Dymista Market Performance, Week Ending 09.13.13	
836	MEDA_APTX01775589-594	Dymista Market Performance, Week Ending 07.26.13	U
837	MEDA_APTX01815781	MedPointe Pharmaceuticals Astelin Forecast Plan for 2007	R
838	MEDA_APTX01815790	Actual vs. Planned TRxs for Astelin, 2006.	R
839	MEDA_APTX01815792	Optivar Eye TRxs, 2005 & 2006.	R
840	MEDA_APTX01815796	Actual vs. Planned TRxs for Astelin and various other brands, 2004-2006	R
841	MEDA_APTX01815798	IMS Data, 09.29.2004-2006	R, F
842	MEDA_APTX01815800	IMS Data, 11.30.2004-2006	R, F
843	MEDA_APTX01920241-248	Dymista Market Performance, Week Ending 03.21.14	
844	MEDA_APTX01920383	Dymista Sales Data, 06.10.2014	
845	MEDA_APTX01920444	Dymista Sales Data, 01.06.2015	
846	MEDA_APTX01921748-749	Formulary market basket	
847	MEDA_APTX01922423-430	Dymista Market Performance, Week Ending 06.13.14	
848	MEDA_APTX01922521-528	Dymista Market Performance, Week Ending 03.21.14	U
849	MEDA_APTX01923936-943	Dymista Market Performance, Week Ending 05.23.14	
850	MEDA_APTX01926595-602	Dymista Market Performance, Week Ending 04.04.14	
851	MEDA_APTX01928726-733	Dymista Market Performance, Week Ending 03.28.14	
852	MEDA_APTX01929428	Meda Dymista 2015 Budget	
853	MEDA_APTX01959811-818	Dymista Market Performance, Week Ending 09.06.13	
854	MEDA_APTX01959907-914	Dymista Market Performance, Week Ending 11.29.13	
855	MEDA_APTX01960731-738	Dymista Market Performance, Week Ending 10.25.13	
856	MEDA_APTX01960761-768	Dymista Market Performance, Week Ending 12.06.13	
857	MEDA_APTX01960973-980	Dymista Market Performance, Week Ending 01.10.14	
858	MEDA_APTX01961593-597	Dymista Market Performance, Week Ending 12.13.13	
859	MEDA_APTX01962120-127	Dymista Market Performance, Week Ending 12.27.13	
860	MEDA_APTX01962497-504	Dymista Market Performance, Week Ending 03.14.14	
861	MEDA_APTX01963297	IMS Data, 09.2010-2011	R
862	MEDA_APTX01963317-324	2011.10.11 Dymista and Data Analytics Task Force	
863	MEDA_APTX01964113	IMS Data - CON, 01.2012-2013, 12.2012.	R
864	MEDA_APTX01964114	IMS Data - SMP, 01.2012-2013, 12.2012.	R
865	MEDA_APTX01964707	2011.04.28 Email to G. Weinstein regarding Meda project proposal.	
866	MEDA_APTX01964708-754	2011.04.28 Dymista Forecast Generation Project Proposal.	

PTX	Bates Range	Document Description	Defendants' Objections
867	MEDA_APTX01964769-770	2011.10.04 Dymista Sales Force Alignment and Placement Data Review Meeting Minutes	
868	MEDA_APTX01964771-794	2011.10.05 Data Review and Dymista Coverage Analysis	
869	MEDA_APTX01964872-879	Dymista Market Performance, Week Ending 01.17.14	
870	MEDA_APTX01965095	2011.06.22 Email regarding Dymista Expansion Rationales	
871	MEDA_APTX01965096-115	2011.06 Presentation regarding staffing, timelines for expansion, price comparisons	
872	MEDA_APTX01966278-280	2010.12.23 Emails regarding sales data	
873	MEDA_APTX01966352-359	Dymista Market Performance, Week Ending 03.14.14	U
874	MEDA_APTX01968291-298	Dymista Market Performance, Week Ending 02.14.14	
875	MEDA_APTX01969369-376	Dymista Market Performance, Week Ending 11.01.13	
876	MEDA_APTX01969382-389	Dymista Market Performance, Week Ending 09.27.13	
877	MEDA_APTX01969532	IMS Data, 2007-2009.	R
878	MEDA_APTX01969999	IMS Data, 02.2011-2012, 01.2011.	R
879		Intentionally Left Blank	
880	MEDA_APTX01970006-013	Dymista Market Performance, Week Ending 02.07.14	
881	MEDA_APTX01970851-858	Dymista Market Performance, Week Ending 03.07.14	
882	MEDA_APTX01971376-377	2011.06.24 Emails regarding sales force expansion	
883	MEDA_APTX01972174-181	Dymista Market Performance, Week Ending 10.04.13	
884	MEDA_APTX01972253	IMS Data -- CON, 11.2011-2012, 10.2011.	R
885	MEDA_APTX01972254	IMS Data -- SMP, 11.2011-2012, 10.2011.	R
886	MEDA_APTX01972769-776	Dymista Market Performance, Week Ending 11.08.13	
887	MEDA_APTX01972898-905	Dymista Market Performance, Week Ending 02.14.14	U
888	MEDA_APTX01972916	IMS Data -- CON, 10.2011-2012, 09.2012.	R
889	MEDA_APTX01972917	IMS Data -- SMP, 10.2011-2012, 09.2012.	R
890	MEDA_APTX01973246-253	Dymista Market Performance, Week Ending 11.22.13	
891	MEDA_APTX02059670	Dymista sales data 2013-2015 and sales projections by country	
892	MEDA_APTX02480361-373	Dymista Formulary Coverage Powerpoint 2014	
893	MEDA_APTX02481624	Dymista Sales Data, 02.06.2015	
894	MEDA_APTX02483658-659	2014.04.01 Email from S. Loesch regarding Dymista briefing document - agency	
895	MEDA_APTX02488317	TRx August 2014	
896	MEDA_APTX02813469-510	MedPointe Pharmaceuticals Board of Directors' Meeting, 09.07.2006.	

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897	MEDA_APTX02813527	Expected Dymista sales and Projected Market	
898	MEDA_APTX03430434-451	ICS Market USA.	
899	MEDA_APTX03430452	IMS Data - DOL, TOT, YEAR 12.2004-2006.	R
900	MEDA_APTX03431132-274	2007.05.29 MedPointe/Meda Partnering Discussion	
901		Intentionally Left Blank	
902	MEDA_APTX03435117	Email regarding Dymista supply prices, 03.12.2014	
903	MEDA_APTX03435118-128	Meda Dymista supply prices, 03.13.2014	
904	MEDA_APTX03435152-153	2014.03.11 Email to E. Haeffler regarding Dymista Product P&L 2013 and 2014 Budget	
905	MEDA_APTX03435154	Dymista ACT 2013 and Dymista Budget 2014	
906	MEDA_APTX03435165	Email regarding Dymista weekly development, 03.11.2014	
907	MEDA_APTX03435166-264	Meda Weekly development Powerpoint	
908	MEDA_APTX03435444	Email regarding market share overview, 03.07.2014	
909	MEDA_APTX03435445	Dymista - launch dates, prices, reimbursements, market shares and approved indications (as of Feb 10, 2014)	
910	MEDA_APTX03435540-541	Email regarding Dymista market high share at levels not seen since July of 2013, 02.10.2014.	
911	MEDA_APTX03456143	Email regarding Meda monthly market definitions, 10.12.2010	
912	MEDA_APTX03456144	Dymista Eye Market Data	
913	MEDA_APTX03456145	Meda Products and Rhinitis Market Weekly Data	
914	MEDA_APTX03474265-282	2015.06.17 Transmittal of advertisements and promotional labeling for Dymista	
915	MEDA_APTX03474323-334	2015.06.29 Transmittal of advertisements and promotional labeling for Dymista	
916	MEDA_APTX03474429-438	2015.06.16 Transmittal of advertisements and promotional labeling for Dymista	
917	MEDA_APTX03478897-936	2012.11.26 Transmittal of advertisements and promotional labeling for Dymista	
918	MEDA_APTX03478963-987	Dymista Promotional Material - A Primer for Pharmacists	
919	MEDA_APTX03490434-467	2009 EU Cipla-Meda License Agreement	
920	MEDA_APTX03501887-932	Dymista 2013 Brand Plan	
921	MEDA_APTX03501933-987	U.S. Commercialization Plan, 06.06.2012	
922	MEDA_APTX03501988-2031	2012 Dymista Strategic Plan, presented 10.28.2011	

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923	MEDA_APTX03502032-114	Dymista Marketing Plan 2014	
924	MEDA_APTX03502168-230	Hanauer, D., "Meda Consumer Healthcare: Allergy Medication Awareness & Usage Landscape Study," 2013	
925	MEDA_APTX03502231-285	Dymista ATU Wave 1 Top Line Results, Prepared for the Marketing & Sales Operating Committee, 2013	
926	MEDA_APTX03502286-293	Dymista Competitor Benchmarking, 2012	
927	MEDA_APTX03502294-334	Dymista Positioning Concept Test Full Report, Nov. 2011	
928	MEDA_APTX03502372-380	Clifford C. & Brown, F. M. "Dymista Phase II - Positioning Exploration: Summary of Key Insights and Implications." July 2011	R, U, F, H, S
929	MEDA_APTX03502654	IMS Data, Integrated 2012-04.2016	
930	MEDA_APTX03502655	Dymista Historical P&L	
931	MEDA_APTX03502656	Dymista Sales Model with Actuals from initial launch date to May 2016	
932	MEDA_APTX03502989	Executive Summary - Cough, Cold, Allergy 11.01.2015	R, U
933	MEDA_APTX03502990	Top OTC Allergy brands weekly retail sales (IRI through 11.29.15)	
934	MEDA_APTX03503351	Claritin 24 Hour Tablets Label, 2015.	
935	MEDA_APTX03503359	Making a Difference. One Life at a Time. Apotex	
936	MEDA_APTX03503373-374	Meda and Cipla sue Apotex to enforce Dymista Patents	R
937	MEDA_APTX03504021	Daily BID rates, June 2016. Historical Currency Converter, OANDA Solutions for Business.	
938	MEDA_APTX03504025-027	Meda AB (publ) - Interim report, January - September 2012.	
939	MEDA_APTX03504066-067	Welcome to Meda U.S., www.meda.us	
940	MEDA_APTX03504267-268	Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations -- Dymista, FDA	
941	MEDA_APTX03504273-274	Over-the-Counter Flonase Allergy Relief Approved. WebMD. 07.28.2014.	
942	MEDA_APTX03504288-289	Types of Allergic Rhinitis. WebMD.	F
943	MEDA_APTX03504398-406	Zyrtec® Tablets, www.zyrtec.com	
944	MEDA_APTX03504407-409	35 U.S. Code § 103 - Conditions for patentability; non-obvious subject matter. www.law.cornell.edu	
945	MEDA_APTX03504512-514	Steinbrook, R. "For Sale: Physicians' Prescribing Data." N. Engl. J. Med., 2006.	U
946	MEDA_APTX03504552-553	Vancenase AQ, Drugs@FDA: FDA Approved Drug Products, www.accessdata.fda.gov	
947	MEDA_APTX03504554-555	Astelin, Drugs@FDA: FDA Approved Drug Products	

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948	MEDA_APTX03504556-557	Astepro, Drugs@FDA: FDA Approved Drug Products	
949	MEDA_APTX03504560-561	Beconase, Drugs@FDA: FDA Approved Drug Products	
950	MEDA_APTX03504562-563	Budesonide. Drugs@FDA: FDA Approved Drug Products	
951	MEDA_APTX03504564-565	Dymista, Drugs@FDA: FDA Approved Drug Products	
952	MEDA_APTX03504566-567	Flonase, Drugs@FDA: FDA Approved Drug Products	
953	MEDA_APTX03504568-573	Nasacort Allergy 24 Hour Label Approval and History, Drugs@FDA: FDA Approved Drug Products	
954	MEDA_APTX03504574-575	Nasacort Allergy 24 HR, Drugs@FDA: FDA Approved Drug Products	
955	MEDA_APTX03504576-577	Nasacort, Drugs@FDA: FDA Approved Drug Products	
956	MEDA_APTX03504578-579	Nasalide, Drugs@FDA: FDA Approved Drug Products	
957	MEDA_APTX03504580-581	Nasarel, Drugs@FDA: FDA Approved Drug Products	
958	MEDA_APTX03504584-585	Omnaris, Drugs@FDA: FDA Approved Drug Products	
959	MEDA_APTX03504586-587	Omnaris, Drugs@FDA: FDA Approved Drug Products	
960	MEDA_APTX03504588-589	Patanase, Drugs@FDA: FDA Approved Drug Products	
961	MEDA_APTX03504590-591	QNASL, Drugs@FDA: FDA Approved Drug Products	
962	MEDA_APTX03504592-593	Rhinocort, Drugs@FDA: FDA Approved Drug Products	
963	MEDA_APTX03504594-597	Vancenase AQ, Drugs@FDA: FDA Approved Drug Products	
964	MEDA_APTX03504598-599	Vancenase, Drugs@FDA: FDA Approved Drug Products	
965	MEDA_APTX03504600-601	Veramyst, Drugs@FDA: FDA Approved Drug Products	
966	MEDA_APTX03504602-603	Zetonna, Drugs@FDA: FDA Approved Drug Products	
967	MEDA_APTX03504604-607	Meda Receives FDA Approval of New Astepro Nasal Spray 0.15%, the first and only once-daily nasal antihistamine. Meda Pharmaceuticals	
968	MEDA_APTX03504608-611	Get answers to your questions about Nasacort Allergy 24 HR. www.sanofi.us	
969	MEDA_APTX03504612-615	Frequently asked questions about Rhinocort, www.rhinocortprofessional.com	
970	MEDA_APTX03504616-619	Meda Adds Spacer-Integrated Inhaler with $135m Acquisition. www.in-pharmatechnologist.com	R
971	MEDA_APTX03504620-625	Rhinocort Label and Approval History, Drugs@FDA: FDA Approved Drug Products	
972	MEDA_APTX03504626-639	Equity Research - Meda, Swedbank.	
973	MEDA_APTX03504640-653	Meda Equity Research - Monday, February 20, 2012, Swedbank	
974	MEDA_APTX03504654-662	Teva announces FDA Approval of QNASL, www.tevapharm.com	

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975	MEDA_APTX03504663-665	Ticanase FDA Package Insert, PureTek Corp.	
976	MEDA_APTX03504727-728	Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations, www.accessdata.fda.gov	
977	MEDA_APTX03504497-509	Flonase Prescribing Information.	
978	MEDA_APTX03506284-287	Drugs@FDA Glossary of Terms - Therapeautic Equivalence. http://www.fda.gov/Drugs/InformationOnDrugs/ucm079436.htm#TE (accessed on June 27, 2016).	
979	CIP_DYM_00201556	Product/Launch excel table	
980	MED_DYM_00000020	WO 03/105856 A1	
981	MED_DYM_00000378	UK Patent Application, GB 2389530A	
982	MEDA_APTX00030877-986	Meda Pharma, Dymista, Weekly Development Presentation	
983	APOTEX_AZFL 0060185-207	FLONASE® Nasal Spray Product, p. 1, l. 17	
984	APOTEX_AZFL 0055205-219	PCT Publication No. WO 97/01337 ("Helzner")	
985	APOTEX_AZFL 0055458-475	PCT Publication No. WO 97/46243 ("Koochaki")	
986	APOTEX_AZFL 0053415-417	U.S. Patent Publication No. 2004/024638 ("Yanni")	
987	APOTEX_AZFL 0055357-410	PCT Publication No. WO 97/31626	
988	APOTEX_AZFL 0054831-847	U.S. Patent No. 6,881,423 (collectively, "Dohi")	
989	APOTEX_AZFL 0053370-376	U.S. Patent Publication No. 2004/0136918 ("Garrett")	
990	APOTEX_AZFL 0054641-647	U.S. Patent No. 6,338,938 (Herve)	
991	APOTEX_AZFL 0054825-830	US Patent No. 6,587,532 (Hermann)	
992	APOTEX_AZFL 0107352-354	[redacted]	F, H
993	CIP_DYM_00143475	Product Sales sheet	
994	CIP_DYM_00467885-895	2011.10.03 Respiratory Allergic Rhinitis Team: September 2011, Memo to Mr. Nikhil Chopra	
995	MEDA_APTX03470303-323	EPO Decision 2012.01.19	R, U, F
996	CIP_DYM_00238740-743	Page of Innovator/Competitor Product Characterization Spray (Nasal/Topical) Chart	
997	MEDA_APTX02830227-290	2006.08.01. Partnering Opportunity with GSK presentation	
998	MEDA_APTX00000604-656	A Treatment Option for Symptom Relief for Seasonal Allergic Rhinitis Presentation draft	R, U, F, S
999	MEDA_APTX00015278-283	Slide notes for Dymista presentation	R, U, F, S
1000	MEDA_APTX00020521-543	Response to 74-Day Letter FDA Review Issue 2	R, U, F, S

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1001	MEDA_APTX00020710-739	2010.07.20. Information Package for August 17, 2010 Pre-ANDA Meeting	R, U, F, S, H
1002	MEDA_APTX00020758-802	2.5 Clinical Overview	R, U, F, H
1003	MEDA_APTX00021481-483	14. Clinical Studies	R, U, F, H
1004	MEDA_APTX00021632-2189	Integrated Summary of Efficacy SAS output documentation [Draft]	R, U, F, H, S
1005	MEDA_APTX01871176-199	MedPointe Making Medicine Better: Astelin Day Life CyclePlan, November 1, 2002	F, H
1006	MEDA_APTX02875674-696	Astelin Nasal Spray Life Cycle Management Projects (Preliminary Plan)	F, H
1007	MEDA_APTX01642785-789	2002.11.12. Lifecycle NPC Meeting Summary/Action Items	R, F, H
1008	MEDA_APTX03094553-557	2004.05.07. Radius Product Development's proposal for conducting a feasibility analysis, Co-Delivery Device	R, F, H
1009		Intentionally Left Blank	
1010		Intentionally Left Blank	
1011	MEDA_APTX01645706-707	Astelin-Flonase Combination Product: Feasibility Assessment Plan	
1012	MEDA_APTX03471968-969	2006.05.16 Memo from Sue Foelix on Astelin plus Fluticasone Q & A	R, U
1013	MEDA_APTX03479050-084	2006.06.21 Partnering Opportunity with Schering Plough Presentation	
1014	MEDA_APTX02897756-759	2008.04.28 Email between D'Addio and Sacks re: Schering-Plough-Merck Pharmaceuticals Receives Not-Approvable Letter from FDA for Lora	R, F, H
1015		Intentionally Left Blank	
1016	MEDA_APTX03490384-422	2006 Cipla-Meda License Agreement with Quality Agreement	U
1017	MEDA_APTX03490468-469	Certificate of Amendment of the Certificate of Incorporation of Medpointe Healthcare Inc.	R
1018	MEDA_APTX00000357-449	Allergic Rhinitis Learning Program: Module 4, DYMISTA Nasal Spray Prescribing Information and Clinical Trials	R, F
1019	MEDA_APTX00000774-793	Dymista Summary of Product Attributes	R, U, F, H
1020	MEDA_APTX00001362-382	Dymista Summary of Product Attributes	R, U, F, H
1021	MEDA_APTX03191984-992	Carr, Comparison of intranasal azelastine to intranasal fluticasone propionate for symptom control in moderate-to-severe seasonal allergic rhinitis	
1022	MEDA_APTX00002308-319	Ostrom, et al, Fluticasone Propionate with Azelastine HCL in a Single Nasal Spray Effectively Relieves Nasal and Ocular Symptoms in Adolescents 12 to 17 Years of Age with Seasonal Allergic Rhinitis (SAR)	R, U, F

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1023	MEDA_APTX00002320-324	Demographic and Other Characteristics of the Study Population, Integrated Summary of Safety	R, U, F, H, S
1024	MEDA_APTX00008635-636	2010.09.27 Azelastine Hydrochloride-Fluticasone Propionate Products, Investigational Formulation Comparison	R, U, F
1025	MEDA_APTX00022453-512	Summary of Clinical Efficacy	R, U, F, H, S
1026	MEDA_APTX00022735-3257	Integrated Summary of Efficacy Azelastine +Fluticasone	R, U, F, H, S
1027	MEDA_APTX00023882-900	Responses to FDA Review questions/issues	R, F, H
1028	MEDA_APTX00024591-639	2.5 Clinical Overview	R, U, F, H
1029	MEDA_APTX00025119-213	Integrated Summary of Efficacy MP29-02, Integrated Summary of Effectiveness	R, U, F, H, S
1030	MEDA_APTX02450184-190	Berger, "Long-term, Randomized Safety Study of MP29-02 (a Novel Intranasal Formulation of Azelastine Hydrochloride and Fluticasone Propionate in an Advanced Delivery System) in Subjects with Chronic Rhinitis," American Academy of Allergy, Asthma, and Immunology, 2014	R, U, F, H
1031	MEDA_APTX02102492-501	Berger, "MP29-02 for the treatment of seasonal allergic rhinitis: a review of clinical pharmacology, efficacy and safety," Expert Rev. Clin. Immunol., 9(9), 803-811 (2013)	U
1032	MEDA_APTX03185188-197	Berger, "Intranasal spray medications for maintenance therapy of allergic rhinitis," Am J Rhinol Allergy 29, 273-282, 2015	R, U, F, H
1033	MEDA_APTX00032409-412	DYMISTA powerpoint slides	R, U, F, H
1034	MEDA_APTX00112621-642	MP4001 Clinical Study Report, 16.2 Patient Data Listings	
1035	MEDA_APTX00112658-687	Clinical Study Report, 16.1 Study Information, Guidance for Industry, Allergic Rhinitis: Clinical Development Program for Drug Products, Draft Guidance	R, U, F, H
1036	MEDA_APTX00114044-7144	MP4001 Clinical Study Report, 16.2 Patient Data Listings	R, U, F, H
1037	MEDA_APTX02522418-481	2.5 Clinical Overview - 2011.03.31	R, U, F, H
1038	MEDA_APTX02935479-482	2010.10.05 Meda Pharmaceuticals MP29-02 Nasal Spray, MP4000 Final CSR	R, U, F, H
1039	MEDA_APTX02935483-487	2010.04.27 Individual Study Synopsis, MP4001 Final Clinical Study Report	R, U, F, H

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1040	MEDA_APTX02935488-493	2010.05.03 MP4002 Clinical Study Report, Synopsis of Randomized, Double-Blind Trial of MP29-02 Nasal Spray Compared to Placebo, Azelastine Hydrochloride Nasal Spray, and Fluticasone Propionate Nasal Spray in Treatment of Patients with Seasonal Allergic Rhinitis	R, U, F, H
1041	MEDA_APTX02935494-499	MP4004 Clinical Study Report	R, U, F, H
1042	MEDA_APTX02935500-505	MP4006 Clinical Study Report	R, U, F, H
1043	MEDA_APTX03150080-085	Clinical Study X-03065-3282, Single dose pharmacokinetics of intranasal fluticasone delivered by a fixed combination with azelastine (MP29-02) in comparison to two different fluticasone nasal sprays	R, U, F, H
1044	MEDA_APTX03150086-090	Clinical Study X-03065-3283, Single dose pharmacokinetics of intranasal fluticasone delivered by a fixed combination with azelastine (MP29-02) in comparison to two different fluticasone nasal sprays	R, U, F, H
1045	CIP_DYM_00314625-630	2011.09.22 Email to Grewal re: Azelastine HCl & Fluticasone Propionate Nasal Spray and Azelastine/Fluticasone Nasal Spray PowerPoint Presentation slides [attachment]	R, U, F, H
1046	CIP_DYM_00389423-428	2011. 09.16 Email between Grewal and Patsy re: Azelastine HCl & Fluticasone Propionate Nasal Spray and Azelastine/Fluticasone Nasal Spray PowerPoint Presentation slides	R, U, F, H
1047	CIP_DYM_00389429-434	2011. 09.17 Email between Grewal and Patsy re: Azelastine HCl & Fluticasone Propionate Nasal Spray and Azelastine/Fluticasone Nasal Spray PowerPoint Presentation slides	R, U, F, H
1048	CIP_DYM_00389442-447	2011.09.21 Email from Patsy re: Azelastine HCl & Fluticasone Propionate Nasal Spray and Azelastine/Fluticasone Nasal Spray PowerPoint Presentation slides	R, U, F, H
1049	CIP_DYM_00389448-453	2011.09.21 Email between Patsy and Maholtra re: Azelastine HCl & Fluticasone Propionate Nasal Spray and Azelastine/Fluticasone Nasal Spray PowerPoint Presentation slides	R, U, F, H
1050	CIP_DYM_00396809	2011.09.23 Email from Patsy re: Azelastine HCl & Fluticasone Propionate Nasal Spray	R, U, F, H
1051	CIP_DYM_00453460-469	Method of Analysis, Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray	R, U, F
1052	CIP_DYM_00469089-130	Finished Product Specification, Sampling and Handling, Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray	R, U, F

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1053	CIP_DYM_00097557-573	Finished Product Specification Standards, Dymista Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray (Sample Pack)	R, U, F
1054	CIP_DYM_00097574-612	2012.07.04 Finished Product Specification, Sampling and Handling, Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray	R, U, F
1055	MEDA_APTX01774849-850	2012.01.11 Email between Hostler and Roecklein re: Medscape Article	R, U, F
1056	MEDA_APTX01878744-746	2011.11.14 Email between White and Dumaswala, Varon, Roecklein, and Riccio re: ACAAI MP29-02 Articles	R, U, F
1057	MEDA_APTX02015939-947	Braido, Allergic Rhinitis: Current Options and Future Perspectives, Curr Opin Allergy Clin Immunol 2014	R, U, F, H
1058	MEDA_APTX02015948-955	Braido, New Therapies for Allergic Rhinitis, Curr Allergy Asthma Rep (2014)	R, U, F, H
1059	MEDA_APTX02884316-318	2011.08.22 Email between D'Addio and Policelli re: Meda's Dymista clear for approval	R, U, F, H
1060	MEDA_APTX01916941-942	2011.11.17 Email between Gever and Riccio re: Medscape: Novel Nasal Spray Bests Current First-Line Therapies for SAR	R, U, F, H
1061	MEDA_APTX01675559-574	Bousquet, Advances in pharmacotherapy for the treatment of allergic rhinitis; MP29-02…fills the gaps, Expert Opin. Pharmacother. 16(6), 2015	R, U, F, H
1062	MEDA_APTX01957177-185	Derendorf, Bioavailability and disposition of azelastine and fluticasone propionate when delivered by MP29-02, a novel aqueous nasal spray (2012)	R, U, F, H
1063	MEDA_APTX02450200-217	Derendorf, Clinical Development of an Advanced Intranasal Delivery System of Azelastine Hydrochloride and Fluticasone Propionate, Drugs of Today, 50(1), 2014	R, U, F, H
1064	MEDA_APTX02450725-740	Price, A New Therapy (MP29-02) Is Effective for the Long-Term Treatment of Chronic Rhinitis, Journal of Investigational Allergology and Clinical Immunology, 23(7) 2013	R, U, F, H
1065	MEDA_APTX03071450-465	Correspondence between FDA and Meda re: IND 77363 and meeting minutes from August 17, 2010	R, U, F, H
1066	MEDA_APTX03071488-490	2012.09.10 Facsimile Transmittal Sheet from FDA to Meda	R, U, F, H
1067	MEDA_APTX01904353-368	2012.05.01 Summary Review of Regulatory Action, Center for Drug Evaluation and Research	R, U, F, H
1068	MEDA_APTX02106608	Bachert, et al., MP29-02 and Time to Response in the Treatment of Seasonal Allergic Rhinitis Compared to Marketed Antihistamine and Corticosteroid Nasal Sprays, EAACI 4001	R, U, F, H

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1069	MEDA_APTX02106611	Carr, et al., MP29-02 in the Symptomatic Treatment of Ocular Symptoms of Seasonal Allergic Rhinoconjunctivitis, EAACl 4004 ocular	R, U, F, H
1070	MED_DYM_00000610-629	Portion of Amendments and Response to Final Office Action Dates April 28, 2010.	R, U, F, H
1071	MED_DYM_00001365-373	Simpson, Budesonide and terfenadine, separately and in combination, in the treatment of hay fever, R. J., Ann. Allergy 73(6): 497-502 (1994)	U
1072	CIP_DYM_00002696-701	Duonase Data Sheet	
1073	CIP_DYM_00003324-335	Wiseman, Intranasal Fluticasone Propionate: A Reappraisal of its Pharmacology and Clinical Efficacy in the Treatment of Rhinitis, Drugs 1997 May, 53(5): 885-907	
1074	CIP_DYM_00468007	13366 Brand Data from 2004 to 2011	R, U, F
1075	CIP_DYM_00469435-436	Comparative Composition Data of Azelastine with steroids/ Comparative Stablility Data of Azelastine with steroid compositions charts	R, U, F
1076	CIP_DYM_00469583-585	Budesonide/Azelastine table	R, U, F
1077	CIP_DYM_00477273	Comparative Data of Azelastine HCL & Triamcinolone Acetonide Nasal Spray	R, U, F
1078	MEDA_APTX03505007-029	Remington's The Science and Practice of Pharmacy (20th ed. 2000) ("Remington's")	
1079	APOTEX_AZFL 0000894	[redacted]	R
1080	APOTEX_AZFL 0000378	[redacted]	R
1081	N/A	Exhibit A_Govindarajan CV	
1082	N/A	Exhibit C_Govindarajan Notebooks Entries	
1083	N/A	PDF for video	
1084	N/A	Exhibit D _video	
1085	N/A	PDF for video	
1086	N/A	Exhibit E_video	
1087	APOTEX_AZFL 0059695-713	Bryson, et al., "Intranasal fluticasone propionate: a review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in allergic rhinitis," Drugs, 1992, vol. 43, No. 5, pp. 760-775	
1088	APOTEX_AZFL 0130722-895	Lund, C.G., et al. The Preparation of Solutions Isoosmotic with Blood, Tears, and Tissue, Contributions from the Danish Pharmacopoeia Commission (1947)	

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1089	APOTEX_AZFL 0132197-219	Remington: The Science and Practice of Pharmacy, 2000, 20th edition, vol. 1, Chapter 23 Rheology (2000)	
1090	APOTEX_AZFL 0132304-325	Loyd V. Allen, The Art, Science, and Technology of Pharmaceutical Compounding, Chapter 20 (1998)	U
1091	APOTEX_AZFL 0132781-800	Avicel® RC-951 Microcrystalline Cellulose and Carboxymethylcellulose Sodium, NF, BP, Pharmaceutical Emulsions and Suspensions Stabilization Technology for Liquid and Semi-Solid Dosage Forms (1994)	
1092	APOTEX_AZFL 0132801-803	British Pharmaceutical Codex, p. 977 (1973)	
1093	APOTEX_AZFL 0132804-805	Dymista® web site (http://dymista.com/spray-volume.php)	
1094	APOTEX_AZFL 0132938-941	Pennington, A.K., et al. The Influence of Solution Viscosity on Nasal Spray Deposition and Clearance, International Journal of Pharmaceutics, Vol. 43 pp. 221-224 (1988)	
1095	APOTEX_AZFL 0133012-018	Suzuki Y., et al, Mucosal Drug Delivery Using Cellulose Derivatives as a Functional Polymer, Journal of Controlsled Release, Vol. 62 pp. 101-107 (1999)	
1096	APOTEX_AZFL 0135183-5212	Remington: The Science and Practice of Pharmacy, 2000, 20th edition, vol. 1, Remington, Chapter 57: "Drug Absorption"	
1097	APOTEX_AZFL 0130690-721	Remington: The Science and Practice of Pharmacy, 2000, 20th edition, vol. 1, Chapter 39, Solutions, Emulsions, Suspensions, and Extracts	
1098	APOTEX_AZFL 0132557-579	Dolz, M., et al., Rheological Behaviour of Microcrystalline Cellulose Hydrogels, Journal of Dispersion Science and Technology Vol. 13 Number 1, pp. 96-99 (1992)	
1099	CIP_DYM_00004654-757	Draft Development Report for Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray for U.S. Market (April 2008)	
1100	CIP_DYM_00087578	Solubility Trials for Azelastine HCl	
1101	CIP_DYM_00451124-169	3.2.P Module 3 - Quality of Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray Suspension	
1102	CIP_DYM_00461986-2122	Draft Development Report for Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray for U.S. Market (July 31, 2007)	
1103	MEDA_APTX02502922-987	Module 2.5 Clinical review on the fixed drug combination of azelastine hydrochloride and fluticasone propionate nasal spray for allergic rhinitis (June 30, 2011)	
1104	MEDA_APTX00402228-287	Historical Perspective of Formulation Development	
1105	MEDA_APTX01569738-741	Email to A. D'Addio, et al. from C. Yayac re Dymista - ask for help	
1106	MEDA_APTX01606639-723	Cipla Draft Development Report for Azelastine Hyrdrochloride and Fluticasone Propionate Nasal Spray	

PTX	Bates Range	Document Description	Defendants' Objections
1107	MEDA_APTX01609436-445	3.2.P.2.1 Components of the Drug Product	
1108	MEDA_APTX01616301	Procedure for Stirred Cell Filtration of Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray	
1109	MEDA_APTX01642520-521	Astelin Hydrocholoride-Fluticasone Propionate 137-50 mcg (Sept. 2, 2008)	
1110	MEDA_APTX01878799-810	Astepro with Fluticasone Suspension Development Update (Sept. 8, 2009)	
1111	APOTEX_AZFL 0132843-891	Guidance for Industry, Nasal Spray and Inhalation Solution, Suspension, and Spray Drug Products - Chemistry, Manufacturing, and Controls Documentation (July 2002)	
1112	APOTEX_AZFL 0132892-937	Guidance for Industry, Nasal Spray and Inhalation Solution, Suspension, and Spray Drug Products - Chemistry, Manufacturing, and Controls Documentation (May 1999)	
1113	APOTEX_AZFL 0133053-057	Examples of Common Clinical Research Designs Used to Find Out Whether Fish Intake Reduces Coronary Heart Disease Risk, Designing Clinical Research, p. 6-7, 2007	R
1114	MEDA_APTX00540740-744	Letter to Fosko, Meda Pharmaceuticals from P. Bowen re IND 77363; Re: SPA Response Letter (January 31, 2008)	R, U, F, H
1115	N/A	Schleimer, Chapter 52: Glucocortidoids, Middleton's Allergy Principles & Practice, vol. 1, 2003	
1116	N/A	Weiler & Meltzer, Azelastine nasal spray as adjunctive therapy to azelastine tablets in the management of seasonal allergic rhinitis	
1117	MEDA_APTX03161222-227	10.21.2013 Emails	
1118	MEDA_APTX01774595-637	11.02.2011 email & 2012 Dymista Strategic Plan	F, H
1119	APOTEX_AZFL 0133172	Allergy sales that rose up your nose article	R, U, F, H
1120	APOTEX_AZFL 0133069-088	Deloitte, *2015 Global Life Sciences Out*look	R, U, F
1121	MEDA_APTX01775589-594	Dymista Market Performance, Week Ending 07.26.13	
1122	MEDA_APTX03501812-886	Dymista Marketing Plan 2015	
1123	MEDA_APTX03502656	Dymista Sales Model with Actuals from initial launch date to May 2016	
1124	APOTEX_AZFL 0133643	GSK launches Flonase OTC	
1125	CIP_DYM_00146333-338	Overview of Respirtatory Team AR 08.05.2011	
1126	APOTEX_AZFL 0133783-785	The tribune india article	
1127	APOTEX_AZFL 0133089-090	About Apotex	
1128	APOTEX_AZFL 0133091-093	About Generics	
1129	APOTEX_AZFL 0133173	Apotex Products	

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1130	APOTEX_AZFL 0133202-204	cipla at a glance article	
1131	APOTEX_AZFL 0133205-206	cipla.com - respiratory therapies	
1132	N/A	2016.05.06 Accetta Deposition Transcript	
1133	MEDA_APTX01663422	Email Re 3 Year Dymista Forecast 06.04.2013	
1134	APOTEX_AZFL 0133664	GSK's Flonase Already a Top Seller	
1135	APOTEX_AZFL 0134733-774	KPMG article indian pharmaceutical industry	
1136	MEDA_APTX00035037-044	Meda Alternate Discounting Strategies	
1137	MEDA_APTX01764754	Meda Budget 2014-15	
1138	MEDA_APTX00036186	Meda Pharm Aerospan 2015 Budget by month	
1139	APOTEX_AZFL 0134181-182	Mylan to buy swedish drugmaker Meda	
1140	N/A	Newman Ex. 1 Medicaid Preffered Drug Status List	
1141	APOTEX_AZFL 0135154-155	Nordea - who we are	
1142	APOTEX_AZFL 0134526-528	Preference Towards Generic Prescription Drugs Shows a 4-1 Lead Over Brand Name Medications, prnewswire.com	
1143	APOTEX_AZFL 0134525	www.census.gov, "Population Clock"	
1144	MED_DYM_00000001-077	620 Patent File History: 2004.12.14 Transmittal of New Application; Claims; Claims Worksheet; Preliminary Amendment; Specification; Abstract; Applicant Argument/Remarks Made in an Amendment	
1145	MED_DYM_00000101	620 Patent File History: 2005.07.06 Bibliographic Data Sheet	
1146	MED_DYM_00000102-104	620 Patent File History: 2005.07.06 Oath or Declaration Filed	
1147	MED_DYM_00000254-275	620 Patent File History: 2009.01.23 Non-Final Rejection	
1148	MED_DYM_00000288-306	620 Patent File History: 2009.07.23 Amendment/Request for Reconsideration After Non-Final Rejection; Claims; Applicant Argument/Remarks Made in an Amendment	
1149	MED_DYM_00000455-477	620 Patent File History: 2009.07.23 Malhotra Declaration	
1150	MED_DYM_00000577-596	620 Patent File History: 2010.04.28 Final Rejection	
1151	MED_DYM_00000609-629	620 Patent File History: 2010.09.24 Amendment Submitted/Entered with Filing of CPA/RCE; Claims; Applicant Argument/Remarks Made in an Amendment	
1152	MED_DYM_00000654-682	620 Patent File History: 2010.09.24 Malhotra Declaration	
1153	MED_DYM_00000765-780	620 Patent File History: 2011.02.16 Non-Final Rejection	
1154	MED_DYM_00000787-790	620 Patent File History: 2011.08.04 Examiner Interview Summary Record	

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1155	MED_DYM_00000793-849	620 Patent File History: 2011.08.16 Amendment/Request for Reconsideration After Non-Final Rejection; specification; claims; applicant argument/remarks made in an amendment	
1156	MED_DYM_00001454-1461	620 Patent File History:2011.08.16 Chopra Declaration	
1157	MED_DYM_00001312-1333	620 Patent File History:2011.08.16 Malhotra Declaration	
1158	MED_DYM_00001334-1433	620 Patent File History:2011.08.16 Maus Declaration	
1159	MED_DYM_00001434-453	620 Patent File History:2011.08.16 Rajan Declaration	
1160	MED_DYM_00002559-271; MED_DYM_00002551-252	620 Patent File History:2011.10.03 Notice of Allowance	
1161	MED_DYM_00009275-9305	723 Patent File History: 2010.09.10 Specification; Claims; Abstract; Oath or Declaration Filed	
1162	MED_DYM_00011300-301	723 Patent File History: 2011.11.23 Examiner Initiated Interview Summary	
1163	MED_DYM_00014516-525	723 Patent File History: 2011.12.12 Preliminary Amendment; Claims; Applicant Argument/Remarks Made in an Amendment	
1164	MEDA_APTX03490530-578	428 Patent File History: 2015.03.18 Oath or Declaration Filed; Specification; Claims; Abstract	
1165	MEDA_APTX03499992-998	428 Patent File History: 2015.05.07 Non-Final Rejection	
1166	MEDA_APTX03499991	428 Patent File History: 2015.05.07 Examiner Initiated Interview Summary	
1167	MEDA_APTX03500044-054	428 Patent File History: 2015.08.07 Amendment/Request for Reconsideration After Non-Final Rejection; Claims; Applicant Argumnet/Remarks Made in an Amendment	
1168	MEDA_APTX03501527-535	428 Patent File History: 2015.10.14 Supplemental Response to Office Action; Claims; Applicant Argument/Remarks Made in an Amendment	
1169	MEDA_APTX03501793-794; MEDA_APTX03501797-798; MEDA_APTX03501805-811	428 Patent File History: March 2016, Requests for Certificate of Correction	
1170	APOTEX_AZFL 0021593	[redacted]	
1171	APOTEX_AZFL 0021601-607	[redacted]	
1172	APOTEX_AZFL 0047655	[redacted]	
1173	APOTEX_AZFL 0047667-668	[redacted]	R
1174	APOTEX_AZFL 0047665	[redacted]	R
1175	APOTEX_AZFL 0047669-672	[redacted]	R
1176	APOTEX_AZFL 0047699-700	[redacted]	R

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1177	APOTEX_AZFL 0047698	[redacted]	R
1178	APOTEX_AZFL 0047701-703	[redacted]	R
1179	APOTEX_AZFL 0047714-715	[redacted]	R
1180	APOTEX_AZFL 0047713	[redacted]	R
1181	APOTEX_AZFL 0047716-718	[redacted]	R
1182	APOTEX_AZFL 0047728-729	[redacted]	R
1183	APOTEX_AZFL 0047727	[redacted]	R
1184	APOTEX_AZFL 0047730-735	[redacted]	R
1185	N/A	Exhibit 1 to the Rebuttal Report of Glenn Newman: Dymista Medicaid Preferred Drug List Status	
1186	N/A	Jarosz CV, Tab 1 of Expert Report	
1187	APOTEX_AZFL 0103807	[redacted]	R
1188	MEDA_APTX01334211-222	Dymista NDA comparing excipients	
1189	N/A	Tabs 3-24 of the Jarosz Report	
1190	APOTEX_AZFL 0000001-0052598	[redacted]	R, U
1191	APOTEX_AZFL 0106375 - 382	[redacted]	R
1192	APOTEX_AZFL 0107900-903	[redacted]	R
1193	APOTEX_AZFL 0108556-560	[redacted]	R
1194	APOTEX_AZFL 0114675-678	[redacted]	R
1195	APOTEX_AZFL 0120802	[redacted]	R
1196	APOTEX_AZFL 0106326-331	[redacted]	R
1197	CIP_DYM_00054140-174	Duonase Marketing Presentation	
1198	CIP_DYM_00469089-71907	Cipla Finished Product Specification - Azelastine Hydrochloride and Fluticasone Nasal Spray - Version No. 6	R, U, F
1199	CIP_DYM_00097557	Cipla Finished Product Specification - Azelastine Hydrochloride and Fluticasone Nasal Spray (Sample Pack) - Version No. 1	R, U, F

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1200	CIP_DYM_00097574	Cipla Finished Product Specification - Azelastine Hydrochloride and Fluticasone Nasal Spray - Version No. 2	R, U, F
1201	CIP_DYM_00314625	09/22/2011 E-mail Correspondence between Cipla Administrative Group and R. Grewal re: Azelastine and Fluticasone Product Deficiency Status	R, U, F
1202	CIP_DYM_00314626	09/22/2011 Azelastine and Fluticasone Product Deficiency Status Summary PowerPoint Slide	R, U, F
1203	CIP_DYM_00389423	09/16/2011 E-mail Correspondence between R. Grewal and P. Jeffery re: Azelastine Nasal Spray PowerPoint	R, U, F
1204	CIP_DYM_00389424-428	09/16/2011 Updated Azelastine and Fluticasone Product Deficiency Status Summary PowerPoint Slide	R, U, F
1205	CIP_DYM_00389429	09/17/2011 E-mail Correspondence between R. Grewal and P. Jeffery re: Updated Azelastine Nasal Spray PowerPoint	R, U, F
1206	CIP_DYM_00389430	09/17/2011 Updated Azelastine and Fluticasone Product Deficiency Status Summary PowerPoint Slide	R, U, F
1207	CIP_DYM_00389442	09/21/2011 Email Correspondence Between Patsy Jeffery and mkh@cipla.com et al. re: Updated Azelastine and Fluticasone Product Deficiency Status	R, U, F
1208	CIP_DYM_00389443	09/21/2011 Updated Azelastine and Fluticasone Product Deficiency Status Summary PowerPoint Slide	R, U, F
1209	CIP_DYM_00389448	09/21/2011 Email Correspondence Between Patsy Jeffery and Geena@cipla.com et al. re: Updated Azelastine and Fluticasone Product Deficiency Status	R, U, F
1210	CIP_DYM_00389449	09/21/2011 Updated Azelastine and Fluticasone Product Deficiency Status Summary PowerPoint Slide	R, U, F
1211	CIP_DYM_00396809	09/23/2011 Email Correspondence Between Patsy Jeffery and mkh@cipla.com et al. re: Updated Azelastine and Fluticasone Product Deficiency Status	R, U, F
1212	CIP_DYM_00453460	Cipla Method of Analysis - Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray	R, U, F
1213	MEDA_APTX02233489	09/26/2014 E-mail Correspondence between Broadcast@meda.us and Meda Atlanta et al. re: Weekly Rx Trend	
1214	MEDA_APTX02233751-753	07/01/2013 Email Correspondence between Broadcast@meda.us and Alexander D'addio et al. re: Weekly Flash Report	

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1215	MEDA_APTX02233978-980	12/02/2013 Email Correspondence between Broadcast@meda.us and Alexandra D'Addio re: Weekly Flash Report	
1216	MEDA_APTX02234122-124	09/16/2013 Email Correspondence between Broadcast@meda.us and Alexandra D'Addio re: Weekly Flash Report	
1217	MEDA_APTX03435118-128	03/13/2014 Meda Supply Prices PowerPoint	
1218	MEDA_APTX03435129	03/12/2014 Email from E. Haeffler to M. Osterlund re: Dymista Supply Prices Power Point	
1219	MEDA_APTX03435130-141	03/13/2014 Meda Supply Prices PowerPoint	
1220	MEDA_APTX03435142-143	03/11/2014 E-mail Correspondence between H. Tritschler and M. Mueller et al. re: P and L Dymista Data	
1221	MEDA_APTX03435144	03/11/2014 E-mail Correspondence between H. Tritschler and E. Haeffler et al. re: Dymista Presentation for Cipla	
1222	MEDA_APTX03435145-151	Dymista PowerPoint - Stockholm, February 2014	R, U, F, H
1223	MEDA_APTX03435152-153	03/11/2014 E-mail Correspondence between M. Mueller and E. Haeffler et al. re: Dymista Product P&L 2013	
1224	MEDA_APTX03435155-156	03/11/2014 E-mail Correspondence between H. Tritschler and E. Haeffler et al. re: AW: Dymista	R, U, F, H
1225	MEDA_APTX03435157-158	03/11/2014 E-mail Correspondence between H. Tritschler and D. Keller et al. re: AW: WG: Dymista	R, U, F, H
1226	MEDA_APTX03435159-160	03/11/2014 E-mail Correspondence between E. Haeffler and D. Keller et al. re: SV: Dymista	R, U, F, H
1227	MEDA_APTX03435161-162	03/11/2014 E-mail Correspondence between D. Keller and M. Mueller et al. re: WG: Dymista	R, U, F, H
1228	MEDA_APTX03435163-164	03/11/2014 E-mail Correspondence between E.J. Dekker and H. Tritschler et al. re: AW: Dymista	R, U, F, H
1229	MEDA_APTX03435165	03/11/2014 E-mail Correspondence between H. Tritschler and E.J. Dekker et al. Dymista Weekly Development PowerPoint	
1230	MEDA_APTX03435166	Meda PowerPoint Opening Slide	R, F, U, H
1231	MEDA_APTX03435265	03/11/2014 E-mail Correspondence between H. Tritschler and D. Keller et al. re: P and L for Dymista Europe	
1232	MEDA_APTX03435266	03/11/2014 E-mail Correspondence between E. Haeffler and H.J. Tritschler re: Dymista Pricing Situation	
1233	MEDA_APTX03435267	03/08/2014 E-mail Correspondence between P.O. Wirenlind and J.T. Dierks re: February Flash Report	R, U, F, H

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1234	MEDA_APTX 03435268-321	Meda February 2014 Sales Flash Report	
1235	MEDA_APTX03435322	03/08/2014 E-mail Correspondence between P.O. Wirenlind and J.T. Dierks re: February Flash Report	R, U, F, H
1236	MEDA_APTX03435323-376	Meda February 2014 Sales Flash Report	
1237	MEDA_APTX03435377-379	03/07/2014 E-mail Correspondence between J. Maus and H. Tritschler re: Dymista Investigator's Brochure	R, F, H
1238	MEDA_APTX03435380-443	Dymista Investigator's Brochure, Ed. No. 5	R, U, F, H, S
1239	MEDA_APTX03435444	03/07/2014 E-mail Correspondence between H. Tritschler and M. Osterlund re: Dymista, price, market share overview	
1240	MEDA_APTX03435446-449	03/06/2014 E-mail Correspondence between H. Tritschler and J. Maus re: Dymista Patent List	R, F, H
1241	MEDA_APTX03435450-451	Meda Dymista Q & A - March 6, 2014	R, F, H
1242		Intentionally Left Blank	
1243	MEDA_APTX03435467-469	03/06/2014 E-mail Correspondence between Y. Tambo and M. Osterlund re: Kyorin/Meda, Q&A session, Dymista	R, U, F, H
1244	MEDA_APTX03435470-471	Meda Dymista Q & A - March 6, 2014	R, U, F, H
1245		Intentionally Left Blank	
1246	MEDA_APTX03435487-488	03/03/2014 E-mail Correspondence between P. Treutiger to H. Stenqvist et al. re: VB Shareholder Question	R, U, F, H
1247	MEDA_APTX03435489	02/19/2014 E-mail Correspondence between E. Faghfouri and M. Osterlund et al. re: SV: Dymista 8ml	R, U, F, H
1248	MEDA_APTX03435490	02/19/2014 E-mail Correspondence between P.O. Wirenlind and J.T. Dierks et al. re: January Report	R, U, F, H
1249	MEDA_APTX03435491-500	January 2014 Meda Management Report	
1250	MEDA_APTX03435501	02/19/2014 E-mail Correspondence between E. Faghfouri and H. Tritschler et al. re: Dymista 8ml	R, U, F, H
1251	MEDA_APTX03435502	02/19/2014 E-mail Correspondence between J.T. Dierks and Undisclosed recipients re Meda - 2013 year result	R, U, F, H
1252	MEDA_APTX03435503-505	02/19/2014 E-mail Correspondence between J.T. Dierks and J.T. Dierks re: Year-end report January-December 2013	R, U, F, H
1253	MEDA_APTX03435506-520	02/11/2014 E-mail Correspondence between H. Tritschler and M. Osterlund re: Dymista Overview	R, U, F, H
1254	MEDA_APTX03435522	02/11/2014 Overview of post-approval studies with Dymista	R, U, F, H

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1255	MEDA_APTX03435523-537	02/10/2014 E-mail Correspondence between J. Maus and H. Tritschler et al. re: Overview of post approval Dymista studies	R, U, F, H
1256	MEDA_APTX03435538-539	02/10/2014 Overview of post-approval studies with Dymista	R, U, F, H
1257	MEDA_APTX03435540-541	02/10/2014 E-mail Correspondence between J.T. Dierks and Undisclosed Recipients re: Meda Dymista market share back at levels not seen since July 2013	R, U, F, H
1258	MEDA_APTX03435540-543	02/10/2014 E-mail Correspondence between J.T. Dierks and Undisclosed Recipients re: Meda Dymista market share back at levels not seen since July 2013	R, U, F, H
1259	MEDA_APTX03436216	02/11/2013 E-mail Correspondence between broadcast@meda.us and A. Lamholt et al. re: Weekly TRx Flash Report for the week of 02/01	
1260	MEDA_APTX03436242-243	01/14/2013 E-mail Correspondence between broadcast@meda.us and A. Lamholt et al. re: Weekly TRx Flash Report for the week of 01/04	
1261	MEDA_APTX03436248	12/26/2012 E-mail Correspondence between broadcast@meda.us and A. Lamholt et al. re: Weekly TRx Flash Report	
1262	MEDA_APTX03445121-256	Meda Brand Plan Kickoff Meeting Power Point	
1263	MEDA_APTX03478963-988	11/26/2012 Transmittal of Advertisement and Promotional Labeling for Drugs and Biologics for Human Use - Dymista	F, H
1264	MEDA_APTX03490384-422	Azelastine Combination Product Agreement	U
1265	MEDA_APTX03490434-467	Azelastine Combination Product Agreement	
1266	MEDA_APTX03502401-653	Datamonitor - “Pipeline and Commercial Insight: Allergic Rhinitis” - July, 2010	
1267	MEDA_APTX00001100-001	04/04/2014 E-mail Correspondence between M. Hausner and L.J. Bremer re: Weekly Flash Report	U, F, H
1268	MEDA_APTX00026832	Dymista Sales Data - November 19, 2014	
1269	MEDA_APTX00026852	Dymista Sales Data - August 26, 2014	
1270	MEDA_APTX00026966	Dymista Sales Data - October 1, 2014	
1271	MEDA_APTX00027314-316	06/27/2014 E-mail Correspondence between broadcast@meda.us and A. D’Addio re: Weekly Flash Report	
1272	MEDA_APTX00027385-387	05/16/2014 E-mail Correspondence between J. Evans and S. loesch re: Weekly TRx Flash Report	
1273	MEDA_APTX00027633	Dymista Sales Data - December 8, 2014	
1274	MEDA_APTX00027707-708	01/13/2015 E-mail Correspondence between broadcast@meda.us and S. Uchrin et al. re: Monthly Nasal Flash Report	

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1275	MEDA_APTX00027802-803	04/15/2014 E-mail Correspondence between broadcast@meda.us and A. Triunfo et al. re: Monthly Nasal Flash Report	
1276	MEDA_APTX00028217-219	05/13/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio et al. re: Monthly Flash Report	
1277	MEDA_APTX00028533-534	10/14/2014 E-mail Correspondence between broadcast@meda.us and A. Triunfo et al. re: Monthly Nasal Flash Report	
1278	MEDA_APTX00028717	Dymista Monthly Budget Estimative - January, 2013 to December, 2015	
1279	MEDA_APTX00028901	Dymista Monthly Sales Data, as of March 26, 2014	
1280	MEDA_APTX00028928	Dymista Monthly Sales Data, as of September 24, 2014	
1281	MEDA_APTX00028967	Dymista Monthly Sales Data, as of April 18, 2014	
1282	MEDA_APTX00029192-193	09/05/2014 E-mail Correspondence between S. Loesch and N. Ruiz re: Weekly Data Delivery to Meda US	
1283	MEDA_APTX00030295-298	07/25/2014 E-mail Correspondence between M. Carell and J. Evans et al. re: Weekly Flash Report	U, F, H
1284	MEDA_APTX00030308-310	06/17/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio et al. re: Monthly Flash Report	
1285	MEDA_APTX00030410-412	05/23/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio et al. re: Weekly Flash Report	
1286	MEDA_APTX00030615-616	03/13/2015 E-mail Correspondence between S. Loesch and J. Karafilidis et al. re: Weekly Rx Trend	U, F, H
1287	MEDA_APTX00030753	Dymista Monthly Sales Data, as of August 6, 2014	
1288	MEDA_APTX00030769	Dymista Monthly Sales Data, as of September 12, 2014	
1289	MEDA_APTX00030861	Dymista Monthly Sales Data, as of September 19, 2014	
1290	MEDA_APTX00031001	Dymista Monthly Sales Data, as of November 5, 2014	
1291	MEDA_APTX00031165	Dymista Monthly Sales Data, as of June 2 2014	
1292	MEDA_APTX00031269-270	05/12/2015 E-mail Correspondence between broadcast@meda.us and S. Uchrin et al. re: Monthly Nasal Flash Report	
1293	MEDA_APTX00031452-454	04/25/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio et al. re: Weekly Flash Report	
1294	MEDA_APTX00031748	Dymista Monthly Sales Data, as of June 16, 2014	
1295	MEDA_APTX00032129-130	11/11/2014 E-mail Correspondence between broadcast@meda.us and A. Triunfo re: Monthly Nasal Flash Report	
1296	MEDA_APTX00032493	Dymista Monthly Sales Data, as of April 23, 2014	

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1297	MEDA_APTX00032666	Dymista Monthly Sales Data, as of March 28, 2014	
1298	MEDA_APTX00033043-044	04/03/2015 E-mail Correspondence between R. Sheridan and J. Germani et al. re: Weekly Rx Trend	U, F, H
1299	MEDA_APTX00033141-143	06/13/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio re: Weekly Flash Report	
1300	MEDA_APTX00033403-405	07/11/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio re: Weekly Flash Report	
1301	MEDA_APTX00033608	01/23/2015 E-mail Correspondence between S. Loesch and J. Germani re: Weekly Rx Trend	
1302	MEDA_APTX00035110-111	09/16/2014 E-mail Correspondence between broadcast@meda.us and A. Triunfo re: Monthly Nasal Flash Report	
1303	MEDA_APTX00035309-310	02/17/2015 E-mail Correspondence between broadcast@meda.us and S. Uchrin re: Monthly Nasal Flash Report	
1304	MEDA_APTX00035388	03/27/2015 E-mail Correspondence between J. Karafilidis and S. Loesch re: Weekly Rx Trend	U, F, H
1305	MEDA_APTX00035777	E-mail Correspondence between S. Loesch and J. Evans re: Weekly TRx Flash Report re: Weekly TRx Flash Report	U, F, H
1306	MEDA_APTX00036186	Meda Pharm. Aerospan, January 2013 - December 2017	
1307	MEDA_APTX00036347-348	03/17/2015 E-mail Correspondence from J. Hostler and S. Loesch et al. re: Monthly TRx Flash Report	
1308	MEDA_APTX00036832	Nasal Spray and Dymista TRxs - Sales, January 2013 - December 2014	
1309	MEDA_APTX00037711-713	04/18/2014 E-mail Correspondence between S. Loesch and G. Mylott re: Weekly Flash Report	
1310	MEDA_APTX00037951-953	07/04/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio re: Weekly Flash Report	
1311	MEDA_APTX00038497-499	08/12/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio et al. re: Monthly Flash Report	
1312	MEDA_APTX01527370	02/20/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1313	MEDA_APTX01527791	04/10/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1314	MEDA_APTX01527931	12/19/2014 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	

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1315	MEDA_APTX01528039	05/08/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1316	MEDA_APTX01528222	02/06/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1317	MEDA_APTX01531077	06/19/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1318	MEDA_APTX01531282	07/10/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1319	MEDA_APTX01531635	01/09/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1320	MEDA_APTX01532345-346	09/12/2014 E-mail Correspondence between G. weisntein and Meda Distribution List re: Weekly Rx Trend	
1321	MEDA_APTX01532478	11/07/2014 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1322	MEDA_APTX01536213	01/30/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1323	MEDA_APTX01541896	05/29/2015 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1324	MEDA_APTX01542628	11/28/2014 E-mail Correspondence between broadcast@meda.us and Meda Distribution List re: Weekly Rx Trend	
1325	MEDA_APTX01615761-763	03/07/2014 E-mail Correspondence between broadcast@meda.us and A. D'Addio et al. re: Weekly Flash Report	
1326	MEDA_APTX01616674-676	10/21/2013 E-mail Correspondence between A. D'Addio and C. Sax re: Weekly Flash Report	
1327	MEDA_APTX01616686-688	11/18/2013 E-mail Correspondence between broadcast@meda.us and A. D'Addio re: Weekly Flash Report	
1328	MEDA_APTX01626795-798	03/01/2014 E-mail Correspondence between N. Ruiz and A. Triunfo re: Weekly Flash Report	
1329	MEDA_APTX01655010-012	12/17/2012 E-mail Correspondence between broadcast@meda.us and A. Triunfo re: Weekly Flash Report	
1330	MEDA_APTX01656029-031	10/22/2012 E-mail Correspondence between broadcast@meda.us and A. Triunfo et al. re: Weekly Flash Report	
1331	MEDA_APTX01656567	Meda Pharmaceuticals Budget Estimate - Aerospan - 2013-2017	R, U
1332	MEDA_APTX01656601-606	Meda Core Sales Team Presentation	

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1333	MEDA_APTX01661556-558	10/08/2012 E-mail Correspondence between broadcast@meda.us and A. Triunfo et al. re: Weekly Flash Report	
1334	MEDA_APTX01665104-106	12/11/2012 E-mail Correspondence between broadcast@meda.us and A. Triunfo et al. re: Weekly Flash Report	
1335	MEDA_APTX01669715-717	11/12/2012 E-mail Correspondence between broadcast@meda.us and A. Triunfo et al. re: Weekly Flash Report	
1336	MEDA_APTX01764754	Meda Pharmaceuticals Budget Estimate - Trilyte - 2013-2017	R, U
1337	MEDA_APTX01764926-927	06/11/2012 E-mail Correspondence between A. Triunfo and M. Carell et al. re: Voicemail for the field	
1338	MEDA_APTX01765137-140	03/12/2013 E-mail Correspondence between B. Roecklein and M. Carell et al. re: Monthly Flash Report	U, F, H
1339	MEDA_APTX01765153-155	09/24/2012 E-mail Correspondence between D. Dell and B. Roecklein re: More recent trends to support the prior Thoughts for PreferaOB	
1340	MEDA_APTX01765908	Dymista Sales Data - As of December 11, 2013	
1341	MEDA_APTX01765918	Dymista Sales Data - As of January 9, 2013	
1342	MEDA_APTX01766047	Dymista Launch Sales Through Oct. 2012	
1343	MEDA_APTX01766796-797	Email from Carell to Hostler re: Weekly TRx Flash Report, 03.25.2013	
1344	MEDA_APTX01767302-309	Dymista Steering Committee Meeting 10.19.2012	
1345	MEDA_APTX01767391	Dymista Launch Forecast data	
1346	MEDA_APTX01768008-011	Email from O'Connor to Hostler re: Astepro - Monthly Flash Report, 08.15.2012	U, F, H
1347	MEDA_APTX01768275-277	Email from B. Roecklein to M. Carell re. monthly flash report, 04.16.2013	U, F, H
1348	MEDA_APTX01768588-590	Email from B. Roecklein to A. Triunfo re. sales, 10.26.2012	U, F, H
1349	MEDA_APTX01768649-725	Dymista Update Jan. 2013	
1350	MEDA_APTX01768794-796	Email from B. Roecklein to M. Carell re. Weekly TRx Flash Report, 01.02.2013	
1351	MEDA_APTX01769379	Dymista Launch Sales, Updated through July 16, 2013	
1352	MEDA_APTX02219672	Email from G. Mylott re. Weekly Rx Trend, 09.19.2014	U, F, H
1353	MEDA_APTX00039654-40081	Determination of Aze., Desmethylaze., and flut. Prop. In Human EDTA Plasma by LC-MS-MS, Protocol MP437, January 2008	R, U, F, I
1354	MEDA_APTX00040082	14.2.3.1 Plot of Mean Change from Baseline in TNSS Intent-to-Treat Population, MP 437, Medpointe	R, U, F, I

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1355	MEDA_APTX00040083	14.2.3.3 Plot of Mean Percent Change from Baseline in TNSS Intent-to-Treat Population, MP 437, Medpointe	R, U, F, I
1356	MEDA_APTX00040084	14.2.4.1 Plot of Mean Change from Baseline in TNSS Evaluable Population, MP 437, Medpointe	R, U, F, I
1357	MEDA_APTX00040085	14.2.4.3 Plot of Mean Percent Change from Baseline in TNSS Evaluable Population, MP 437, Medpointe	R, U, F, I
1358	MEDA_APTX02455809-6638	Integrated Summary of Efficacy MP29-02, February 28 2011	R, U, F, H, S
1359	MEDA_APTX02491645-650	Meda MP4007 Clinical Study Report, 2. Synopsis	R, U, F
1360	MEDA_APTX02491651-56	Meda MP4008 Clinical Study Report, 2. Synopsis	R, U, F
1361	MEDA_APTX02560482-1070	Cedra DCN 1001728 Medpointe Pharma Protocol MP437 Report & First 3 Amendments	R, U, F, I
1362	MEDA_APTX02935479-82	Meda MP4000 Final CSR, 2. Synopsis, Meda Pharma MP29-02 Nasal Spray	R, U, F
1363	MEDA_APTX02935483-487	MP4001 Final Clinical Study Report, MP29-02 Meda Pharma.	R, U, F
1364	MEDA_APTX02935488-493	MP4002 Clinical Study Report, Meda Pharma.	R, U, F
1365	MEDA_APTX02935494-499	MP4004 Clinical Study Report, Meda Pharma.	R, U, F
1366	MEDA_APTX02935500-505	MP4006 Clinical Study Report, Meda Pharma.	R, U, F
1367	MEDA_APTX03110220-699	Randomized, Double-Blind Trial of MP29-02…. (MP4006), IND No. 77,363, 05.04.2010	R, U, F
1368	MEDA_APTX03110700-769	Meda Confidential Report (MP29-02), 01.21.2011	R, U, F
1369	MEDA_APTX03110770-829	Meda Confidential Report (MP29-02), 01.14.2011	R, U, F
1370	MEDA_APTX03110830-1663	Meda Clinical Study Report: Safety and Tolerability of MP29-02 in Subjects with Chronic Allergic or Nonallergic Rhinitis (MP4000), 10.05.2010	R, U, F
1371	MEDA_APTX03111664-2217	Randomized, Double-Blind Trial of MP29-02…(MP4001), IND No. 77,363, 04.27.2010	R, U, F
1372	MEDA_APTX03112218-589	Randomized, Double-Blind Trial of MP29-02…(MP4002), IND No. 77,363, 05.03.2010	R, U, F
1373	MEDA_APTX03112590-3041	Randomized, Double-Blind Trial of MP29-02…(MP4004), IND No. 77,363, 05.04.2010	R, U, F
1374	MEDA_APTX03116128-212	MP4007 Clinical Study Report, Meda Pharm., 04.04.14	R, U, F
1375	MEDA_APTX03116213-322	MP4008 Clinical Study Report, Meda Pharm., 06.30.14	R, U, F
1376	MEDA_APTX03150080-085	Meda Clinical Study X-03065-3282 of MP29-02, IND No. 77,363, 01.21.2011	R, U, F

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1377	MEDA_APTX03150086-90	Meda Clinical Study X-03065-3283 of MP29-02, IND No. 77,363, 02.14.2011	R, U, F
1378	MEDA_APTX03440545-608	Module 2.5 Clinical Overview, 03.31.2011	R, U, F
1379	MEDA_APTX03460069-1116	Clinical Study Report (Protocol MP428) - signature page	R, U, F
1380	MEDA_APTX00401247	3.2.P.5 Control of Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Analytical Procedures	
1381	MEDA_APTX00401591-612	3.2.P.5 Control of Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Batch Analyses	
1382	MEDA_APTX00401811-823	3.2.P.7.1 Container Closure System - Dymista (azelastine hydrochloride and fluticasone propionate), Nasal Spray, 137 mcg/50 mcg	
1383	MEDA_APTX00402183-185	3.2.P.1 Description and Composition of the Drug Product (Placebo Nasal Spray)	
1384	MEDA_APTX00402186	3.2.P.1 Description and Composition of the Drug Product - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Dymista	
1385	MEDA_APTX00402188-207	Development Specifications (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray)	
1386	MEDA_APTX00402225	3.2.P.2 Pharmaceutical Development - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Components of the Drug Product	
1387	MEDA_APTX00402288	3.2.P.2 Pharmaceutical Development - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Drug Product	
1388	MEDA_APTX00403594	3.2.P.5 Control of Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Justification of Specifications	
1389	MEDA_APTX00403626-629	3.2.P.3 Manufacture - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Description of Manufacturing Process and Process Controls	
1390	MEDA_APTX00403643-647	3.2.P.3 Manufacture - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Description of Manufacturing Process and Process Controls	
1391	MEDA_APTX00403842	3.2.P.2 Pharmaceutical Development - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Microbiological Attributes	

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1392	MEDA_APTX00403930	3.2.P.8 Stability (Placebo Nasal Spray) - Post-approval Stability Protocol and Stability Commitment	
1393	MEDA_APTX00404063	3.2.P.6 Reference Standards or Materials (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Dymista Nasal Spray, 137 mcg/50 mcg	
1394	MEDA_APTX00404064-065	3.2.P.6 Reference Standards or Materials (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray)	
1395	MEDA_APTX00404688-737	3.2.P.8.3 Stability (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Stability Data Graphs	
1396	MEDA_APTX00404770-939	3.2.P.8 Stability Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Stability Data	
1397	MEDA_APTX00405109-121	3.2.P.8 Stability (Placebo Nasal Spray) - Stability Data	
1398	MEDA_APTX00405126-223	3.2.P.8 Stability Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Stability Summary and Conclusion	
1399	MEDA_APTX00405224	3.2.P.8 Stability Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Summary and Conclusion	
1400	MEDA_APTX00405234-251	3.2.P.8 Stability (Placebo Nasal Spray) - Stability Summary and Conclusion	
1401	MEDA_APTX00405365-373	Summary of CMC Information Location by Product	F
1402	MEDA_APTX00409757-758	3.2.P.5 Control of Drug Product (Placebo Nasal Spray) - Validation of Analytical Procedures	
1403	MEDA_APTX00413541	3.2.P.4 Control of Excipients (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Validation of Analytical Procedures	
1404	MEDA_APTX00413544-546	3.2.P.5 Control of Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Validation of Analytical Procedures	
1405	MEDA_APTX00422739	3.2.P.2 Pharmaceutical Development - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Container Closure System	
1406	MEDA_APTX00422755-767	3.2.P.7 Container Closure System - Dymista (azelastine hydrochloride and fluticasone propionate), Nasal Spray, 137 mcg/50 mcg	
1407	MEDA_APTX01331280-312	3.2.P.5 Control of Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Batch Analyses	

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1408	MEDA_APTX01331794-797	3.2.P.5 Control of Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Characterization of Impurities	
1409	MEDA_APTX01332117-124	2.3.P Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Control of Drug Product	
1410	MEDA_APTX01332131-132	2.3.P.4 Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Control of Excipients	
1411	MEDA_APTX01334064-065	2.3.P.1 Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Description and Composition	
1412	MEDA_APTX01336466-471	2.3.P.3 Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Manufacture	
1413	MEDA_APTX01449877-888	2.3.P Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Pharmaceutical Development	
1414	MEDA_APTX01450029-030	2.3.P.6 Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Reference Standards or Materials	
1415	MEDA_APTX01450033	2.3.R Regional Information (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray)	
1416	MEDA_APTX01450458-461	2.3.P.8 Drug Product (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - Stability	
1417	MEDA_APTX01450464-532	3.2.P.8 Stability (azelastine hydrochloride 0.1% and fluticasone propionate 0.037% Nasal Spray) - List of Figures	
1418	MEDA_APTX02666380-388	3.2.P.2 Pharmaceutical Development - Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Manufacturing Process Development	
1419	MEDA_APTX02666565-622	3.2.P.8.3 Stability Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Data	
1420	MEDA_APTX02666623-804	3.2.P.8.3 Stability Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Data	
1421	MEDA_APTX02666807-808	3.2.P.8.3 Stability Dymista (azelastine hydrochloride and fluticasone propionate) Nasal Spray, 137 mcg/50 mcg - Summary and Conclusion	
1422	MEDA_APTX01973083-084	Email regarding Monthly Flash Report, 10.16.2012	
1423	MEDA_APTX02217008-010	Email regarding Weekly Flash Report, 12.16.2013	
1424	MEDA_APTX02217079-081	Email regarding Weekly Flash Report, 09.12.2013	
1425	MEDA_APTX02217152-154	Email regarding Weekly Flash Report, 07.29.2013	

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1426	MEDA_APTX02217223-225	Email regarding Weekly Flash Report, 05.20.2013	
1427	MEDA_APTX02217369-371	Email regarding Weekly Flash Report, 01.06.2014	
1428	MEDA_APTX02217538-540	Email regarding Monthly Flash Report, 06.11.2013	
1429	MEDA_APTX02217697-699	Email regarding FW: Weekly Flash Report, 05.12.2014	
1430	MEDA_APTX02217768-770	Email regarding Monthly Flash Report, 12.17.2013	
1431	MEDA_APTX02217917-919	Email regarding Weekly Flash Report, 10.07.2013	
1432	MEDA_APTX02218426-428	Email regarding Weekly Flash Report, 12.03.2012	
1433	MEDA_APTX02218907-910	Email regarding Weekly Flash Report, 08.01.2014	
1434	MEDA_APTX02219052-054	Email regarding Weekly Flash Report, 03.28.2014	
1435	MEDA_APTX02219272-273	Email regarding Monthly TRx Flash Report, 03.17.2015	
1436	MEDA_APTX02219672	Email regarding FW: Weekly Rx Trend, 09.19.2014	U, F, H
1437	MEDA_APTX02233489	Email regarding Weekly Rx Trend, 09.26.2014	
1438	MEDA_APTX02233751-753	Email regarding Weekly Flash Report, 07.01.2013	
1439	MEDA_APTX02233978-980	Email regarding Weekly Flash Report, 12.02.2013	
1440	MEDA_APTX02234122-124	Email regarding Weekly Flash Report, 09.16.2013	
1441	MEDA_APTX02234263-265	Email regarding Weekly Flash Report, 03.18.2013	
1442	MEDA_APTX02234474-475	Email regarding Monthly Nasal Flash, 03.11.2014	
1443	MEDA_APTX02234544-546	Email regarding Weekly Flash Report, 07.15.2013	
1444	MEDA_APTX02234755-757	Email regarding Weekly Flash Report, 01.07.2013	
1445	MEDA_APTX02234904-906	Email regarding Weekly Flash Report, 03.14.2014	
1446	MEDA_APTX02235046-048	Email regarding Weekly Flash Report, 01.20.2014	
1447	MEDA_APTX02235117-119	Email regarding Weekly Flash Report, 08.12.2013	
1448	MEDA_APTX02235267-269	Email regarding Weekly Flash Report, 12.10.2012	
1449	MEDA_APTX02235338-340	Email regarding Weekly Flash Report, 09.24.2012	
1450	MEDA_APTX02235559-561	Email regarding Weekly Flash Report, 09.03.2013	
1451	MEDA_APTX02235630-632	Email regarding Weekly Flash Report, 08.26.2013	
1452	MEDA_APTX02235701-703	Email regarding Monthly Flash Report, 01.15.2013	
1453	MEDA_APTX02235844-846	Email regarding Weekly Flash Report, 07.08.2013	
1454	MEDA_APTX02235985-987	Email regarding Weekly Flash Report, 10.28.2013	
1455	MEDA_APTX02236056-058	Email regarding FW: Weekly Flash Report, 03.12.2013	
1456	MEDA_APTX02236127-129	Email regarding Monthly Flash Report, 02.12.2013	
1457	MEDA_APTX02236200-202	Email regarding Monthly Flash Report, 11.12.2013	
1458	MEDA_APTX02236274-276	Email regarding Weekly Flash Report, 01.21.2013	

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1459	MEDA_APTX02236345-347	Email regarding Weekly Flash Report, 10.01.2012	
1460	MEDA_APTX02236557-559	Email regarding Weekly Flash Report, 05.27.2013	
1461	MEDA_APTX02236850-852	Email regarding Weekly Flash Report, 12.23.2013	
1462	MEDA_APTX02237067-069	Email regarding Weekly Flash Report, 11.06.2012	
1463	MEDA_APTX02237138-140	Email regarding Weekly Flash Report, 11.04.2013	
1464	MEDA_APTX02237209-211	Email regarding Weekly Flash Report, 01.13.2014	
1465	MEDA_APTX02237280-282	Email regarding Weekly Flash Report, 10.29.2012	
1466	MEDA_APTX02237351-353	Email regarding FW: Weekly Flash Report, 09.19.2013	
1467	MEDA_APTX02237562-564	Email regarding Weekly Flash Report, 04.15.2013	
1468	MEDA_APTX02237710-712	Email regarding Weekly Flash Report, 03.21.2014	
1469	MEDA_APTX02237781-783	Email regarding Monthly Flash Report, 10.15.2013	
1470	MEDA_APTX02237852-854	Email regarding Weekly Flash Report, 06.13.2013	
1471	MEDA_APTX02238073-075	Email regarding Weekly Flash Report, 07.22.2013	
1472	MEDA_APTX02239016-018	Email regarding Weekly Flash Report, 06.03.2013	
1473	MEDA_APTX02239440-442	Email regarding Weekly Flash Report, 11.25.2013	
1474	MEDA_APTX02239582-584	Email regarding Weekly Flash Report, 03.04.2013	
1475	MEDA_APTX02239653-655	Email regarding Weekly Flash Report, 04.01.2013	
1476	MEDA_APTX02239864-866	Email regarding Monthly Flash Report, 02.07.2014	
1477	MEDA_APTX02239945-947	Email regarding Monthly Flash Report, 07.16.2013	
1478	MEDA_APTX02479967-972	Email regarding FW: Weekly Flash Report, 06.26.2014	
1479	MEDA_APTX02483749-752	Email regarding FW: Weekly Flash Report, 06.06.2014	
1480	MEDA_APTX02487009-011	Email regarding RE: Weekly Flash Report, 10.03.2014	U, F, H
1481	MEDA_APTX02784252-253	Press Release: Meda and Cipla sue Apotex to enforce Dymista patents, 12.03.2014	R
1482	MEDA_APTX02813511-525	MedPointe Astelin Business Cases	R, F
1483	MEDA_APTX03435166-264	Meda Weekly development PowerPoint	F
1484	MEDA_APTX03435540-541	Email regarding Dymista market high share at levels not seen since July of 2013, 02.10.2014.	F, H
1485	MEDA_APTX03436216	Email regarding Weekly TRx Flash Report, 02.11.2013	
1486	MEDA_APTX03436242-243	Email regarding Weekly TRx Flash Report, 01.14.2013	
1487	MEDA_APTX03436248	Email regarding Weekly TRx Flash Report, 12.26.2012	
1488	MEDA_APTX03445121-256	Meda Brand Plan Kick-off Meeting PowerPoint	U

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1489	MEDA_APTX03478963-988	Transmittal of Advertisements and Promotional Labeling for Drugs and Biologics for Human Use, Dymista, 11.26.2012	R, U, F, H
1490	CIP_DYM_00039923-40021	Cipla Analytical Method Validation for Traces of Azelastine hydrochloride and Fluticasone propionate in Rinse and Swab, Protocol No.: MV/A1661/R,S/01	R, U, F
1491	MEDA_APTX01777416-418	Email regarding Elestrin (FW: Weekly Flash Report), 06.13.2014	R
1492	MEDA_APTX00234291-608	eCRF Audit Trail History, 07.26.2013	R, U, F
1493	MEDA_APTX00030410-412	Email regarding Meda Weekly Flash Report, 05.23.2014	
1494	MEDA_APTX00030615-616	Email correspondence from Stewart Loesch re: weekly Rx trend, 3.13.2005	R, F, H
1495	MEDA_APTX00031269-270	Email correspondence from Broadcast re: Monthly nasal flash, 5.12.2015	
1496	MEDA_APTX00031452-454	Email correspondence from Broadcast re: Weekly flash report, 4.25.2014	
1497	MEDA_APTX00031827-834	Dymista Market Performance for week ending 5.09.2014	U, F, H
1498	MEDA_APTX00032129-130	Email correspondence from Broadcast re: Monthly nasal flash, 11.11.2014	
1499	MEDA_APTX00033043-044	Email correspondence from Robert Sheridan re: Weekly Rx trend, 4.03.2015	U, F, H
1500	MEDA_APTX00033141-143	Email correspondence from Broadcast re: Weekly flash report, 6.13.2014	
1501	MEDA_APTX00033403-405	Email correspondence from Broadcast re: Weekly flash report, 7.11.2014	
1502	MEDA_APTX00033608	Email correspondence from Stuart, Loesch re: Weekly Rx trend, 01.23.2015	
1503	MEDA_APTX00035110-111	Email correspondence from Broadcast re: Monthly nasal flash, 9.16.2014	
1504	MEDA_APTX00035309-310	Email correspondence from Broadcast re: Monthly nasal flash, 2.17.2015	
1505	MEDA_APTX00035388	Email correspondence from John Karafildis re: Weekly Rx trend, 3.27.2015	R, U, F, H
1506	MEDA_APTX00035777-778	Email correspondence from Stuart Loesch re: Weekly TRx flash report, 10.17.2014	R, U, F
1507	MEDA_APTX00036347-348	Email correspondence from Jeffery Hostler re: Monthly TRx flash report, 3.17.2015	
1508	MEDA_APTX00037055-062	Dymista Market Performance for week ending 6.6.2014	U, F, H
1509	MEDA_APTX00037711-713	Email correspondence from Stuart Loesch re: Weekly flash report, 4.18.2014	
1510	MEDA_APTX00037951-953	Email correspondence from Broadcast re: Weekly flash report, 7.04.2014	
1511	MEDA_APTX00038497-499	Email correspondence from Broadcast re: Monthly flash report, 8.12.2014	
1512	MEDA_APTX01527370	Email correspondence from Broadcast re: Weekly Rx trend, 2.20.2015	

PTX	Bates Range	Document Description	Defendants' Objections
1513	MEDA_APTX01527791	Email correspondence from Broadcast re: Weekly Rx trend, 4.10.2015	
1514	MEDA_APTX01527931	Email correspondence from Broadcast re: Weekly Rx trend, 12.19.2014	
1515	MEDA_APTX01528039	Email correspondence from Broadcast re: Weekly Rx trend, 5.08.2015	
1516	MEDA_APTX01528222	Email correspondence from Broadcast re: Weekly Rx trend, 2.06.2015	
1517	MEDA_APTX01531077	Email correspondence from Broadcast re: Weekly Rx trend, 6.19.2015	
1518	MEDA_APTX01531282	Email correspondence from Broadcast re: Weekly Rx trend, 7.10.2015	
1519	MEDA_APTX04531635	Email correspondence from Broadcast re: Weekly Rx trend, 1.09.2015	
1520	MEDA_APTX01532345-346	Email correspondence from Greg Weinstein re: Weekly Rx trend- some more tips on how to interpret data, 09.12.2014	
1521	MEDA_APTX01532478	Email correspondence from Broadcast re: Weekly Rx trend, 11.07.2014	
1522	MEDA_APTX01536213	Email correspondence from Broadcast re: Weekly Rx trend, 1.30.2015	
1523	MEDA_APTX01541896	Email correspondence from Broadcast re: Weekly Rx trend, 5.29.2015	
1524	MEDA_APTX01542628	Email correspondence from Broadcast re: Weekly Rx trend, 11.28.2014	
1525	MEDA_APTX01615761	Email correspondence from Broadcast re: Weekly flash report, 3.07.2014	
1526	MEDA_APTX01616674-676	Email correspondence from Alexander D'Addio re: Weekly flash report, 10.21.2013	
1527	MEDA_APTX01616686-688	Email correspondence from Broadcast re: Weekly flash report, 11.18.2013	
1528	MEDA_APTX01626795-798	Email correspondence from Nancy Ruiz re: Weekly flash report, 3.01.2014	
1529	MEDA_APTX01644282-283	Email correspondence from Alexander D'Addio re: Dymista, Words do matter, 7.23.2012	F, H
1530	MEDA_APTX01655010-012	Email correspondence from Broadcast re: Weekly flash report, 12.17.2012	
1531	MEDA_APTX01656029-031	Email correspondence from Broadcast re: Weekly flash report, 10.22.2012	
1532	MEDA_APTX01656601-606	Presentation to Meda Core Sales Team re: How are we doing, dated 11.5.2012	
1533	MEDA_APTX01661556-558	Email correspondence from Broadcast re: Weekly flash report, 10.8.2012	
1534	MEDA_APTX01680723-724	Email correspondence from Sam Patel re: Meda U.S. Medical and Scientific Poster Presentations at AAAI(DC) and WIP (NYC), 3.11.2009	R
1535	MEDA_APTX01669715-717	Email correspondence from Broadcast re: Weekly flash report, 11.12.2012	
1536	MEDA_APTX01764926-927	Email correspondence from Al Triunfo re: message to field, 6.11.2012	F, H

PTX	Bates Range	Document Description	Defendants' Objections
1537	MEDA_APTX01765137-140	Email correspondence from Bryan Roecklein re: Monthly flash report, 3.12.2013	U, F, H
1538	MEDA_APTX01765153-155	Email correspondence from Donna Dell re: More recent trends to support the prior thoughts for PreferaOB & PreferaOB DHA, 9.24.2012	
1539	MEDA_APTX01766444-447	Email correspondence from Sherri Kamp to Bryan Roecklein re: what job description do you have, 11.14.2012	R
1540	MEDA_APTX01766796-797	Email correspondence from Maria Carell re: Weekly TRx flash report, 3.25.2013	
1541	MEDA_APTX01767302-309	Dymista Steering Committee Meeting, 10.19.2012	U
1542	MEDA_APTX01768008-011	Email correspondence from Nancy O'Connor re: Astepro monthly flash report, 8.15.2012	F, H
1543	MEDA_APTX01768275-277	Email correspondence from Bryan Roecklein re: Monthly flash report- Chandra's test, 4.16.2013	F, H
1544	MEDA_APTX01768588-590	Email correspondence from Bryan Roecklein to Al Triunfo re: how are we doing, 10.26.2012	U, F, H
1545	MEDA_APTX01768649-725	Dymista update, January 2013	U
1546	MEDA_APTX01768794-796	Email correspondence from Bryan Roecklien to Maria Carell re: Weekly TRx flash report, 01.02.2013	U
1547	MEDA_APTX01770095-107	MEDA- Take the Lead presentation	
1548	MEDA_APTX01772879	Email correspondence from Micaela Gannon re: Direction on EDLUAR final sales calls, 11.29.2012	
1549	MEDA_APTX01774318-325	Dymista- Brand awareness and message recall presentation	F, H
1550	MEDA_APTX01776576-577	Email correspondence from Bryan Roecklin to Jeffrey Hostler re: Monthly nasal flash, 2.11.2014	
1551	MEDA_APTX01779228-229	Email correspondence from Broadcast re: Monthly nasal flash, 6.16.2015	
1552	MEDA_APTX01779302-303	Email correspondence from Broadcast re: Monthly nasal flash, 5.12.2015	
1553	MEDA_APTX01779304-305	Email correspondence from Broadcast re: Monthly nasal flash, 7.14.2015	
1554	MEDA_APTX01779339-340	Email correspondence from Broadcast re: Monthly nasal flash, 4.14.2015	
1555	MEDA_APTX01807973	Email correspondence from Cindy Yayac to Brian Lawrence re: Dymista 74 day letter, 06.13.2011	R
1556	MEDA_APTX01779962-963	Email correspondence from Broadcast re: Monthly nasal flash, 1.14.2014	
1557	MEDA_APTX01815782-788	Medpointe- LRP Scenario Planning presentation	R
1558	MEDA_APTX01815789	Email correspondence from Cheryl Siddell re: Monthly market review charts, 8.01.2006	R, F, I

PTX	Bates Range	Document Description	Defendants' Objections
1559	MEDA_APTX01815797	Email correspondence from Cheryl Siddell re: WSAPRX, 10.10.2006	R, F, I
1560	MEDA_APTX01865709-711	Email correspondence from Phillip Reveal to Lorna Bremer re: Weekly flash report, 8.12.2014	
1561	MEDA_APTX01871168	Email correspondence from Broadcast re: Weekly Rx Trend, 4.24.2015	
1562	MEDA_APTX01871169	Email correspondence from Broadcast re: Weekly Rx Trend, 5.01.2015	
1563	MEDA_APTX01871302	Email correspondence from Broadcast re: Weekly Rx Trend, 7.03.2015	
1564	MEDA_APTX01871303	Email correspondence from Broadcast re: Weekly Rx Trend, 7.10.2015	
1565	MEDA_APTX01871717	Email correspondence from Broadcast re: Weekly Rx Trend, 6.12.2015	
1566	MEDA_APTX01871743	Email correspondence from Broadcast re: Weekly Rx Trend, 5.15.2015	
1567	MEDA_APTX01871747	Email correspondence from Broadcast re: Weekly Rx Trend, 6.05.2015	
1568	MEDA_APTX01871748	Email correspondence from Broadcast re: Weekly Rx Trend, 6.26.2015	
1569	MEDA_APTX01871749	Email correspondence from Broadcast re: Weekly Rx Trend, 7.17.2015	
1570	MEDA_APTX01872375	Email correspondence from Broadcast re: Weekly Rx Trend, 4.10.2015	
1571	MEDA_APTX01872376	Email correspondence from Broadcast re: Weekly Rx Trend, 4.17.2015	
1572	MEDA_APTX01872377	Email correspondence from Broadcast re: Weekly Rx Trend, 5.22.2015	
1573	MEDA_APTX01873614-616	Email correspondence from Broadcast re: Weekly flash report, 1.31.2014	
1574	MEDA_APTX01876703-705	Email correspondence from Broadcast re: Weekly flash report, 8.05.2013	
1575	MEDA_APTX01876774-776	Email correspondence from Broadcast re: Weekly flash report, 1.28.2013	
1576	MEDA_APTX01881418-420	Email correspondence from Broadcast re: Monthly Flash report, 5.14.2013	
1577	MEDA_APTX01899517-518	Email correspondence from Al Triunfo re: Dymista Update and NSM closing video, 10.05.2012	U, F, H
1578	MEDA_APTX01921748-749	Memorandum from Jeff Hofmeister re: CVS Caremark Formulary Decisions-2015, 8.01.2014	
1579	MEDA_APTX01912188-190	Email correspondence from Dennis Fuge to Micaela Gannon re: EDULAR Hits 1,000 per week, 10.15.2012	R
1580	MEDA_APTX01919695-697	Email correspondence from Broadcast re: Weekly flash report, 8.15.2014	
1581	MEDA_APTX01922822-825	Email correspondence from Joseph Evans re: Weekly flash report, 6.20.2014	F
1582	MEDA_APTX01934589	Email correspondence from Broadcast re: Weekly RX Trend, 10.31.2014	
1583	MEDA_APTX01936214	Email correspondence from Broadcast re: Weekly RX Trend, 12.26.2014	
1584	MEDA_APTX01939604	Email correspondence from Broadcast re: Weekly RX Trend, 10.24.2012	

PTX	Bates Range	Document Description	Defendants' Objections
1585	MEDA_APTX01959790-793	Email correspondence from Michael Delmage re: Weekly Flash Report, 4.11.2014	
1586	MEDA_APTX01959935	Email correspondence from Gregg Weinstein to Joseph Osborne re: Weekly RX Trend-some more tips on how to interpret the data, 9.12.2014	
1587	MEDA_APTX01960741-758	MEDA- Incentive Compensation Plan- Respiratory Sales Force, 2014 Q3	
1588	MEDA_APTX01962027-031	Email correspondence from Carter Wallace to Gregg Weinstein re: Pathway Analysis for the Carolinas, 02.14.2013	
1589	MEDA_APTX01962202-203	Email correspondence from Steve Uchrin re: Weekly TRx flash report, 12.12.2014	
1590	MEDA_APTX01962582	Email correspondence from Steve Uchrin re: TEST WEEKLY TRx Flash, 12.04.2012	R
1591	MEDA_APTX01963299-305	MEDA presentation re: Aerospan Target Estimates	R
1592	MEDA_APTX01963337-339	Email correspondence from Broadcast re: Weekly flash report, 10.14.2013	
1593	MEDA_APTX01964167-169	Email correspondence from Broadcast re: Weekly flash report, 11.11.2013	
1594	MEDA_APTX01964471-473	Email correspondence from Broadcast re: Monthly flash report, 11.13.2012	
1595	MEDA_APTX01964543-435	Email correspondence from Broadcast re: Weekly Flash Report, 11.19.2012	
1596	MEDA_APTX01964900-902	Email correspondence from Broadcast re: Weekly Flash Report, 05.06.2013	
1597	MEDA_APTX01964971	Email correspondence from Sandra Morales re: Q4 Phase I Incentive Summary, 10.24.2012	
1598	MEDA_APTX01966099	Email correspondence from Broadcast re: Weekly flash report, 2.21.2014	
1599	MEDA_APTX01966278-280	Email correspondence from Rick Mcelheny to Gregg Weinstein re: Can you take a look, 12.23.2010	U, F, H
1600	MEDA_APTX01966431-433	Email correspondence from Gregg Weinstein to Donna Dell re: Weekly flash report, 4.15.2013	
1601	MEDA_APTX01969378-379	Email correspondence from Mathew Farris re: Dymista performance, 10.24.2012	R
1602	MEDA_APTX01969380	Email correspondence from Thomas Altobelli re: Dymista performance 9.13.13, 10.07.2013	R

PTX	Bates Range	Document Description	Defendants' Objections
1603	MEDA_APTX01969703	Email correspondence from Larry Gever re: One request for Dymista Dossier, 05.28.2012	R
1604	MEDA_APTX01969704-705	Email correspondence from Gregg Weinstein re: How Used Data, 08.16.2013	R
1605	MEDA_APTX01970133-134	Email correspondence from Steve Uchrin re: Monthly Nasal Flash, 09.17.2013	
1606	MEDA_APTX01971328-329	Email correspondence from Keeshia Muhammad re: Monthly Nasal Flash, 11.13.2013	
1607	MEDA_APTX01972126-128	Email correspondence from Gregg Weinstein re: Weekly Flash Report, 07.18.2014	R
1608	MEDA_APTX01972174-181	Dymista Market Performance, Week Ending 10.04.13	R, U, F, H
1609	MEDA_APTX01972262	Email correspondence from Lawrence Levey re: Weekly Rx Trend, 10.10.2014	
1610	MEDA_APTX01972657-659	Email correspondence from Broadcast re: Weekly Flash Report, 06.10.2013	
1611		Intentionally Left Blank	
1612	MEDA_APTX01815781	MedPointe Pharmaceuticals, Astelin Forecast, Plan - Scenario, January 2005 - December 2007	R
1613	MEDA_APTX01972253	IMS Health, Integrated Promotional Services, Client Factored Numbers	F
1614	MEDA_APTX00034326	Flash TRxs Quarterly: January - March 2015	
1615	MEDA_APTX01963907	Nasal Flash TRxs for the Month of July 2013	
1616	MEDA_APTX01969701	Operations Management	R
1617	MEDA_APTX01969736	Flash TRxs Quarterly: July - September 2012	
1618	MEDA_APTX01970236	Flash TRxs for the week ended on 11.16.2012 (Sat - Fri)	
1619	MEDA_APTX01970943	Flash TRxs for the week ended on 03.29.2013 (Sat - Fri)	
1620	MEDA_APTX00030753	Dymista Sales - updated through August 6, 2014	
1621	MEDA_APTX00030769	Dymista Sales - updated through September 12, 2014	
1622	MEDA_APTX00030861	Dymista Sales - updated through September 19, 2014	
1623	MEDA_APTX00031001	Dymista Sales - updated through November 5, 2014	
1624	MEDA_APTX00031165	Dymista Sales - updated through June 2, 2014	
1625	MEDA_APTX00031748	Dymista Sales - updated through June 16, 2014	
1626	MEDA_APTX00032493	Dymista Sales - updated through April 23, 2014	
1627	MEDA_APTX00032666	Dymista Sales - updated through March 28, 2014	
1628	MEDA_APTX00036832	Nasal Spray and Dymista TRxs - Sales, January 2013 - December 2014	

PTX	Bates Range	Document Description	Defendants' Objections
1629	MEDA_APTX01656567	Meda Pharm. Aerospan, March 2015 - December 2017	R
1630	MEDA_APTX01765908	Dymista Sales - updated through December 11, 2013	
1631	MEDA_APTX01765918	Dymista Launch Sales - updated through January 9, 2013	
1632	MEDA_APTX01766047	Dymista Launch Sales - Cumulative Sales	
1633	MEDA_APTX01767391	Dymista Rx Revenue	
1634	MEDA_APTX01769379	Dymista Launch Sales - updated through July 16, 2013	
1635	MEDA_APTX01778397	Dymista Launch Sales - updated through December 19, 2012	
1636	MEDA_APTX01778401	Dymista Sales - updated through October 8, 2013	
1637	MEDA_APTX01778605	Dymista Sales - updated through January 14, 2014	
1638	MEDA_APTX01778693	Dymista Sales - updated through March 5, 2014	
1639	MEDA_APTX01778946	Dymista Launch Sales - updated through June 6, 2013	
1640	MEDA_APTX01816057	Dymista Only and AG Model Sales	R, F
1641	MEDA_APTX01960739	Dymista Market Share Full Market, 09.23.2011 - 10.25.2013	
1642	MEDA_APTX01960760	Dymista Market Share Full Market, 09.23.2011 - 12.06.2013	
1643	MEDA_APTX01964756	Territory (Cincinnati, OH) Spreadsheet	R
1644	MEDA_APTX01969168	Flash TRxs for the Month of July 2013	
1645	MEDA_APTX01969377	Dymista Market Share Full Market, 09.23.2011 - 01.11.2013	
1646	MEDA_APTX01969381	Dymista Market Share Full Market, 09.23.2011 - 01.11.2013	
1647	MEDA_APTX01969702	Meda Open Cases (as of noon 02.05.2013)	R, F, H
1648	MEDA_APTX00036832	Nasal Spray and Dymista TRx Sales, January 2013 - December 2014	
1649	MEDA_APTX01663423	Meda Pharm. Dymista Family Forecast, January 2013 - December 2015	
1650	APOTEX_AZFL 0133049-052	[redacted]	R
1651	APOTEX_AZFL 0133698-761	PWC - India Pharma Inc.: Capitalising on India's Growth Potential	
1652	APOTEX_AZFL 0134728-732	Guha, Rahul, et al., The Economics of Commercial Success in Pharmaceutical Patent Litigation	
1653	MEDA_APTX00035037-044	Meda Dymista Alternate Discounting Strategies for Improved Access	
1654	MEDA_APTX02483660-664	Dymista briefing document	
1655	MEDA_APTX02486009-075	Dymista Marketing Plan 2015, PPT 1	
1656	MEDA_APTX03501812-886	Dymista Marketing Plan 2015, PPT 2	
1657	MEDA_APTX03506112-283	MedPointe Laboratory Notebook No. 1044 - All Pages	
1658	APOTEX_AZFL 0133410-412	Dymista Relief Overview - Safety Information	R
1659	CIP_DYM_00472121	Indian IMS Mometasone, 05.11-05.12	

PTX	Bates Range	Document Description	Defendants' Objections
1660	N/A	Bousquet, J. et al. "Dymista: a new level of allergic rhinitis symptom control." *Key Opinions in Medicine*, 2014. www.keyopinions.info	R, U, F, H, N
1661	N/A	Bousquet, J. et al. "Advances in pharmacotherapy for the treatment of allergic rhinitis; MP29-02 (a novel formulation of azelastine hydrochloride and fluticasone propionate in an advanced delivery system) fills the gaps." *Expert Opin. Pharmacother.*, 16(6): 1-16; 2015.	R, U, F, H, N
1662	N/A	Peters, Stephen et al., "Late Phase Allergic Reactions," *in Allergy: Principles and Practice*, 342-355 (E. Middleton, Jr., C. Reed, E. Ellis, N. Adkinson, J. Yunginger, and W. Busse eds., vol 1., 5th ed. 1998.)	N

APOTEX RESERVES THE RIGHT TO OBJECT ON ADDITIONAL GROUNDS NOT MENTIONED HERE IN ITS MOTIONS IN LIMINE

Exhibit 11

The following abbreviations are used for Plaintiffs' objections to Apotex's Trial Exhibit List.

Abbreviation	Objection	Applicable Rule(s)
A	Requires authentication or identification	FRE 901
B	Best evidence rule	FRE 1001-1002
C	Improper compilation of separate documents	FRE 403, 901
D	Improper designation (designation is neither a question or testimony)	FRE 401 ,402
E	Improper examination (vague, ambiguous, loaded, leading, etc.)	FRE 402, 403, 602, 611
F	Lack of foundation/personal knowledge (including calls for speculation)	FRE 402, 403, 602, 611
H	Hearsay if offered for the truth of the matter asserted	FRE 801, 802
I	Incomplete document or testimony	FRE 403
IL/FL	Illegible/foreign language	FRE 1002
M	Offer or discussion for settlement or compromise	FRE 408
MD	Mischaracterizing or misleading description of underlying document.	
N	Exhibit not produced in discovery	FRE 403
O	Improper opinion testimony	FRE 701-704
P	Privileged or attorney work product	FRE 501, 502
R	Lack of relevance	FRE 401, 402
S	Summary requiring underlying data or information	FRE 1006
T	Beyond the scope of the Rule 30(b)(6) topic for which a witness has been designated	FRE 602, FRCP 30(b)(6)
U	Unduly prejudicial, wasteful, confusing, misleading or cumulative	FRE 403

Plaintiffs reserve the right to make additional objections to any exhibit, including objections as to foundation, depending on the witness through which Apotex seeks to introduce the exhibit.

Def. No.	Beg Bates	End Bates	Description of Exhibits' and Witnesses	Date	Plaintiffs' Objections
DXT-001	ACCETTA 000001	ACCETTA 000001	Dr. Accetta's Examination Notes	4/24/2001	H, U, F, I, A, S, O
DXT-002	ACCETTA 000002	ACCETTA 000002	Dr. Accetta's Examination Notes	3/26/2001	H, U, F, I, A, S, O
DXT-003	ACCETTA 000004	ACCETTA 000004	Dr. Accetta's Examination Notes	7/25/2000	H, U, F, I, A, S, O
DXT-004	ACCETTA 000005	ACCETTA 000005	Dr. Accetta's Examination Notes	12/18/2000	H, U, F, I, A, S, O
DXT-005	ACCETTA 000006	ACCETTA 000006	Dr. Accetta's Examination Notes	4/28/1997	H, U, F, I, A, S, O
DXT-006	ACCETTA 000007	ACCETTA 000007	Dr. Accetta's Examination Notes	3/6/2000	H, U, F, I, A, S, O
DXT-007	ACCETTA 000008	ACCETTA 000008	Dr. Accetta's Examination Notes	4/11/2002	H, U, F, I, A, S, O
DXT-008	ACCETTA 000009	ACCETTA 000009	Dr. Accetta's Examination Notes	2/20/2002	H, U, F, I, A, S, O
DXT-009	ACCETTA 000010	ACCETTA 000010	Dr. Accetta's Examination Notes	3/24/1999	H, U, F, I, A, S, O
DXT-010	ACCETTA 000012	ACCETTA 000012	Dr. Accetta's Examination Notes	5/30/2002	H, U, F, I, A, S, O
DXT-011	ACCETTA 000013	ACCETTA 000013	Dr. Accetta's Examination Notes	8/31/1998	H, U, F, I, A, S, O
DXT-012	APOTEX_AZFL 0052951	APOTEX_AZFL 0052960	European Patent Application No. 0 780 127 (1997)	6/25/1997	H, R, U
DXT-013	APOTEX_AZFL 0053117	APOTEX_AZFL 0053129	GB 2389530	12/17/2003	I, R, U, H, F
DXT-014	APOTEX_AZFL 0053370	APOTEX_AZFL 0053376	U.S. Application Publication No. 2004/0136918	7/15/2004	H, R, U
DXT-015	APOTEX_AZFL 0053415	APOTEX_AZFL 0053417	U.S. Patent Application Publication No. 2004/0242638 ("Yanni")		H, R, U
DXT-016	APOTEX_AZFL 0054360	APOTEX_AZFL 0054365	U.S. Patent No. 5,164,194 (Hettche)	11/17/1992	H, R, U
DXT-017	APOTEX_AZFL 0054831	APOTEX_AZFL 0054847	US Patent No. 6881423 ("Dohi")		H, R, U
DXT-018	APOTEX_AZFL 0055357	APOTEX_AZFL 0055410	WO9731626 ("Dohi")		H, R, U, I, A, IL/FL, F
DXT-019	APOTEX_AZFL 0055458	APOTEX_AZFL 0055475	WO 1997/046243	12/11/1997	H, R, U
DXT-020	APOTEX_AZFL 0059010	APOTEX_AZFL 0059024	PCT Publication No. WO 97/01337 ("Helzner")		H, R, U
DXT-021	APOTEX_AZFL 0059025	APOTEX_AZFL 0059037	WO 98/48839	11/5/1998	H, R, U
DXT-022	APOTEX_AZFL 0059081	APOTEX_AZFL 0059097	Astelin Nasal Spray Approval Letter, Center for Drug Evaluation and Research, Application No. 20-114/S006	9/15/2000	H, R, U
DXT-023	APOTEX_AZFL 0059181	APOTEX_AZFL 0059242	Advair Diskus 100/50 Label Highlights of Prescribing Information, GlaxoSmithKline, Rev. Apr.2008	04/00/2008	H, R, U, F, I
DXT-024	APOTEX_AZFL 0059261	APOTEX_AZFL 0059283	Akerlund, Anders, et al., "Clinical trial design, nasal allergen challenge models, and considerations of relevance to pediatrics, nasal polyposis, and different classes of medication," J. Allergy Clin. Immunol., Mar. 2005, vol. 115, No. 3, pp. S460-S482	03/00/2005	H, R, U
DXT-025	APOTEX_AZFL 0059647	APOTEX_AZFL 0059665	Berge, S., et al., "Pharmaceutical Salts," Journal of Pharmaceutical Sciences, vol. 66, No. 1, Jan. 1977, pp. 1-19	01/00/1977	H, R, U, F

DXT-026	APOTEX_AZFL 0059666	APOTEX_AZFL 0059672	Berger, W., et al., Double-blind Trials of Azelastine Nasal Spray Monotherapy Versus Combination Therapy with Loratadine Tablets and Beclomethasone Nasal Spray in Patients with Seasonal Allergic Rhinits, Vol. 82 (June 1999)	06/00/1999	H, R, U
DXT-027	APOTEX_AZFL 0059681	APOTEX_AZFL 0059684	Block, J., et al., "Inorganic Medicinal and Pharmaceutical Chemistry," 1986, cover, publication, and preface pages plus p. 100, Indian Edition, Varghese Publishing House, Bombay, India	1986	H, U, R, I
DXT-028	APOTEX_AZFL 0059688	APOTEX_AZFL 0059694	Brooks, et al, Spectrum of seasonal allergic rhinitis symptom relief with topical corticoid and oral antihistamine given singly or in combination," American Journal of Rhinology, Vol. 10, No. 3, pp. 193-199 (1996)	1996	H, R, U
DXT-029	APOTEX_AZFL 0059695	APOTEX_AZFL 0059713	Bryson, et al., "Intranasal fluticasone propionate: a review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in allergic rhinitis," Drugs, 1992, vol. 43, No. 5, pp. 760-775	1992	H, R, U
DXT-030	APOTEX_AZFL 0131985	APOTEX_AZFL 0131993	Database Medline Online! US National Library of Medicine (NLM), Bethesda, MD, US: 2000 Portmann D et al: Acceptability of local treatment of allergic rhinitis with a combination of a corticoid (beclomethasone) and an antihistaminic (azelastine), Revue de Laryngologie Otologie Rhinologie: European Review of E.N.T., 2000, vol. 121, No. 4, pp. 273-279, XP-002252974.	2000	H, R, U, I, A, F, B, S
DXT-031	APOTEX_AZFL 0060069	APOTEX_AZFL 0060077	Di Lorenzo, G., et al., "Randomized Placebo-controlled Trial Comparing fluticasone aqueous nasal spray in mono-therapy, fluticasone plus cetirizine, fluticasone plus montelukast and cetirizine plus montelukast for seasonal allergic rhinitis," Clin. Exp. Allergy, 2004, vol. 34, pp.259-267, Blackwell Publishing Ltd.	2004	H, U, I, R

DXT-032	APOTEX_AZFL 0060084	APOTEX_AZFL 0060093	Drouin, M., et al., Adding Loratadine to Topical Nasal Steroid Therapy Improves Moderately Severe Seasonal Allergic Rhinoconjunctivitis, Advances in Therapy Vol. 12, No. 6, pp. 340-349 (November/December 1995)	11/1995-12/1995	H, R, U
DXT-033	APOTEX_AZFL 0060185	APOTEX_AZFL 0060207	Flonase Final Printed Labeling, Center for Drug Evaluation and Research, Application No. 20-121/S009 (1998)	1998	H, C, U, R
DXT-034	APOTEX_AZFL 0060307	APOTEX_AZFL 0060317	Galant, et al., Clinical Prescribing of Allergic Rhinitis Medication in the Preschool and Young School-Age Child, BioDrugs Vol. 15 No. 7. pgs. 453-463 (2001)	2001	H, R, U
DXT-035	APOTEX_AZFL 0060362	APOTEX_AZFL 0060366	Harding, "The human pharmacology of fluticasone propionate," Respiratory Medicine, 1990, vol. 84, Suppl. A, pp. 25-29.	1990	H, P, R, D
DXT-036	APOTEX_AZFL 0060367	APOTEX_AZFL 0060390	Hodges, N. A.,et al., "Antimicrobial Preservative Efficacy Testing," Handbook of Microbiological Quality Control, Pharmaceuticals and Medical Devices, 2000, p. 168-189 plus cover page and publication page, Rosamund M. Baird, et al., Editor, Taylor & Francis Publisher, USA and Canada.	2000	H, U, R, I, F
DXT-037	APOTEX_AZFL 0060391	APOTEX_AZFL 0060398	Hodges, N. A., et al., "Preservative Efficacy Tests in Formulated Nasal Products: Reproducibility and Factors Affecting Preservative Activity," J. Pharm. Pharmacol., 1996, vol. 48, pp. 1237-1242.	1996	H, R, U, F
DXT-038	APOTEX_AZFL 0060403	APOTEX_AZFL 0060408	Howarth, P. H., "A comparison of the anti-inflammatory properties of intranasal corticosteroids and antihistamines in allergic rhinitis," Allergy, Vol. 62, pp. 6-11, (Munksgaard 2000)	2000	H, R, U

DXT-039	APOTEX_AZFL 0060450	APOTEX_AZFL 0060455	Johnson, Malcolm, "Development of fluticasone propionate and comparison with other inhaled corticosteroids," J. Allergy Clin. Immunol., Apr. 1998, vol. 101, No. 4, Part 2, pp. S434-S439.	04/00/1998	H, R, U, F
DXT-040	APOTEX_AZFL 0060456	APOTEX_AZFL 0060462	Juniper, E F., et al., "Comparison of beclomethasone dipropionate aqueous nasal spray, astemizone, and the combination in the prophylactic treatment of ragweed pollen-induced rhinoconjunctivitis," Journal of Allergy and Clinical Immunology, Vol. 83, No. 3, Cover page, Publications page, pp. 627-633 (Mar. 1989)	03/00/1989	H, R, U
DXT-041	APOTEX_AZFL 0060518	APOTEX_AZFL 0060525	Laforce, et al., "Fluticasone propionate: an effective alternative treatment for seasonal allergic rhinitis in adults and adolescents," J. Fam. Pract., 1994, vol. 38, No. 2, pp. 145-152.	1994	H, R, U
DXT-042	APOTEX_AZFL 0060544	APOTEX_AZFL 0060547	Lieberman, P., Treatment Update: Nonallergic Rhinitis, Allergy and Asthma Procedure Vol. 22, No. 4, pp. 199-202 (July-August 2001)	7/2001-8/2001	H, R, U
DXT-043	APOTEX_AZFL 0060744	APOTEX_AZFL 0060767	McNeely, Wendy, et al., "Intranasal Azelastine A Review of its Efficacy in the Management of Allergic Rhinitis," Drugs, 1998, vol. 56, No. 1, pp. 91-114.	1998	H, R, U, F
DXT-044	APOTEX_AZFL 0060783	APOTEX_AZFL 0060791	Meltzer, et al., "Onset of therapeutic effect of fluticasone propionate aqueous nasal spray," Ann. Allergy Asthma Immunol., 2001, vol. 86, No. 3, pp. 286-291.	2001	H, U, R, B, F
DXT-045	APOTEX_AZFL 0060792	APOTEX_AZFL 0060803	Millard, Jeffrey W., et al., "Solubilization by cosolvents establishing useful constants for the log-linear model," Int'l Journal of Pharmeceutics, vol. 245, 2002, pp. 153-166.	2002	H, U, R, I

DXT-046	APOTEX_AZFL 0060871	APOTEX_AZFL 0060879	Nathan, et al., "A once daily fluticasone proprionate aqueous nasal spray is an effective treatment for seasonal allergic rhinitis," Annals of Allergy, 1991, vol. 67, pp. 332-338.	1991	H, R, U, F
DXT-047	APOTEX_AZFL 0061645	APOTEX_AZFL 0061652	Scadding, et al., "Clinical and physiological effects of fluticasone propionate aqueous nasal spray in the treatment of perennial rhinitis," Rhinology, 1991, Suppl. 11, pp. 37-43.	1991	H, R, U, F
DXT-048	APOTEX_AZFL 0061704	APOTEX_AZFL 0061722	Shenfield, "Fixed drug combinations: which ones can be recommended?" Current Therapeutics, 1986, pp. 15-29.	1986	H, R, U, F
DXT-049	APOTEX_AZFL 0061723	APOTEX_AZFL 0061728	Simpson, R., Budesonide and terfenadine, separately and in combination, in the treatment of hay fever, Annals of Allergy, Vol. 73 pp. 497-502 (Dec. 1994)	12/00/1994	H, R, U, S
DXT-050	APOTEX_AZFL 0061786	APOTEX_AZFL 0061787	Spector, S., Ideal Pharmacotherapy for Allergic Rhinitis, Journal of Allergy Clinical Immunology, Vol. 103, Number 3, Part 2, pp. S386-S387, Mosby, Inc., 1999	1999	H, R, U
DXT-051	APOTEX_AZFL 0061852	APOTEX_AZFL 0061860	Van As, et al., "Once daily flluticasone propionate is as effective for perennial allergic rhinitis as twice daily beclomethasone dipropionate," J. Allergy Clin. Immunol., 1993, vol. 91, No. 6, pp. 1146-1154.	1993	H, R, U, F
DXT-052	APOTEX_AZFL 0061873	APOTEX_AZFL 0061875	Wang, De-Yun, "Treatment of Allergic Rhinitis: H1-Antihistamines and Intranasal Steroids," Current Drug Targets—Inflammation & Allergy, 2002, vol. I, pp. 215-220, Bentham Science Publishers Ltd.	2002	H, U, R, I
DXT-053	APOTEX_AZFL 0061890	APOTEX_AZFL 0061902	Wiseman, L., et al., "Intranasal Fluticasone Propionate: A Reappraisal of its Pharmacology and Clinical Efficacy in the Treatment of Rhinitis," Drugs, 1997, vol. 53, No. 5, pp. 885-907, Adis International Limited.	1997	H, U, R, B, I

DXT-054	APOTEX_AZFL 0061929	APOTEX_AZFL 00619444	Sherman, W.B., The Uses and Abuses of Antihistamine Drugs		H, R, U
DXT-055	APOTEX_AZFL 0061946	APOTEX_AZFL 0061964	Di Cyan, E. "Steroid Hormones and other Steroid Synthetics," CRC Handbook of Chemistry and Physics, 68th Ed., pp. C-682-98 (1987)		H, R, U
DXT-056	APOTEX_AZFL 0131994	APOTEX_AZFL 0131998	Barnes, P., Clinical Outcome of Adding Long-Acting ß-agonists to inhaled corticosteroids, Resp. Med. Vol. 95 (2001) (Supplement B), S12-S16	2001	H, R, U
DXT-057	APOTEX_AZFL 0131999	APOTEX_AZFL 0132003	Church, M., et al., Inhibition of Histamine release from Human Lung in vitro by Antihistamines and Related Drugs, Br. J. Pharmac. Vol. 69, pp. 663-667 (1980)	1980	H, R, U
DXT-058	APOTEX_AZFL 0132004	APOTEX_AZFL 0132012	Ciprandi, G,. et al., Topical Azelastine Reduces Eosinophil Activation and Intercellular Adhesion Molecule-1 Expression on Nasal Epithelial Cells: An Antiallergy Activity, J. Allergy Clin. Immunol., Dec. 1996, Volume 98, Number 6, Part 1, pp. 1088-1096	12/00/1996	H, R, U
DXT-059	APOTEX AZFL 0132024	APOTEX AZFL 0132029	Dunsky, E., et al., Histologic Responses in Human Skin Test Reactions to Ragweed, IV. Effects of a Single Intravenous Injection of Steroids, J. Allergy Clin. Immunol., Vol. 59, No. 1 (February 1977)	2/00/1997	H, R, U
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DXT-061	APOTEX_AZFL 0132034	APOTEX_AZFL 0132040	Hancox, RJ et al., Randomised Trial of An Inhaled B2 Agonsist, Inhaled Corticosteroid and Their Combination in the Treatment of Asthma, Thorax, Vol. 54 pp. 482-487 (1999)	1999	H, R, U
DXT-062	APOTEX_AZFL 0132041	APOTEX_AZFL 0132077	Wade, A., et al., Handbook of Pharmaceutical Excipients (1994)	1994	H, U, R, S, I

DXT-063	APOTEX_AZFL 0132078	APOTEX_AZFL 0132081	Harris et al., "Intranasal Administration of Peptides: Nasal Deposition, Biological Response, and Absorption of Desmopressin," Journal of Pharmaceutical Sciences, Vol. 75 No. 11 (Nov. 1986), pp. 1085-88.		H, R, U
DXT-064	APOTEX_AZFL 0132082	APOTEX_AZFL 0132092	Hide, I., et al., Suppression of TNF-a Secretion by Azelastine in a Rat Mast (RBL-2H3) Cell Line, Evidence for Differential Regulation of TNF-a Release, Transcription, and Degranulation, The Journal of Immunology, Vol. 159, No. 6, (September 15, 1997)	9/15/1997	H, R, U
DXT-065	APOTEX_AZFL 0132093	APOTEX_AZFL 0132099	Honda, M. et al., Effect of Azelastine Hydrochloride on Macrophage Chemotaxis and Phagocytosis in Vitro, Allergy, Vol. 37, pp. 41-47 (1982)	1982	H, R, U
DXT-066	APOTEX_AZFL 0132100	APOTEX_AZFL 0132104	Jacobi, H., et al., Histamine and Tyrptase in Nasal Lavage Fluid After Allergen Challenge: effect of 1 week of Pretreatment with Intranasal Azelastine of Systemic Cetirizine, J. Allergy Clin. Immunol., Vol. 103, No. 5, Part 1 (May 1999)	05/00/1999	H, R, U
DXT-067	APOTEX_AZFL 0141162	APOTEX_AZFL 0141171	Lytinas, M., et al., Azelastine's Inhibition of Histamine and Tryptase Release from Human Umbilical Cord Blood-Derived Cultured Mast Cells as well as Rat Mast Cell-Induced Vascular Permeability: Comparison with Olopatadine, Abstract, Allergy and Asthma Proc.		H, U, R
DXT-068	APOTEX_AZFL 0132106	APOTEX_AZFL 0132132	Markham, A., et al., Inhaled Salmeterol-Fluticasone Propionate Combination, A Review of its Use in Persistent Asthma, Drugs 60(5) pp. 1207-1233 (Nov. 2000)	11/00/2000	H, R, U
DXT-069	APOTEX_AZFL 0132133	APOTEX_AZFL 0132141	Martin, R., et al., Systemic Effect Comparisons of Six Inhaled Corticosteroid Preparations, American Journal of Respiratory and Critical Care Medicine, Vol. 165, pp. 1377-1383 (2002)	2002	H, R, U

DXT-070	APOTEX_AZFL 0132142	APOTEX_AZFL 0132146	Mosges, R., et al., Azelastine Reduces Mediators of Inflammation in Patients with Nasal Polyps, Allergy and Asthma Proc., Vol. 19, No. 6, pp. 379-383 (November-December 1998)	11/00/1998-12/00/1998	H, R, U
DXT-071	APOTEX_AZFL 0132226	APOTEX_AZFL 0132231	Schleimer R., et al., Effects of Dexamethasone on Mediator Release from Human Lung Fragments and Purified Human Lung Mast Cells, J. Clin. Invest., Vol. 71, pp. 1830-1835 (June 1983)	06/00/1983	H, R, U
DXT-072	APOTEX_AZFL 0132232	APOTEX_AZFL 0132256	Schleimer, R., Glucocorticoids: Their Mechanisms of Action and Use in Allergic Diseases, Allergy Principles & Practice Vol. I, (1998)	1998	H, U, R, I
DXT-073	APOTEX_AZFL 0132257	APOTEX_AZFL 0132263	Schulman, E. et al., Human Lung Mast Cells: Purification and Characterization, The Journal of Immunology, Vol. 129, No. 6, pp. 2662-2667 (December 1982)	12/00/1982	H, R, U
DXT-074	APOTEX_AZFL 0132264	APOTEX_AZFL 0132271	Slott, et al., A Controlled Study of the Effect of Corticosteroids on Immediate Skin Test Reactivity, J. Allergy Clin. Immunol., Vol. 54, No. 1, pp. 229-234 (1974)	1974	H, R, U
DXT-075	APOTEX_AZFL 0132272	APOTEX_AZFL 0132281	Slott, R., et al., Histologic Studies of Human Skin Test Responses to Ragweed and Compound 48/80, J. Allergy Clin. Immunol., Vol. 55, No. 4, pp. 232-240 (1975)	1975	H, R, U
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DXT-077	APOTEX_AZFL 0132289	APOTEX_AZFL 0132303	Stoloff, R., et al., Combination Therapy with Inhaled Long-Acting ß2-Agonists and Inhaled Corticosteroids: A Paradigm Shift in Asthma Management, Pharmacotherapy, Vol. 22, No. 2, pp. 212-226 (2002)	2002	H, R, U
DXT-078	APOTEX_AZFL 0132304	APOTEX_AZFL 0132325	Loyd V. Allen, The Art, Science, and Technology of Pharmaceutical Compounding, Chapter 20 (1998)	1998	H, U, R, I

DXT-079	APOTEX_AZFL 0132326	APOTEX_AZFL 0132332	Togias, A., et al., In vivo and in vitro Effects of Antihistamines on Mast Cell Mediator Release: A Potentially Important Property in the Treatment of Allergic Disease, Annals of Allergy, Vol. 63, No. 5, Nov. 1989	11/00/1998	H, R, U
DXT-080	APOTEX_AZFL 0132333	APOTEX_AZFL 0132337	U.S. Pharmacopoeia, The National Formulary, 24/NF19 (2000)	2000	H, U, R, I
DXT-081	APOTEX_AZFL 0132361	APOTEX_AZFL 0132548	Bousquet et al., Management of Allergic Rhinitis and Its Impact on Asthma, Journal of Allergy and Clinical Immunology, Vol. 108, No. 5 (2001) ("ARIA Guidelines")	2001	H, U, R, I, B
DXT-082	APOTEX_AZFL 0132557	APOTEX_AZFL 0132579	Dolz, M., et al., Rheological Behaviour of Microcrystalline Cellulose Hydrogels, Journal of Dispersion Science and Technology Vol. 13 Number 1, pp. 96-99 (1992)	1992	H, R, U
DXT-083	APOTEX_AZFL 0132580	APOTEX_AZFL 0132583	Fischer, B., et al., Inhibition by Azelastine of the Immunologically Induced Histamine Release from Isolated Guinea Pig Mast Cells, Arzneimittle Forschung, Dru. Res. 8/1981, pp. 1193-1195	1981	H, U, R, I
DXT-084	APOTEX_AZFL 0132692	APOTEX_AZFL 0132699	Katayama, S. et al., Effect of Azelastine on the Release and Action of Leukotriene C4 and D4, Int. Archs Allergy Appl. Immun. Vol. 83 pp. 284-289 (1987)	1987	H, R, U
DXT-085	APOTEX_AZFL 0132700	APOTEX_AZFL 0132707	Kusters, S., et al. at, Effects of Antihistamines on Leukotriene and Cykotine Release from Dispersed Nasal Polyp Cells, ArzneimForsh DrugRes, 2/2002, Vol. 52, No. 2, pp. 73-144 (2002)	2002	H, U, R, I
DXT-086	APOTEX_AZFL 0132708	APOTEX_AZFL 0132713	Pipkorn, U. et al., Inhibition of Mediator Release in Allergic Rhinitis by Pretreatment with Topical Glucocorticosteroids, The new England Journal of Medicine, Vol. 316, No. 24, pp. 1506-1510, June 11, 1987	6/11/1987	H, R, U

DXT-087	APOTEX_AZFL 0132733	APOTEX_AZFL 0132742	Wang, D., et al., Effect of Topical Applications of Budesonide and Azelastine of Nasal Symptoms, Eosinophil Count and Mediator Release in Atopic Patients after Nasal Allergen Challenge during the Pollen Season, Int. Arch Allergy Immunol. Vol. 114 pp. 1185-1192 (1997)	1997	H, R, U
DXT-088	APOTEX_AZFL 0132747	APOTEX_AZFL 0132780	Ansel, H., et al., Oral Suspensions, Emulsions, Magmas, and Gels, Chapter 7, Pharmaceutical Dosage Forms and Drug Delivery Systems, pp. 253-285	1995	H, U, R, I
DXT-089	APOTEX_AZFL 0132781	APOTEX_AZFL 0132800	Avicel® RC/CL, Microcrystalline Cellulose and Carboxymethylcellulose Sodium, NF Dispersible Cellulose, BP, Specifications and Analytical Methods, RC-16 Updated Oct. 1995 (Feb. 1999), 6 pages, FMC BioPolymer	2/00/1999	H, R, U
DXT-090	APOTEX_AZFL 0132801	APOTEX_AZFL 0132803	British Pharmaceutical Codex, p. 977 (1973)	1973	H, U, R, I
DXT-091	APOTEX_AZFL 0132809	APOTEX_AZFL 0132817	Grönneberg, R., et al., Effect in Man of Anti-Allergic Drugs on the Immediate and Late Phase Cutaneous Allergic Reactions Induced by Anit-IgE, Allergy, Vol. 36, pp. 201-208 (1981)	1981	H, R, U
DXT-092	APOTEX_AZFL 0132818	APOTEX_AZFL 0132842	Imitrex Nasal Spray Prescribing Information		H, U, R, F, A
DXT-093	APOTEX_AZFL 0132938	APOTEX_AZFL 0132941	Pennington, A.K., et al. The Influence of Solution Viscosity on Nasal Spray Deposition and Clearance, International Journal of Pharmaceutics, Vol. 43 pp. 221-224 (1988)	1988	H, R, U
DXT-094	APOTEX_AZFL 0132974 APOTEX_AZFL 0135183 APOTEX_AZFL 013942 MEDA_APTX03504760 APOTEX_AZFL 0130673 APOTEX_AZFL 0132197	APOTEX_AZFL 0132992 APOTEX_AZFL 0135212 APOTEX_AZFL 013942 MEDA_APTX03504768 APOTEX_AZFL 0130689 APOTEX_AZFL 0132219	Gennaro, Alfonso R., ed., et al., Remington: The Science and Practice of Pharmacy, 2000, 20th edition at 209; 246-62; 743; Chapter 16; Chapter 18; Chapter 22; Chapter 23; Chapter 39; Chapter 57		H, U, R, I, S, C
DXT-095	APOTEX_AZFL 0133012	APOTEX_AZFL 0133018	Suzuki Y., et al, Mucosal Drug Delivery Using Cellulose Derivatives as a Functional Polymer, Journal of Controlled Release, Vol. 62 pp. 101-107 (1999)	1999	H, R, U

DXT-096	APOTEX_AZFL 0133019	APOTEX_AZFL 0133041	U.S. Patent No. 4,335,121 (Phillips)	6/15/1982	H, U, R, F, A
DXT-097	APOTEX_AZFL 0133042	APOTEX_AZFL 0133048	Falser, N., et al., Comparative Efficacy and Safety of Azelatine and Levocabastine Nasal Sprays in Patients with Seasonal Allergic Rhinitis, Arzneim-Forsch./Drug Res. 51(I), pp. 387-393 (2001)	2001	H, R, U
DXT-098	APOTEX_AZFL 0133058	APOTEX_AZFL 0133060	Erffmeyer, J., et al., Efficacy of Phenylephrine-Phenylpropanolamine in the Treatment of Rhinitis, Southern Medical Journal, Vol. 75, No. 5, May 1982	05/00/1982	H, R, U
DXT-099	APOTEX_AZFL 0133061	APOTEX_AZFL 0133068	Greiff et al, Topical azelastine has a 12-hour duration of action as assessed by histamine challenge-induced exudation of α2-macroglobulin into human nasal airways, Volume 27, Issue 4, April 1997	04/00/1997	H, U, R
DXT-100	APOTEX_AZFL 0133069	APOTEX_AZFL 0133088	Deloitte: 2015 Global Life Sciences Outlook		H, U, R, A, F
DXT-101	APOTEX_AZFL 0133172	APOTEX_AZFL 0133172	Allergy Sales that Run up Your Nose, http://www klinegroup.com/blogs/index .php/2015/03/31/allergy-sales-that-rose-up-your-nose/		H, U, R, A, I
DXT-102	APOTEX_AZFL 0133205	APOTEX_AZFL 0133206	Respiratory Therapies – Respiratory Overview and Achievements, http://www.cipla.com/en/therapies/respiratory html		H, U, R, A, I
DXT-103	APOTEX_AZFL 0133644	APOTEX_AZFL 0133644	GSK's new Flonase already a top allergy seller, http://www.drugstorenews.com/article/gsk%E2%80%99s-new-flonase-already-top-allergy-seller		H, U, R, A, I
DXT-104	APOTEX_AZFL 0133698	APOTEX_AZFL 0133761	Pwc Indian Pharma Report		H, U, R, A, F
DXT-105	APOTEX_AZFL 0133783	APOTEX_AZFL 0133785	Lack of awareness among patients ails Jan Aushadhi stores, The Tribune, May 1, 2016, http://www.tribuneindia.com/news/chandigarh/community/lack-of-awareness-among-patients-ails-janaushadhi-stores/230353 html		H, U, R, A, I
DXT-106	APOTEX_AZFL 0133874	APOTEX_AZFL 0134015	2015 Meda Annual Report		H, U, R, A

DXT-107	APOTEX_AZFL 0141140	APOTEX_AZFL 0141148	Juniper, E., "First-line Treatement of Seasonal (Ragweed) Rhinoconjunctivitis)," Canadian Medical Association Journal, Vol. 156, No. 8, April 1997, pp. 1123-31.	4/15/1997	H, U, R, I, IL/FL, F
DXT-108	APOTEX_AZFL 0141149	APOTEX_AZFL 0141156	Berger, W.E., "Treatment Update: Allergic Rhinitis," Allergy and Asthma Proc., Vol. 22, No. 4, pp. 191-98 (July-August 2001)	1/14/2001	H, R, U, F, N
DXT-109	APOTEX_AZFL 0141157	APOTEX_AZFL 0141161	Blephamide Ophthalmic Suspension – Physicians Desk Reference, 55th Ed. 2001, pp. 514-15	2001	H, R, U, F, N
DXT-110	CIP_DYM_00000644	CIP_DYM_00000692	Duonase Marketing Presentation	2/9/2004	H, U, IL/FP, R
DXT-111	CIP_DYM_00053314	CIP_DYM_00053370	What COMPLETE means to you?		H, U, R
DXT-112	CIP_DYM_00055947	CIP_DYM_00055970	Duonase Campaign – Approach		H, U, R
DXT-113	CIP_DYM_00056837	CIP_DYM_00056839	Duonase Brand Plan for the 1st Quarter of financial year 2010-11		H, R, U
DXT-114	CIP_DYM_00060301	CIP_DYM_00060350	Declaration of Geena Malhotra for Application No. 10/518,016 (July 6, 2005)	8/12/2011	H, U, R, C
DXT-115	CIP_DYM_00087578	CIP_DYM_00087578	Solubility Trials for Azelastine HCl		H, U, A, B, I, R, IL
DXT-116	CIP_DYM_00087834	CIP_DYM_00087857	Declaration of Geena Malhotra for Application No. 10/518,016	7/3/2009	H, U, R, C
DXT-117	CIP_DYM_00145269	CIP_DYM_00145269	Email to V. Ranjan from R. Tupat re Launch Date Required		H, R
DXT-118	CIP_DYM_00146333	CIP_DYM_00146338	Overview of Respiratory Team Allergic Rhinitis	8/5/2011	H, U, R, IL
DXT-119	CIP_DYM_00201741	CIP_DYM_00201761	4-year market performance presentation of Allergic Rhinits (Market Watch & We)	Undated	H, U, R
DXT-120	CIP_DYM_00226663	CIP_DYM_00226691	Fax to P. Jeffrey from C. Fishman enclosing Signed Agreement by MedPointe	11/13/2006	H, U, B, R
DXT-121	CIP_DYM_00388925	CIP_DYM_00388926	Email toP. Jeffrey from G. Malhotra re Press Release from Meda on Fluti-Azelastins Combination Showing Superiority to Single Components	3/28/2011	H, U, R
DXT-122	CIP_DYM_00392226	CIP_DYM_00392226	Email to P. Jeffrey from Al re Clinical results/Meda	2/2/2009	H, U, R
DXT-123	CIP_DYM_00392333	CIP_DYM_00392333	Email to J. Bauer fromP. Jeffrey re Novel Nasal Spray Offer	3/17/2008	H, U, R
DXT-124	CIP_DYM_00392334	CIP_DYM_00392334	Email to R. Rumbold from P. Jeffrey re Novel Nasal Spray Offer	3/17/2008	H, U, R
DXT-125	CIP_DYM_00392335	CIP_DYM_00392335	Email to L. Holmes from P. Jeffrey re Novel Nasal spray offer from Cipla	3/17/2008	H, U, R

DXT-126	CIP_DYM_00392336	CIP_DYM_00392336	Email to M. Jung from P. Jeffrey re Novel Nasal Spray Offer	3/17/2008	H, U, R
DXT-127	CIP_DYM_00392601	CIP_DYM_00392602	Email toP. Jeffrey from A. Lulla re Draft Term Sheet	8/11/2006	H, U, R
DXT-128	CIP_DYM_00392739	CIP_DYM_00392739	Email to P. Jeffrey from P. Savle re Azelastine and Fluticasone nasal spray	3/25/2008	H, U, R
DXT-129	CIP_DYM_00400689	CIP_DYM_00400691	Email to G. Malhotra, et al., from V. Manish re All products total revenue (Sales + Royalty) for US and Canada (In-Line and Pipeline for FY 2013-20)	4/2/2013	H, U, R, I, B, A
DXT-130	CIP_DYM_00408508	CIP_DYM_00408513	Paper regarding market share of similar products	Undated	H, U, A, B, I, R
DXT-131	CIP_DYM_00413345	CIP_DYM_00413355	Memo from Vipul Ranjan to Nikhil Chopra re Team A.R. Basket (Nasal Spray)	4/26/2011	H, U, R
DXT-132	CIP_DYM_00451124	CIP_DYM_00451169	3.2.P Module 3 - Quality of Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray Suspension		H, U, R
DXT-133	CIP_DYM_00466860	CIP_DYM_00466907	Allergic Rhinitis Market Insights		H, U, R
DXT-134	CIP_DYM_00477275	CIP_DYM_00477275	Table re Total Expenses for Promotion of Drug	2013-2016	H, U, R, A, B, F, I
DXT-135	CIP_DYM_0054179	CIP_DYM_0054192	U.S. Patent No. 8,163,723	4/24/2012	H, P, R, D, I
DXT-136	CIP_DYM_0054193	CIP_DYM_0054206	U.S. Patent No. 8,168,620	5/1/2012	H, P, R, D, I
DXT-137	MED_DYM_00000001	MED_DYM_00009274	File History of U.S. Patent No. 8,168,620 (Certified)	5/1/2012	H, U, R, IL/FL
DXT-138	MED_DYM_00000654	MED_DYM_00000682	Declaration of Geena Malhotra for Application No. 10/518,016	9/23/2010	H, R, U, C
DXT-139	MED_DYM_00001334	MED_DYM_00001341	Declaration of Joachim Maus for Application No. 10/518,016	8/12/2011	H, U, R, C
DXT-140	MED_DYM_00001355	MED_DYM_00001364	Ratner, P., et al., "A Comparison of the Efficacy of Fluticasone Propionate Aqueous Nasal Spray and Loratadine, Alone and in Combination, for the Treatment of Seasonal Allergic Rhinitis," The Journal of Family Practice, Vol. 47, No. 2, pp. 118-125 (Aug. 1998)	08/00/1998	H, R, U
DXT-141	MED_DYM_00001434	MED_DYM_00001453	Declaration of Dr. Sujeet Rajan for Application No. 10/518,016	7/6/2005	H, U, R, C
DXT-142	MED_DYM_00001454	MED_DYM_00001461	Declaration of Nikhil Chopra filed with Application 10/518,016	12/8/2011	H, R, U, C
DXT-143	MED_DYM_00009275	MED_DYM_00018009	File History of U.S. Patent No. 8,163,723 (Certified)	4/14/2012	H, R, U, IL/FL

DXT-144	MEDA_APTX02502922	MEDA APTX02502987	Module 2.5 Clinical review on the fixed drug combination of azelastine hydrochloride and fluticasone propionate nasal spray for allergic rhinitis (June 30, 2011)		H, R, U
DXT-145	MEDA_APTX 01596418	MEDA_APTX 01596517	Pippins, Jennifer R. "Clinical Review for NDA 202-236." DPARP/ODE II, 2012.		H, R, U
DXT-146	MEDA_APTX 02174007	MEDA_APTX 02174013	Sur, D.K. et al. "Treatment of allergic rhinitis." SA Fam. Pract., 52(5): 398-403; 2010.		H, R, U
DXT-147	MEDA_APTX 02473546	MEDA_APTX 02473551	Soni, Anita. "Statistical Brief #204 - Allergic rhinitis: Trends in use and expenditures, 2000 and 2005." Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality. May 2008.		H, R, U
DXT-148	MEDA_APTX 02821042	MEDA_APTX 02821050	Meltzer, E. et al. "Clinically relevant effect of a new intranasal therapy (MP29-02) in allergic rhinitis assessed by responder analysis." Int. Arch. Allergy Immunol., 161: 369-377; 2013		H, R, U
DXT-149	MEDA_APTX 02845997	MEDA_APTX 02845998	Leung et al. "The Editors' Choice: MP29-02: A Major Achievement in the treatment of allergic rhinitis." J. Allergy Clin. Immunol., 129(5): 1216; 2012.		H, R, U
DXT-150	MEDA_APTX 03071154	MEDA_APTX 03071158	2007.07.10 Facsimile to Dr. Fosko, MedPointe		H, R, U
DXT-151	MEDA_APTX 03071175	MEDA_APTX 03071180	2007.09.07 Facsimile from FDA to MedPointe		H, R, U
DXT-152	MEDA_APTX 03502657	MEDA_APTX 03502662	Aberg, N. et al. "Increase of asthma, allergic rhinitis and eczema in Swedish schoolchildren between 1979 and 1991." Clin. Experimental Allergy, 25: 815-819; 1995.		H, R, U
DXT-153	MEDA_APTX 03502663	MEDA_APTX 03502666	Storms, W. et al. "Allergic rhinitis: the patient's perspective." J. Allergy Clin. Immunol., 99: S825-S828; 1997		H, R, U
DXT-154	MEDA_APTX 03502667	MEDA_APTX 03502685	Cauwenberge, P. "Consensus statement on the treatment of allergic rhinitis." Allergy, Vol. 55, 116-134. 2000		H, R, U

DXT-155	MEDA_APTX 03502686	MEDA_APTX 03502692	Crystal-Peters, J. et al. "The Cost of productivity losses associated with allergic rhinitis." Am. J. Manag. Care, 6:373-378; 2000.		H, R, U
DXT-156	MEDA_APTX 03502693	MEDA_APTX 03502701	Demoly, P. et al. "ERASM, a pharmacoepidemiologic survey on management of intermittent allergic rhinitis in every day general medical practice in France." Allergy, 57: 546-554; 2002		H, R, U
DXT-157	MEDA_APTX 03502708	MEDA_APTX 03502714	Verlato, Giuseppe et al. "Is the prevalence of adult asthma and allergic rhinitis still increasing? Results of an Italian study." J. Allergy Clin. Immunol., 111(6): 1232-1238; 2003		H, R, U
DXT-158	MEDA_APTX 03502715	MEDA_APTX 03502721	Maurer, M. et al. "Under-treatment of rhinitis symptoms in Europe: findings from a cross-sectional questionnaire survey." Allergy, 62:1057-1063; 2007		H, R, U
DXT-159	MEDA_APTX 03502722	MEDA_APTX 03502726	Meltzer, E. et al. "The economic impact of allergic rhinitis and current guidelines for treatment." Ann. Allergy, Asthma, and Immunol., 106: S12-S16; 2011		H, R, U
DXT-160	MEDA_APTX 03502727	MEDA_APTX 03502745	FDA, Center for Drug Evaluation and Research. "Allergic Rhinitis: Clinical Development Programs for Drug Products." *Guidance for Industry* , 2000		H, R, U
DXT-161	MEDA_APTX 03502746	MEDA_APTX 03502747	Larnholt, Anders. "MEDA: Dymista -- could be the drug of choice." Business Wire, 2012.		H, U
DXT-162	MEDA_APTX 03502748	MEDA_APTX 03502753	Mabry, R. "Recent advances in pharmacotherapy of allergic rhinitis." Curr. Opin. Otolaryngol. Head Neck Surg, 7: 375-378; 1999. MEDA_APTX 03502748-03502753		H, R, U
DXT-163	MEDA_APTX 03502771	MEDA_APTX 03502780	Naclerio, Robert M. "Drug Therapy: Allergic Rhinitis." New England J. Med., 325(12): 860-869; 1991		H, R, U
DXT-164	MEDA_APTX 03504716	MEDA_APTX 03504724	"Aerobiology and inhalant allergens" in Allergy: Principles and Practice, 493-498 (E. Middleton, Jr., C. Reed, E. Ellis, N. Adkinson, J. Yunginger, and W. Busse eds., vol 1., 4th ed. 1993.)		H, U, R

DXT-165	MEDA_APTX 03504783	MEDA_APTX 03504783	Andy, C. et al. "How effective are nasal steroids combined with nonsedating antihistamines for seasonal allergic rhinitis?" J. Fam. Pract., 51(7): 616; 2002		H, R, U
DXT-166	MEDA_APTX 03504821	MEDA_APTX 03504826	Meltzer, E. et al. "Concomitant montelukast and Loratadine as treatment for seasonal allergic rhinitis: A randomized, placebo-controlled clinical trial." J. Allergy Clin. Immunol., 105(5): 919-922; 2000.	2000	H, R, U
DXT-167	MEDA_APTX 03505071	MEDA_APTX 03505080	Michael et al., Characterisation of the aggregation behavior in a salmeterol and fluticasone propionate inhalation aerosol system, International Journal of Pharmaceutics 221: 165-174 (2001)		H, R, U
DXT-168	MEDA_APTX 03505562	MEDA_APTX 03505610	Lieberman et al., Pharmaceutical Dosage Forms: Disperse Systems, vol. 2 ch. 5 (2nd ed., Revised and Expanded 1996)		H, R, U, I, C
DXT-169	MEDA_APTX 03505576	MEDA_APTX 03505729	Datamonitor, "Commercial and Stakeholder Perspectives: Allergic Rhinitis." 09.2004		H, R, U
DXT-170	MEDA_APTX 03505875	MEDA_APTX 03505878	"Onset of action," in Mosby's Medical, Nursing, & Allied Health Dictionary, 6th ed., 1220; 2002.		H, R, U, N, C
DXT-171	MEDA_APTX00008898	MEDA_APTX000008913	Letter to R. Fosko from Meda Pharmaceuticals re Meeting Minutes	Undated	H, R, U
DXT-172	MEDA_APTX00015443	MEDA_APTX00015456	Draft Dymista White Paper, Dymista: The Importance of Formulation in Developing a Combination Intranasal Spray for Treatment of Allergic Rhinitis	10/12/2012	H, U, I, B
DXT-173	MEDA_APTX00015578	MEDA_APTX00015588	MedPointe Product & Process Development Program Priorities and Issues – September 9 , 2002		H, U, R
DXT-174	MEDA_APTX00015637	MEDA_APTX00015648	Medpointe Product & Process Development Program Priorities & Issues	9/30/2002	H, U, I, R
DXT-175	MEDA_APTX00015649	MEDA_APTX00015656	Medpointe Product & Process Development Program Priorities & Issues	9/2/2002	H, U, I, R

DXT-176	MEDA_APTX00017340	MEDA_APTX00017350	Draft Meda Report - Method Development for the Determination of Posterior Deposition of Dymista versus Sequential Administration of Fluticasone Propionate Nasal Spray and Azelastine Hydrochloride Nasal Spray via Nasal Cast Deposition	Undated	H, U, I, B, R
DXT-177	MEDA_APTX00022196	MEDA_APTX00022226	MEDA Report		H, U, I, B
DXT-178	MEDA_APTX00028978	MEDA_APTX00028986	Email to S. Loesch, et al., from B. Roecklein re Project Gold Co-Promotion outline 030315BRComments.pptx	3/9/2015	H, U, I, B, R
DXT-179	MEDA_APTX00034325	MEDA_APTX00034325	Email to S. Loesch, et al., from J. Hostler re Quarterly TRx Info Q1-2015 xlsxm	4/14/2015	H, U, I, B, R
DXT-180	MEDA_APTX00035036	MEDA_APTX00035044	Email to J. Hostler, et al., from J. Evans re Symista AG Proposal	5/16/2014	H, U, R, F, A
DXT-181	MEDA_APTX00035037	MEDA_APTX00035044	Dymista Alternate Discounting Strategies for Improved Success		H, R, U
DXT-182	MEDA_APTX00036186	MEDA_APTX00036186	Meda Forecasting Document		H, B, R, U
DXT-183	MEDA_APTX00036832	MEDA_APTX00036832	Meda Forecasting Document		H, B, R, U
DXT-184	MEDA_APTX00402228	MEDA_APTX00402287	Historical Perspective of Formulation Development		H, U, B, R
DXT-185	MEDA_APTX00540740	MEDA_APTX00540744	Letter to R. Fosko, Meda Pharmaceuticals from P. Bowen re IND 77363; Re: SPA Response Letter (January 31, 2008)	1/31/2008	H, U, R
DXT-186	MEDA_APTX00540768	MEDA_APTX00540772	Letter to C. Sax for R. Fosko, Meda Pharmaceuticals from P. Bowen re IND 77363; Re: Q&A for Meeting on April 29, 2008	4/28/2008	H, U, R
DXT-187	MEDA_APTX00589866	MEDA_APTX00589873	NDA # 20-115 for Astelin Tablets Vol. 125 or 482	Undated	H, U, R, I, F
DXT-188	MEDA_APTX01569738	MEDA_APTX01569741	Email to A. D'Addio, et al. from C. Yayac re Dymista		H, R, U
DXT-189	MEDA_APTX01606639	MEDA_APTX01606723	Cipla Draft Development Report for Azelastine Hyrdrochloride and Fluticasone Propionate Nasal Spray		H, U, I, B, R
DXT-190	MEDA_APTX01608672	MEDA_APTX01608672	Email to J. Karafilidis, et al., from L. Gever re "Sequential Studies"	6/20/2014	H, U, R

DXT-191	MEDA_APTX01608673	MEDA_APTX01608680	Ratner, P., et al., "Combination Therapy with Azelastine Hydrochloride Nasal Spray and Fluticasone Propionate Nasal Spray in the Treatment of Patients with Seasonal Allergic" Rhinitis, Annals of Allergy, Asthma, & Immunology, Vol. 100 pp. 74-81 (January 2008)	01/00/2008	H, U, L, R, R
DXT-192	MEDA_APTX01608808	MEDA_APTX01608810	Dymista Nasal Cast Study - Single Sprays	4/24/2014	H, U, B, R, F
DXT-193	MEDA_APTX01609337	MEDA_APTX01609339; MEDA_APTX01609453	Email to I. Kaufman from A. D'Addion re Draft Development Sections including 32P24	1/4/2011	H, U, B, R, F, C
DXT-194	MEDA_APTX01609436	MEDA_APTX01609445	3.2.P.2.1 Components of the Drug Product		H, U, B, I, R
DXT-195	MEDA_APTX01609454	MEDA_APTX01609454	3.2.P.1 Description and Composition of the Drug Product [Azelastine/Fluticasone Nasal Spray]	Undated	H, U, I, R
DXT-196	MEDA_APTX01616301	MEDA_APTX01616301	Procedure for Stirred Cell Filtration of Azelastine Hydrochloride and Fluticasone Propionate Nasal Spray		H, U, A, I, B, R
DXT-197	MEDA_APTX01616889	MEDA_APTX01616891	Email to N. Ruiz, et al., from A. D'Addio re Dymista nomenclature	7/16/2013	H, U, R
DXT-198	MEDA_APTX01618783	MEDA_APTX01618797	Formulation Internal Communique - Dymista: The Importance of Formulation in Developing a Combination Topica Nasal Spray for the Treatment of Allergic Rhinits	Undated	H, U, B, I, R
DXT-199	MEDA_APTX01631375	MEDA_APTX01631380	Email to J. Maus from A. D'Addion re FDA feedback on Dymista	6/16/2011	H, U, R
DXT-200	MEDA_APTX01642520	MEDA_APTX01642521	Astelin Hydrocholoride-Fluticasone Propionate 137-50 mcg (Sept. 2, 2008)		H, U, A, R
DXT-201	MEDA_APTX01642782	MEDA_APTX01642783	Email to A. Dumaswala from L. Grever re Dymista Dossier: Once More Thought	2/13/2012	H, R, U
DXT-202	MEDA_APTX01645706	MEDA_APTX01645707	MedPointe Feasibility Assessment Plan		H, U, A, F, I, R
DXT-203	MEDA_APTX01663422	MEDA_APTX01663422	Email to J. Hostler from D. Fuge re 3 year Dymista Forecast xls	6/4/2013	H, U, B, I
DXT-204	MEDA_APTX01663423	MEDA_APTX01663423	Attachment to Email to J. Hostler from D. Fuge re 3 Year Dymista Forecast		H, U, R, F
DXT-205	MEDA_APTX01663695	MEDA_APTX01663695	Email to C. Fishman from D. Fuge re Cipla Trip Report	8/4/2006	H, U, R

DXT-206	MEDA_APTX01675508	MEDA_APTX01675521	Bernstein, MP29-02: A Breakthrough for the treatment of Allergic Rhinitis, Expert Opinion Pharmacotherapy, 14(15) (2013)	2013	H, U, R
DXT-207	MEDA_APTX01676267	MEDA_APTX01676284	Nielsen, et al., "Intranasal corticosteroids for allergic rhinitis: superior relief?" Drugs, 2001, vol. 61, No. 11, pp. 1535-1691	2001	H, U, R
DXT-208	MEDA_APTX01681257	MEDA_APTX01681258	Template Letter re Astelin		H, U, R, F, AU
DXT-209	MEDA_APTX01764754	MEDA_APTX01764754	Meda Forecasting Document		H, U, R
DXT-210	MEDA_APTX01774595	MEDA_APTX01774637	Email to B. Roecklein from A. Dumaswala re ET Dymista presentation and 2012 Dymista Strategic Plan	11/2/2011	H, U, R
DXT-211	MEDA_APTX01774596	MEDA_APTX01774637	2012 DYMISTA Strategic Plan, October 28, 2011		H, U, R
DXT-212	MEDA_APTX01793191	MEDA_APTX01793192	Email from N. Ruiz to J. Maus re Dymista		H, U, R, F, A
DXT-213	MEDA_APTX01831196	MEDA_APTX01831198	Email re AzeFlu Conjunctivitis Score		H, U, R, F, A
DXT-214	MEDA_APTX01857429	MEDA_APTX01857441	Astelin Clinical Update		H, U, R, F, A
DXT-215	MEDA_APTX01859436	MEDA_APTX01859456	Maus Emailing Dev Program Doc		H, U, R, F, A
DXT-216	MEDA_APTX01864079	MEDA_APTX01864085	Ridolo, E., A Role for the Intranasal Formulation of Azelastine Hydrochloride/Fluticasone Propionate in the Treatment of Allergic Rhinits, Therapeutic Delivery		H, U, I, R
DXT-217	MEDA_APTX01878799	MEDA_APTX01878810	Astepro with Fluticasone Suspension Development Update (Sept. 8, 2009)		H, U, R, F
DXT-218	MEDA_APTX01893256	MEDA_APTX01893257	Email to A. D'Addio, et al., from S. Pikulin re Final Draft of NDA Sections - First Email	12/8/2010	H, U, R, F, I
DXT-219	MEDA_APTX01921748	MEDA_APTX01921748	Hofmeister Memo re Formulary Decisions, Aug. 1, 2014		H, U, R
DXT-220	MEDA_APTX01992214	MEDA_APTX01992214	Email from J. Maus re Specs for Corrections of Reports		H, U, R, B, I, F, A
DXT-221	MEDA_APTX01992215	MEDA_APTX01992218	Specs for Correction of Reports		H, U, R, B, I, F, A
DXT-222	MEDA_APTX01998484	MEDA_APTX01998485	Email from J. Maus to R. Murray		H, U, R, B, I, F, A
DXT-223	MEDA_APTX02022397	MEDA_APTX02022400	Press Release Results for Dymista		H, U, R, B, I, F, A
DXT-224	MEDA_APTX02039969	MEDA_APTX02039970	Email from J. Maus to U. Munzel re AHRQ Strategy		H, U, R, B, I, F, A
DXT-225	MEDA_APTX02048074	MEDA_APTX02048078	Email from J. Maus re MP29-02		H, U, R, B, I, F, A
DXT-226	MEDA_APTX02049012	MEDA_APTX02049014	Email from J. Maus re AzeFlu Figure		H, U, R, B, I, F, A

DXT-227	MEDA_APTX02057587	MEDA_APTX02057595	Barnes, M. L., et al., "Effects of levocetirizine as add-on therapy to fluticasone in seasonal allergic rhinitis," Clinical and Experimental Allergy, Jan. 27, 2006, vol. 36, pp. 676-684, Blackwell Publishing Ltd.	1/27/2006	H, R, U
DXT-228	MEDA_APTX02180630	MEDA_APTX02180666	Dymista Prescribing Information (2015)	2015	H, R, U
DXT-229	MEDA_APTX02308986	MEDA_APTX02308991	Hampel, Frank C., et al., Double-blind, placebo-controlled study of azelastine and fluticasone in a single nasal spray delivery device, Annals of Allergy, Asthma & Immunology, Aug. 2010, vol. 105, pp. 168-173.		H, R, U
DXT-230	MEDA_APTX02411737	MEDA_APTX02411739	Letter to A. Lulla from S. Clarke re Right of First Refusal Under the Azelastine Combination Product Agreement by and between Cipla and MedPoint Healthcare Inc (Meda US) dated November 13, 2006 (the "Agreement")	2/19/2008	H, R, U
DXT-231	MEDA_APTX02429132	MEDA_APTX02429149	Carr, et al., A Novel Intranasal Therapy of Azelastine with Fluticasone for the Treatment of Allergic Rhinitis, J. Allergy Clin. Immunology, (2012)	2012	H, U, B, R, I
DXT-232	MEDA_APTX02429157	MEDA_APTX02429165	Meltzer, et al., MP29-02 (a novel intranasal formulation of azelastine hyrdocholoride and fluticasone propionate) in the treatment of seasonal allergic rhinitis: A randomized, double-blind, placebo-controlled trial of efficacy and safety, Allergy and Asthma Proceedings, pg. 324-332, Vol. 33, No. 4 (July-August 2012)	07/00/2012	H, U, B, R
DXT-233	MEDA_APTX02452943	MEDA_APTX02452947	Email to C. Fishman from D. Fuge re MP Revisions 8-14-06.doc	8/14/2016	H, R, C, U
DXT-234	MEDA_APTX02480361	MEDA_APTX02480373	Meda Powerpoint		H, R, U
DXT-235	MEDA_APTX02482904	MEDA_APTX02482909	Email to S. Loesch from M. Carrel re Agency	3/31/2014	H, U, C, R
DXT-236	MEDA_APTX02482904	MEDA_APTX02482909	Email to S. Loesch from M. Carrell re Agency		H, U, C, R
DXT-237	MEDA_APTX02483660	MEDA_APTX02483664	Dymista briefing document		H, U, F, R

DXT-238	MEDA_APTX02486008	MEDA_APTX02486075	Email to B. Orrison from S. Loesch re DYMISTA 2015 DRAFT Brand Plan and Dymista 2015 marketing plan	11/14/2014	H, U, R, I
DXT-239	MEDA_APTX02486009	MEDA_APTX02486075	Dymista Marketing Plan 2015		H, U, R, I
DXT-240	MEDA_APTX02486590	MEDA_APTX02486598	US Sales Force Effectiveness, August 26, 2014		H, R, U
DXT-241	MEDA_APTX02512353	MEDA_APTX02512424	MEDA Efficacy and Safety Trials Analysis		H, U, R, B, I, F, A
DXT-242	MEDA_APTX02519516	MEDA_APTX02519519	Email from J. Maus re MP29-02		H, U, R, B, I, F, A
DXT-243	MEDA_APTX02845997	MEDA_APTX02845998	MP29-02: A Major Advancement in the Treatment of Allergic Rhinitis, The Journal of Allergy and Clinical Immunology, Volume 129, Number 5		H, R, U
DXT-244	MEDA_APTX02855574		Combination Development Program PPT		H, U, R, B, I, F, A
DXT-245	MEDA_APTX03071244	MEDA_APTX03071440	2010.07.19 Letter re Information Package for Pre-NDA Meeting on 2010.08.17		H, R, U, C, I
DXT-246	MEDA_APTX03140805 APOTEX_AZFL 0060100	MEDA_APTX03140845 APOTEX_AZFL 0060140	Dykewicz, M., et al., Diagnosis and Management of Rhinitis: Complete Guidelines of the Joint Task Force on Practice Parameters in Allergy, Asthma and Immunology, Annals of Allergy, Asthma, & Immunology, 81 pg. 478-518 (1998)	1998	H, R, U, B
DXT-247	MEDA_APTX03161222	MEDA_APTX03161227	Email from Maus to Munzel		H, U, R, I, A, F, IL/FL
DXT-248	MEDA_APTX03227075	MEDA_APTX03227083	Benincasa, C., et al., Evaluation of Flucticasone Propionate Aqueous Nasal Spray Taken Alone and in Combination with Cetirizine in the Prophylactic Treatment of Seasonal Allergic Rhinits (1994)	1994	H, R, U
DXT-249	MEDA_APTX03470939	MEDA_APTX03470940	Email to G. Balwani, et al., from M. Lehr re Wednesday Cough/Cold Meeting	11/11/2003	H, U, R, I
DXT-250	MEDA_APTX03470942	MEDA_APTX03470945	Alexander D'Addio Self Evaluation	4/21/2004	H, U, R, B
DXT-251	MEDA_APTX03470947	MEDA_APTX03470947	Spreadsheet re Projects for various drugs	Undated	H, U, R, F
DXT-252	MEDA_APTX03470948	MEDA_APTX03470970	MedPointe Lab Notebook		H, R, U
DXT-253	MEDA_APTX03490368	MEDA_APTX03490383	U.S. Patent No. 9,259,428	2/16/2016	H, U, I, R
DXT-254	MEDA_APTX03490384	MEDA_APTX03490422	Azelastine Combination Product Agreement between Cipla Ltd. and MedPointe Healthcare Inc., dated November 13, 2006		H, P, R

DXT-255	MEDA_APTX03490423	MEDA_APTX03490433	2011 First Amendment to Azelastine Combination Product Agreements (signed by Cipla)	11/7/2011	H, U, R, B, I
DXT-256	MEDA_APTX03490434	MEDA_APTX03490467	Azelastine Combination Product Agreement between Cipla Ltd. and Meda AB, dated September 7, 2009		H, U, R, B, I
DXT-257	MEDA_APTX03490470	MEDA_APTX03490512	Azelastine Combination Product Agreement between Cipla Ltd. and Meda AB, dated June 5, 2013		H, R, U
DXT-258	MEDA_APTX03490530	MEDA_APTX03501811	File History of U.S. Patent No. 9,259,428 (Certified)		H, R, U, IL/FL, C
DXT-259	MEDA_APTX03502115	MEDA_APTX03502167	2016 DYMISTA® Brand Plan		H, R, U
DXT-260	MEDA_APTX03502336		Dymista Phase II – Positioning Exploration, July 2011		H, U, R, B, I, F, A
DXT-261	MEDA_APTX03502656	MEDA_APTX03502656	Meda Pharmaceuticals-DYMISTA-Financials Spreadsheet		H, B, R, U
DXT-262	MEDA_APTX03503395	MEDA_APTX03503400	Bousquet, Dymista®: in a class of its own for the treatment of allergic rhinitis		H, I, R, U
DXT-263	MEDA_APTX03503458	MEDA_APTX03503738	Allergic Rhinitis – Global Drug Forecast and Market Analysis to 2024		H, U, R
DXT-264	MEDA_APTX03504280	MEDA_APTX03504283	Technavio Expects the Global Allergic Rhinitis Drugs market to Exceed USD 12 billion by 2020		H, U, R
DXT-265	MEDA_APTX03504739	MEDA_APTX03504759	06.30.16 Confidential Avomeen Analytical Services Report		H, U, D, R
DXT-266	MEDA_APTX03504760	MEDA_APTX03504768	Blaiss, M., Efficacy, Safety, and Patient Preference of Inhaled Nasal Corticosteroids: A Review of Pertinent Published Data, Allergy and Asthma Proceedings, Vol. 22, No. 6 (November-December 2001)	11/2001-12/2001	H, R, U
DXT-267	MEDA_APTX03504909	MEDA_APTX03504985	Martin, Physical Pharmacy, chs. 10 & 18 (Fourth Ed., 1993)		H, U, R, I, C
DXT-268	MEDA_APTX03505081	MEDA_APTX03505090	Michael et al., The physico-chemical properties of salmeterol and fluticasone propionate in different solvent environments, International Journal of Pharmaceutics 200: 279-288 (2000)		H, R, U
DXT-269	MEDA_APTX03505160	MEDA_APTX03505259	Loyd V. Allen, The Art, Science, and Technology of Pharmaceutical Compounding (1998), Chapters 9, 10, 11, 15, 16, 17, 18, 19,		H, R, U, I, C
DXT-270	N/A	N/A	Apotex Inc. and Apotex Corp.'s Notice of Rule 30(b)(6) Deposition to Plaintiffs	12/4/2015	R, D, I, U, H

DXT-271	N/A	N/A	Apotex Inc.'s and Apotex Corp.'s Notice of Deposition of Geena Malhotra	12/4/2015	R, D, I, U, H
DXT-272	N/A	N/A	Apotex Inc.'s and Apotex Corp.'s Notice of Deposition of Nikhil Chopra	12/4/2015	R, D, I, U, H
DXT-273	N/A	N/A	Apotex Inv and Apotex Corp.'s Notice of Rule 30(b)(6) Deposition to Plaintiffs	12/4/2015	R, D, I, U, H
DXT-274	N/A	N/A	Defendants' Notice of Deposition of Alexander D'Addio	4/26/2016	R, D, I, U, H
DXT-275	N/A	N/A	Deposition Transcript of Alexander D'Addio	5/4/2016	U, R, D, E, B, T, H
DXT-276	N/A	N/A	Deposition Transcript of Alexander D'Addio (Second)		U, R, D, E, B, T, H
DXT-277	N/A	N/A	Deposition Transcript of Dennis Fuge	4/14/2016	U, R, D, E, B, T, H
DXT-278	N/A	N/A	Deposition Transcript of Donald Accetta	5/6/2016	U, R, D, E, B, T, H
DXT-279	N/A	N/A	Deposition Transcript of Geena Malhotra	4/25/2016	U, R, D, E, B, T, H
DXT-280	N/A	N/A	Deposition Transcript of Jeff Hostler	4/27/2016	U, R, D, E, B, T, H
DXT-281	N/A	N/A	Deposition Transcript of Joachim Maus	5/19/2016	U, R, D, E, B, T, H
DXT-282	N/A	N/A	Deposition Transcript of Nikhil Chopra	4/6/2016	U, R, D, E, B, T, H
DXT-283	N/A	N/A	Deposition Transcript of Patsy Jeffrey	4/22/2016	U, R, D, E, B, T, H
DXT-284	N/A	N/A	Deposition Transcript of Sujeet Rajan	4/7/2016	U, R, D, E, B, T, H
DXT-285	N/A	N/A	Donald Accetta CV	Undated	H, A, R, F, U
DXT-286	N/A	N/A	Plaintiff's Objections and Responses to Apotex's Notice of Rule 30(b)(6) Deposition	12/30/2015	R, D, I, U, H
DXT-287	N/A	N/A	Plaintiffs' Supplemental Objections and Responses to Apotex's First Set of Interrogatories (Nos. 1-7)	1/15/2016	R, D, I, U, H
DXT-288	N/A	N/A	Confidential Declaration of Alexander D'Addio	6/30/2016	R, D, I, U, H

Exhibit 12

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS, INC. and CIPLA LTD.	)	
Plaintiffs,	)	Civil Action No. 14-1453 (LPS)
v.	)	
APOTEX, INC. and APOTEX CORP.	)	
Defendants.	)	

APOTEX'S FIRST MOTION *IN LIMINE*:
TO EXCLUDE TESTIMONY REGARDING FDA'S STATE OF MIND

OF COUNSEL:

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George C. Lombardi
Samuel S. Park
Ryan Hauer
35 W. Wacker Drive
Chicago, Illinois 60601-9703

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Ilan Wurman
1700 K Street, N.W.
Washington, DC 20006

PROCTOR HEYMAN ENERIO LLP
Dominick T. Gattuso (# 3630)
300 Delaware Avenue, Suite 200
Wilmington, DE 19801

Attorneys for Defendants Apotex Inc. and Apotex Corp.

INTRODUCTION

This Hatch-Waxman case addresses Apotex's application before the FDA to market a generic version of Plaintiffs' combination azelastine-fluticasone product branded as Dymista®, which is indicated to treat allergic rhinitis. Apotex contends that the two patents-in-suit, which cover this method of treatment, is obvious because, among other reasons: (1) before the priority date, physicians combined FDA-approved azelastine and fluticasone products (Astelin® and Flonase®, respectively) to treat allergic rhinitis; (2) a person of ordinary skill in the art was motivated to combine these products into a single formulation for patient convenience and would have had a reasonable expectation of success in doing so; and (3) a blocking patent (covering azelastine) prevented skilled artisans from doing so, thus explaining why the azelastine-fluticasone combination was not formulated before the priority date.

Apotex separately moves *in limine* to exclude three categories of evidence and testimony. In this motion, Apotex seeks to exclude all speculative testimony from Plaintiffs' witnesses regarding FDA's state of mind. In its second motion, Apotex seeks to exclude a hearsay scientific report analyzing the formulation of alleged "copycat" products. In its third motion, Apotex seeks to exclude Plaintiffs' purported evidence of commercial success in this case because a "blocking patent" renders such evidence legally irrelevant in the context of this case.[1]

ARGUMENT

Apotex moves to exclude all testimony from Plaintiffs' witnesses—in particular, their expert witnesses Michael Kaliner and Warner Carr—as to FDA's purported state of mind. As discussed below, Plaintiffs rely solely on inadmissible speculation that lacks adequate foundation to support a theory of "FDA skepticism" in response to Apotex's defense of obviousness.

[1] Apotex recently learned that its commercial success expert will be unable to testify at trial due to a sudden illness, and the parties will be discussing options to address this unfortunate situation. Apotex's third motion *in limine*, if granted, would moot this issue.

In their respective expert reports as to patent validity, Drs. Kaliner and Carr offered opinions as to "FDA's skepticism"—namely, that FDA purportedly expressed skepticism as to whether the azelastine-fluticasone combination would be effective. [redacted]

These opinions are based solely on Drs. Kaliner and Carr's speculation as to internal and undocumented deliberations by the FDA. Time and again, courts have prevented experts from testifying—based on speculation—as to the state of mind of the FDA. *See, e.g, In re Mirena IUD Prod. Liab. Litig.*, 169 F. Supp. 3d 396, 466 (S.D.N.Y. 2016) ("Dr. Feigal will not be permitted to testify as to what type of label the FDA would or would not have ultimately accepted or rejected. *This is impermissible speculation as to the state of mind of the FDA*.") (emphasis added); *Kruszka v. Novartis Pharm. Corp.*, 28 F. Supp. 3d 920, 931 (D. Minn. 2014) ("[The experts] may not proffer an opinion relating to what individuals ... with the FDA thought with respect to certain documents or about their motivations."); *Deutsch v. Novartis Pharm. Corp.*, 768 F. Supp. 2d 420, 442 (E.D.N.Y. 2011) (testimony on "intent, motives, or states of mind of corporations, regulatory

[2] The specific opinions subject to this motion are highlighted in the pertinent pages of Drs. Kaliner and Carr's expert reports attached as Exhibits A-D. The curriculum vitae of Drs. Kaliner and Carr are attached as Exhibits E and F.

agencies and others have no basis in any relevant body of knowledge or expertise") (internal quotation marks omitted).

In addition, neither Dr. Kaliner nor Dr. Carr has any expertise that even arguably could provide a foundation for testimony as to FDA's state of mind or internal deliberations. Neither has worked for the FDA. *See* Kaliner Opening Report Ex. 2 (c.v.); Carr Opening Report Ex. 2 (c.v.). [redacted]

For these reasons, Apotex requests that the Court bar Plaintiffs under Federal Rule of Evidence 703 from offering speculative testimony on FDA's state of mind and its alleged skepticism of the efficacy of Dymista®.

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Dated: October 31, 2016

Exhibit A

Exhibit B

Exhibit C

Exhibit D

Exhibit E

Exhibit 2: Curriculum Vitae

CURRICULUM VITAE

MICHAEL A. KALINER, M.D.

Address:



Education:

1959-1960 - Duke University
1960-1963 - B.S. (Zoology). Cum Laude, University of Maryland
1963-1967 - M.D., University of Maryland School of Medicine

Board Certification:

Internal Medicine, 1974
Allergy & Immunology, 1974; Re-certification 1994

Brief Chronology of Employment

1967-1968 - Internship, Hospital of University of Maryland (Medicine)
1968-1970 - Residency, University of California at San Francisco (Medicine)
1970-1973 - Fellowship, Robert B. Brigham Hospital, Harvard University School of Medicine, Boston, Massachusetts (Allergy/Immunology, Rheumatology)
1972-1973 - Assistant in Medicine, Peter Bent Brigham Hospital, Boston Massachusetts
1972-1973 - Fellow, National Tuberculosis and Respiratory Disease Association
1973-1975 - Major, USAF Medical Center, Keesler AFB, Mississippi
1974-1975 - Chief, Section of Allergy and Immunology, Keesler AFB, Mississippi
1975-1993 - Allergic Diseases Section, LCI, NIAID, NIH

1977-1993 - Consultant, Walter Reed Army Medical Center
1978-1993 - Head, Allergic Diseases Section, LCI, NIAID, NIH
1978-1993 - Director, Asthma and Allergic Diseases Center, NIAID, NIH
1981-1991 - Director, Outpatient Department, NIAID, NIH
1983-1993 - Consultant in Allergy, Department of Health and Human Service
1993-Date - Medical Director, Institute for Asthma and Allergy
1993-2013 - Section Chief, Allergy and Immunology, Washington Hospital Center
1994-Date - Clinical Professor of Medicine, George Washington University School of Medicine, Washington, DC
2004-2009 - Founding partner, Strategic Pharmaceutical Advisors
2009-2009 – Consultant, Strategic Pharmaceutical Advisors

Military Service:
USAF, August 1973 - August 1975
USPHS, August 1975 - 1993 (Retired 9-1-93)

Patents:
4,902,495, IgE Fc directed delivery system, awarded 2/20/90

07/472,855, "Novel antioxidant in humans, composition thereof and method of treating oxidant related disorders"

Societies:
American Academy of Allergy, Asthma and Immunology, Fellow
American Association for Advancement of Science
American Association of Immunologists
Association of American Physicians
American College of Allergy, Asthma and Immunology, Fellow
American Federation for Clinical Research
American Society of Clinical Investigation (Emeritus)
American Thoracic Society
Collegium International Allergologicum
Greater Washington Allergy, Asthma and Immunology Society
Joint Council of Allergy and Immunology
World Allergy organization

Honors:
Phi Kappa Phi
Omicron Delta Kappa
Phi Sigma
USPHS Commendation Medal for Meritorious Service, 1980
David W. Talmadge Award, Aspen Allergy Conference, 1983
USPHS Outstanding Service Award, 1985
Jaros Lectureship and Award, American Association of Clinical Immunology and Allergy, 1986
Jaros Lectureship, American College of Allergy, Asthma and Immunology, 1988
Roy Patterson Lectureship, American Academy of Allergy and Immunology, 1989

International Scientific Board, Pharmacia Allergy Research Foundation, 1990-1992
Von Pirquet Lectureship and Award, Georgetown University Medical School, 1990
Harold Lecks Memorial Lectureship, Children's Hospital of Philadelphia, 1990
Philip C. Pratt Distinguished Lectureship, University of North Carolina, 1992
Listed as one of the "Best Doctors in America":1993, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015

Cited as one of the top 50 allergists/immunologists (Woodward/ White)
Listed as one of the "Best Doctors in America: Southeast region", 1996-date (Woodward/White)
Scientific Advisory Board, John Hancock Global Rx Mutual Fund, 1992
Series Editor, "Clinical Allergy and Immunology", Marcel Dekker Publishing Company, 1993-2010
Stephen D. Lockey Sr., MD Memorial Lectureship and the Pennsylvania Allergy Association Past President's Award, 1992
Recipient: National Asthma Award for Biomedical Research, awarded by the First National Conference on Asthma Management, 1992

Visiting Pulmonary Scholar, Consortium of North Carolina Programs, March 3-4, 1993

Hyman Chai Lectureship, American College of Allergy, Asthma and Immunology, 1993

Listed as one of the "Best Doctors in Washington DC" by the Washingtonian Magazine: 1993, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015

Recipient of the Honor Award and Gold Key from the University of Maryland Medical Alumni Association, awarded to the outstanding graduate of the University of Maryland Medical School, 1994

President-elect of the American Academy of Allergy, Asthma and Immunology, 1994
President, American Academy of Allergy, Asthma and Immunology, 1995-6
Member, Pfizer Academic Advisory Committee, 1995-1998
Member, McNeil Consumer Products Advisory Board, 1995-2000
Who's Who in the United States, 1995-Date
Recipient GD West Medal, European Histamine Society, 1996
Listed among the Best Doctors in America, American Health Magazine, 3/96
University of Illinois Pediatrics Distinguished Lectureship, 1997
Longwood Asthma Center Distinguished Lecture, Brigham and Women's Hospital, 1996
Member, Merck-Medco Asthma and Allergy Advisory Committee, 1997-98
Who's Who in American Medicine, 1998-Date
Member, Merck-Medco Medical Advisory Board, 1999-2000
Outstanding Service Award 2000 Recipient, World Allergy Organization
Editor and Chief, Current Allergy and Asthma Reports, 2000-2013

World Allergy Congress-VXIII IAACI Co-Chairman, 2000-2003, Chairman, 2005-7
Chief Editor, E-medicine/WebMD, allergy and immunology, 2000-date
Medscape, Editorial Advisory Board Member, 2002-Date
2000 Eminent Scientists of Today, 2002-Date
Clinical Guide to Top Doctors, cited as Top Doctor, 2002 to 2014
President-Elect, World Allergy Organization, 2003-2005
America's Top Doctors (Castle Connolly Guide), 2003 through 2013
University of Arkansas Medical Center Deans Distinguished Lecture, 2003
Executive vice-president, Strategic Pharmaceutical Advisors, 2004-2013
John Salvaggio Lectureship Award, Louisiana Allergy Society, 2005
Flagship Healthcare management, 2005-2008
Chief Consultant, Allergy and Immunology
President, World Allergy Organization, 2005-7
Past-president, World Allergy Organization, 2007-2009
Recipient of American Academy of Asthma, Allergy and Immunology's Distinguished Clinician Award, 2006
Historian, World Allergy Organization, 2009-11

Activities:
Accreditation Council Graduate Medical Education, Board of Appeals, 1997-2013
Allergy and Asthma Network/Mothers of Asthmatics
Board of Directors, 1989-97
American Board of Allergy and Immunology
Chairman, 1986-7
Co-Chairman-Elect, 1985-6
Director, 1982-87
Examination Committee, 1973-5, 1982-6; Chairman, 1984-6
Conjoint Credentials Committee, 1983-7
Residency Review Committee Member, 1982-7
Representative to American Board of Medical Specialties, 1984-7
American Medical Association, Accreditations Council for Graduate Medical, 1985-7

Education, Appeals Panel, Diagnostic Laboratory Immunology, 1993-2001

American Thoracic Society Scientific Assembly on Allergy and Immunology

Nominating Committee, 1977-8, 1985-6
Program Committee, 1978-80, 1982-6
Secretary, 1982-3
President-Elect, 1983-4
President, 1984-5
American Association of Immunologists

Membership Committee, 1980-3
Program Committee, 1984-9
Block Chairman - Immediate Hypersensitivity, 1986-8
Financial Development Committee, 1990-5

American Society of Clinical Investigation

Program Committee, 1980-1

American Academy of Allergy, Asthma and Immunology

Executive Committee, 1989-98

At large member, 1989-91
Secretary, 1992-93
Treasurer, 1991-2, 1993-4.
President-elect, 1994
President, 1995-6
Immediate Past President, 1996-7
Past Past President, 1997-8

Awards, Memorials and Commemorative Lectureships Committee, 2007-Date

Committee on Committees, 1996-98
Chairman, 1997-98

Continuing Medical Education Committee, 1992-4

Distinguished Lecture Series, 1991-1997
Editor, Academy News, 1997-8
Ethic Committee, ad hoc member, 1991-2
Finance Committee, 1994-7
Chairman, 1996-7

Government Advisory Panel, 1993-2001
History and Archive Committee, 2001-2007
Vice-Chairman, 2001-2002
Chairman, 2003-2007
International Committee, Executive Liaison, 1993-7
Joint Committee on Primary Care Rotations in Allergy, 1996-2001
Latex Committee, 1998-2001
Local Arrangements Committee, 1997-8
Nominating Committee, 1995-7
Chairman, 1996-7
Outcomes Study Oversight Committee, Chairman, 1993-2001
Postgraduate Education Committee, 1981-1984; Chairman, 1982
Program Committee, 1981, 1984, 1985, 1987-1988
Professional Education Council, 1987-1990
Chairman, 1989-90
Related Industries Council, 1991-2001

Chairman-elect, 1996-8
Chairman, 1998-2001
Related Organizations Council
Chairman, 1996-7
Representative to ENT Specialty Societies, 1997-2001
Representative to NIAID, 1994-7

Rhinosinusitis Committee, 2004-Date
Seminars Committee, 1986-9
American College of Physicians

Allergy and Immunology Subcommittee, 1983-5
Allergy and Immunology Update, Chairman, 1987
Allergy and Immunology Meet the Professor, 1988, 1989, 1990, 1991, 1999
Workshop Chairman, 1988-9, 1999
Clinical Allergy and Immunology Series, Marcel Dekker Publishers, Editor, 1994-2010
Current Asthma and Allergy Reports, Editor, 2000- 2013
Current Review of Allergic Diseases, Editor, 1999-2013
Editorial Boards:
Allergy, 1984-1990
Allergy and Clinical Immunology International, Editor, 1988-2001
American Journal of Rhinology and Allergy, 1987-95, 2011-2015
Assistant Editor, 2011-2015
American Journal of Physiology, 1990-6
Breathe Well, Founder & Editor, 1997-2003
Clinical and Experimental Allergy, 1988-92
E-medicine/ WebMD, 1998-date
Editor, Allergy and Immunolgy Section, 1998-date
Giornale Italiano di Allergologia e Immunologia Clinica, 1992-2003
Journal of Allergy and Clinical Immunology, 1978-83
Journal of Clinical Immunology, 1984-8
Journal of the World Allergy Organization, Editor, 2001-2007
Medscape, 2004-Date
NIH Observer, Editor, 1988-90
Respiratory Reviews, 1997-2006
WAO Journal, Regional Editor, 2007-2013; Special Editor, 2013-Date
E-medicine/WebMD, Chief Editor, Allergy-Immunology Section, 1998-Date

Foundation for Advanced Education in the Sciences

Board of Directors, 1997-2001
Nominating Committee, 1999-2001
Course Director, Immunology 504, Co-Director with Warren Strober, MD, Graduate level course on Allergy and Clinical Immunology, 1975-1995

George Mason University, Affiliate Faculty, 1996-Date

Greater Washington Asthma, Allergy and Immunology Society,

Secretary-Treasurer, 2005
President-elect, 2006
President, 2007
Past-president, 2008
International Union of Immunologic Societies

Subcommittee on Nomenclature of the Hypersensitivity Reactions, Chairman, 1988-93
Finance Committee, 1992-95
Joint Council of Allergy and Immunology
Chairman, Outcomes study oversight committee, 1993-2001
Executive Committee, 1994-6
National Institutes of Health
Allergy and Immunology Research Committee/Study Section, 1980-4
Asthma and Allergic Diseases Task Force, NIAID, 1977-8
Asthma and Allergic Diseases Center, NIAID, Director, 1978-93
Ambulatory Care Committee, 1984-90
Animal Care Committee, NIAID, 1984-91
Clinical Research Committee, NIAID,1977-79; Chairman, 1978-9
Director, Outpatient Services, NIAID, 1980-91
Foundation for Advanced Education in the Sciences Board of Directors, 1997-2000
Graduate Medical Education Committee, 1990-3
Training Program Director, Allergy and Immunology, 1978-93
NYLCare (Healthplus) Quality Assurance/Utilization Review Committee, 1994-8
Chairman, 1994-7

Asthma and Allergy Advisory Board, 1998

World Allergy Organization, formerly known as the IAACI, 1988-2012

Allergy Specialty Training Council, 2007-2005
Chairman, 2001-2005
Awards Committee, 2003-2010
Chairman, 2005-7
Audit and Finance Committee, 2003- 2010
Bylaws Committee, 2001-2005
Congress Council, 2003-2012
XVIII Congress, Vancouver 2003, Co-Chairman, 2001-2003
Local Organizing Committee, Co-Chairman, 2001-3
Scientific Program Committee,

Member: 1983-6, 1989-92, 1992-95, 1995-98, 1998-2001, 2001-3, 2003-2005, 2007-9

Chairman, 2005-7

XX Congress of the World Allergy Organization, Thailand 2007,

Chairman, 2003-Date
Negotiating Committee, 2003-Date
Social Events Committee, Chairman, 1983-5
Credentials committee, 2005-7
Presidential Advisory Committee, 1985-98
Emerging Societies Committee, 2001-2010
Executive Committee,

Treasurer, 1994-2000
Vice-President, 2000-3
President-elect, 2003-5
President, 2005-2007
Past-president, 2008-9
Historian, 2009-11
Nominating committee, 2001-2010
Chairman, 2008-9

Perspectives on Allergy, Advisory Committee, 1996-2000

Chairman-elect, 1998-9
Chairman 1999-2000
Symposia and Seminars Committee,

Chairman, 1991-8
Member, 1998-2003
Complex Issues in Asthma and Allergy, Chairman, 2001-2003

World Allergy Forum, advisory panel, 2001-2010

Chairman, 2005-7

U.S. Pharmacopoeia Advisory Panel, 1981-1983

Legal Cases:

Sanofi Pharmaceuticals and Sanofi-Aventis US LLC v. Barr Laboratories, Inc., C.A. No 06-286 (GMS) (D.Del), 2007-8 (Nasocort AQ)

Alcon Manufacturing LTD., Alcon Laboratories and Kyowa Hakko Kogyo Co. Inc v. Barr Laboratories and Sandoz inc., No –vc-1377 RLY-Tab (Consolidated). 2006-2010 (Patanol)

Alcon Research LTD vs. Barr Laboratories, Case 1;109-cv-0026 (Pataday)

Alcon Research LTD and Kyowa Hakko Kirin Co vs. Wockhardt LTD, 1:10-CV-0181 (Patanol)

Manchik v. Lowenthal, Malpractice case. Chicago, 2008-9

Shea v. Chappell, Anne Arundel County, c-09-140102, 2009-Date (Malpractice)

AJ Self vs. Riverside Physician Services, inc. Case CL09-000103, 2009-2011 (Malpractice)

Data safety monitoring committee:

Regeneron/Sanofi, Dupilumab, Committee member, 2014-Date

Circassa, HDMspire, Committee chairman, 2015-date

Research Interests:

Pathogenesis and treatment of asthma, rhinitis, anaphylaxis, sinusitis and urticaria

Plus 500+ original manuscripts, reviews, chapters and books

MEDA_APTX03504674

MEDA_APTX03504675

Bibliography: Papers published in journals

1. Kaliner, M.: The house officer; an employee or colleague? JAMA 214:121-122, 1970.
2. Kaliner, MA, Orange,R.P., Koopman,W.J., Austen,A.F., and LaRaia,P.J.: Cyclic adenosine3',5'-monophosphate in human lung. Biochem. Biophys. Acta. 252:160-164, 1971.
3. Orange,R.P., Kaliner,M.A., LaRaia,P.J., and Austen,K.F.: The immunologic release of histamine and slow-reacting substance of anaphylaxis from human lung. II. Influence of cellular levels of cyclic AMP. Fed. Proc. 30:1725-1729, 1971.
4. Kaliner,M.A., Orange,R.P., and Austen,K.F.: Immunological release of histamine and slow-reacting substance of anaphylaxis from human lung. IV. Enhancement by cholinergic and alpha adrenergic stimulation. J. Exp. Med. 1361:556-567, 1972.
5. Tauber,A.I., Kaliner,M.A., Stechschulte,D.J., and Austen,K.F.: The immunologic release of histamine and slow-reacting substance of anaphylaxis from human lung. V. Effect of prostaglandin on histamine release. J. Immunol. 111:27-35, 1973.
6. Kaliner,M.A., Wasserman,S.E., and Austen,K.F.: Immunologic release of chemical mediators from human nasal polyps. N. Engl. J. Med. 289:277-281, 1973.
7. Kaliner,M.A., and Austen,K.F.: The sequence of biochemical events in the antigen-induced release of chemical mediators from sensitized human lung tissue. J. Exp. Med. 138:1077-1094, 1973.
8. Strom,T.B., Carpenter,C.B., Garovoy,M.R., Austen,K.F., Merrill,J.P., and Kaliner,M.A.: The modulating influence of cyclic nucleotides upon lymphocyte mediated cytotoxicity. J. Exp. Med. 138:381-393, 1973.
9. Kaliner, M.A., and Austen, K.F.: Cyclic nucleotides and modulation of effector systems of inflammation. Biochem. Pharmacol. 23:763-771, 1974.
10. Kaliner, M.A.: Immunologic mechanisms for the release of the chemical mediators of anaphylaxis from human lung tissue. Canad. Med. Assoc. J. 110:431-435, 1974.
11. Kaliner,M.A., and Austen,K.F.: Cyclic AMP, ATP and reversed anaphylactic histamine release. J. Immunol. 112:664-674, 1974.
12. Kaliner,M.A., and Austen,K.F.: Cyclic AMP inhibition of complement mediated lysis. Science 183:659-661, 1974.
13. Wasserman,S.I., Goetzl,E.J., Kaliner,M.A., and Austen,K.F.: Modulation of the immunologic release of eosinophil chemotactic factor of anaphylaxis from human lung. Immunology 26:677-684, 1974.

14. Kaliner, M.A., and Austen, K.F.: Immunologic release of chemical mediators from human tissues, pharmacologic controls and biochemical concomitants. Annual Rev. Pharm. 15:179-190, 1975.

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39. Lemanske, R.F., and Kaliner, M.: Late phase allergic reactions. In: Middleton, E., Reed, C.E., Ellis, E.F., Adkinson, N.F., Jr., and Yunginger, J.W., eds. Allergy Principles and Practice, Vol. I, 3rd Edition. The C.V. Mosby Co., St. Louis, pp.224-246, 1988.

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44. Kaliner, M.A.: Two decades of allergy research: dramatic changes in basic and clinical allergy. In: Stadler, B.M., Schneider, C.H., Pichler, W.J., and Dahinden, C.A., eds. From Allergy to Immunology. Hans Huber Publishers, Toronto, pp. 45-56, 1988.

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46. Lemanske, R.F., and Kaliner, M.A.: The assessment of autonomic nervous system function. In: Spector, S.L., ed. Provocative Challenge Procedures: Background and Methodology. Futura Publishing, NewYork, pp. 131-166, 1989.

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50. Kaliner, M.A.: The mechanisms of air flow obstruction in asthma. In: Pichler, W.J., ed. Progress in Allergy and Clinical Immunology. Proceedings of the XIII International Congress of Allergology and Clinical Immunology. Hogrefe & Huber Publishers, Toronto, pp. 159-161, 1989.

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102. Scarupa MD, Kaliner MA. Headaches and nasal disease. . In: Current review of Rhinitis, Second edition. Current Medicine, Phila Pa. 2006. pp 97-104

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Monographs, Books and Supplements Edited by Michael A Kaliner

1. Mast Cells and Asthma. Kaliner, M.A., ed. Am. Rev. Respir. Dis. 135(suppl):1157-1209, 1987.
2. The Airways: Neural Control in Health and Disease. Kaliner, M.A., and Barnes, P.J., eds. Marcel Dekker, New York, 1988.
3. Chronic Bronchial Asthma and the Increasing Role of Inhaled Corticosteroid Therapy. Kaliner, M.A., ed., J. Respir. Dis. S1-48, Sept. 1988 (suppl).
4. Understanding and Managing Asthma. Decker, J.L., and Kaliner, M.A., eds. Avon Books, New York, 1988.
5. Management of Allergy in the 1990's. Kaliner, M.A., ed. Hans Huber Publishers, Toronto, 1989.
6. Corticosteroids: Their Biologic Mechanism and Application to the Treatment of Asthma. Kaliner, M.A., Sertl, K., and Clark T, eds. Am. Rev. Respir. Dis. 141(suppl.):1-89, 1990.
7. Asthma. It's Patholgy and Treatment. Kaliner, M. A., Barnes, P. J., Persson, C. G. A., eds. Marcel Dekker, New York, 1990.
8. Histamine and Disease: A Forum on Current and Future Management. Kaliner, M.A., and Meltzer, E., eds. J. Allergy Clin. Immunol. 86 (suppl):589-686, 1990.
9. What Everyone Needs to Know About Corticosteroids. Kaliner, M. A., The National Asthma and Allergy Network, Fairfax Virginia, 1991.
10. Managing Allergic Rhinitis: Implications for the Upper and Lower Airways. J. Resp.Dis., 12:S7-56 (suppl), 1991.
11. Allergic Diseases. Kaliner, M.A., Clinical Center Communications, National Institutes of Health, April 1991.
12. Mast cells in Health and Disease, Kaliner MA and Metcalfe DD, Editors, Marcel Dekker NY.1992.
13. Allergic Rhinitis. Kaliner M, Sloan R. American Family Physician Monograph, Winter 1992-3.
14. Neuropeptides in Respiratory Medicine. Kaliner MA, Barnes PJ, Kunkel GHH, Baraniuk JN, Editors, Marcel Dekker, NY, 1994
15. Chronic Sinusitis. Kaliner MA. Scienta Healthcare Education, 1995.
16. Progress in Allergy and Clinical Immunology, Vol 4. Oehling AK, Huerta-Lopez JG, Kaliner M, Bousquet J, Marone J (Editors), Hogrefe & Huber Publishers, Seattle, 1997, pp. 191-4.
17. Current Reviews of Allergic Diseases. Kaliner MA.(editor), Blackwell Science, Philadelphia, Pa, 1998.
18. Management of Sinusitis: Current clinical strategies. Medical Economics Co., Montvale, NJ 2000.

19. Current Review of Allergic Disease, 2nd Edition. Michael Kaliner, Editor, Current Medicine. Philadelphia, Pa, 2001.

20. Current Review of Rhinitis, Michael Kaliner, Editor, Current Medicine, Philadelphia, PA, 2002.

21. Current Review of Asthma, Michael Kaliner, Editor, Current Medicine, Philadelphia, PA, 2003.

22. Current Review of Rhinitis, Second edition, Michael A Kaliner, Editor, Current Medicine, Phila Pa, 2006

Books Published in the "Clinical Allergy and Immunology " series, Editor: Michael A. Kaliner

1. Druce HM: Sinusitis - pathophysiology and treatment. Marcel Dekker, New York, 1993.
2. Gleich GJ, Kay AB: Eosinophils in allergy and inflammation, 1994.
3. Levinson Al, Paterson Y: Molecular and cellular biology of the allergic response, 1994.
4. Kaliner MA, Barnes PJ, Baraniuk JB, Kunkel G: Neuropeptides in health and disease. 1994.
5. Spector SL: Provocation testing in clinical practice. 1995.
6. Caughey GH: Mast cell proteases in immunology and biology, 1995.
7. Simons FER: Histamine and H1-Recptor Antagonists in Allergic Disease, 1996.
8. Townley RG, Agrawal DK. Immunopharmacology of Allergic Diseases, 1997.
9. Bardana EJ, Montanaro A. Indoor Air Pollution and health, 1997.
10. Blumenthal MN, Bjorksten B. Genetics of Allergy and Asthma, 1997.
11. Weiler JM. Allergic and respiratory Disease in Sports medicine, 1997.
12. Lockey RF, Bukantz SC. Allergens and Allergy Immunotherapy, Second edition, 1999.
13. Brenner BE. Emergency Asthma, 1999.
14. Friere M, Kettlehut B. Food hypersensitivity and adverse reactions. 1999.
15. Kemp SF, Lockey RF. Diagnostic testing of allergic disease, 2000.
16. Zweiman B, Schwartz LB. Inflammatory mechanisms in allergic disease, 2002.
17. Simons ER. Histamine and H1 antagonists in allergic disease. Second edition, 2003.
18. Lockey R, Bukantz S, Bousquet J. Allergens and allergen immunotherapy. Informa. New York. 2006
19. Baraniuk JN, Schusterman D Nonallergic Rhinitis.Informa. New York, 2007.

Exhibit F

Exhibit 2: Curriculum Vitae

Warner W. Carr, MD

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PERSONAL DATA
FULL NAME: Warner W. Carr, MD

EDUCATION:
UNDERGRADUATE:
B.S., Boise State University
Major: Biology
Aug. 1986-June 1991
MEDICAL SCHOOL:
M.D., University of Washington School of Medicine
Seattle, WA.
Sept. 1992-June 1996

PROFESSIONAL TRAINING:
INTERNSHIP and RESIDENCY:
Internal Medicine, Brooke Army Medical Center, Fort Sam Houston, San Antonio, TX.
1 July 96-30 June 99

FELLOWSHIP:
Allergy and Immunology, Walter Reed Army Medical Center, Washington DC
8 Jul 2002 to 30 June 2004

MILITARY TRAINING:
Chemical, Biological, Radiological and High Yield Explosives training for the Clinician, Officer Advanced Course, Officer Basic Course, Medical Management of Chemical and Biologic Warfare Casualties, Combat Casualty Care Course, Basic Training, Ft Sill, OK 1987, 91A Combat Medic Course, FSH, TX 1987, Professional Leadership Development Course 1990

WORK HISTORY / MILITARY ASSIGNMENT HISTORY:
1. Co- Medical Director, Southern California Research, July 2007-present.
2. Partner and VP, Allergy and Asthma Associates of Southern California, July 2007-present.
3. Investigator, Div. of Experimental Therapeutics, Walter Reed Army Institute of Research, Jun 2004 to June 2007.
4. Chief of Medicine, 21st Combat Support Hospital, Iraq March 2006-October 2006.
5. Medical Officer, FDA, CDER, Div. of Pulmonary and Allergy Drug Products, 1 Jan 2005 to 30 Dec 2005.
6. Clinical Teaching Staff, Allergy and Immunology WRAMC June 2004 to June 2007.
7. Fellow, Allergy and Immunology WRAMC Jul 2002 to June 2004.
8. Core Faculty Member for Internal Medicine Residency Program, July 2000- June 2002.
9. Staff, Internal Medicine; Chief, Graduate Medical Education of Internal Medicine Clinics, July 2000- June 2002.
10. Staff, Internal Medicine, July 1999- June 2000.
11. House Staff, Internal Medicine, June 1996- June 1999.
12. NCOIC, TMC, 2nd Plt SGT, 1987-1992, Honorable discharge 1992.

MILITARY DUTY LOCATIONS:
1. Iraq, 21st Combat Support Hospital, March –Oct 2006
2. Walter Reed Army Institute of Research, Washington, DC July 2004-June 2007
3. FDA, Rockville, MD Jan 2005-Dec 2005
4. Walter Reed Army Medical Center, Washington, DC July 2002-June 2007
5. William Beaumont Army Medical Center, Ft Bliss, TX July 2000- June 2002
6. Brooke Army Medical Center, FSH, TX June 1996- June 2000
7. Gowen Field, Boise ID, (National Guard) 1987-1992

note: 1992-1996 HPSP medical student, University of Washington School of Medicine

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LICENSURE AND SPECIALTY CERTIFICATION:

CURRENT UNRESTRICTED STATE LICENSE

State: California
Number: A98901
Expiration: October 31, 2016

State: Maryland
Number: D0062093
Expiration: September 30, 2016

BOARD CERTIFICATION
1. Allergy and Immunology
2. Internal Medicine
3. ACRP Certified Principle Investigator

HONORS AND RECOGNITION:

Military:

Bronze Star, Army Achievement Medal x 5, Army accommodation x 6; Army Service Ribbon x 2, Global War on Terrorism ribbon, Iraq War Medal, Public Health accommodation, Student teacher award Dept. of Med. BAMC 1997-98; Certificate of recognition. Bailey K. Ashford Semifinalist, Walter Reed Army Medical Center. Mologne Award for academic excellence June 2004 WRAMC. Army Service Ribbon, Idaho Service Ribbon, Army Achievement Medal, NCO Professional Development Ribbon, National Defense Service Ribbon, Army Reserve Components Achievement Medal.

Medical School:

Senior election to Alpha Omega Alpha, Merck Award for academic excellence (given to four of 165 seniors), Idaho State Scholarship: junior - senior years. Health Professions Scholarship Program: sophomore-senior. WAMI scholarship for academic achievement and leadership: 1992. Class senator: freshman year. Basic sciences: 11 honors. Clinical rotations: 10 honors

Undergraduate:

Cum Laude Graduate, National Science Foundation Research fellowship with full stipend: junior year. Department of Biology scholarship (academic achievement award). Sigma Xi Honorary Research Society: elected junior year. Dean's list: semester program, 8 semesters.

SPECIAL AWARD AND RECOGNITION:
1. Lifetime Commissioner of the Orange County Sheriff's Department (July 2014-Present)
2. FBI Citizens Academy, Lifetime Award (April 2015-Present)
3. Distinguished Fellowship Award, ACAAI (Nov. 2015)

ACADEMIC APPOINTMENTS:

1. Reviewer, The Medical Letter, 2012 - Present
2. Deputy Editor of Allergy, American Journal of Rhinology and Allergy. June 2010 to June 2014
3. Clinical Pearls and Pitfalls Section Editor, Allergy and Asthma Proceedings Jan 2005 to June 2014
4. Editorial Board, Allergy and Asthma Proceedings Jan 2005 to present
5. Editorial Board, Allergy & Rhinology, to June 2014
6. Teaching staff, Department of Allergy and Immunology, Walter Reed, July 2004 to June 2007
7. Core faculty member Internal medicine residency WBAMC (Jul2000-Jun02)
8. Chief, Graduate Medical Education of Internal Medicine Clinic WBAMC (Jul2000 –Jun02)
9. House Staff Representative to Hospital Education Committee (1997-1999)
10. President, Postgraduate Medical Education Council, Brooke Army (Jun '97-1999)

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PROFESSIONAL SOCIETIES:

1. ACAAI- Fellow
2. AAAAI- Fellow
3. ACP - Fellow
4. SIGMA XI Research Society (1991-present)
5. Alpha Omega Alpha (1995-present)

PROFESSIONAL SOCIETIES LEADERSHIP ACTIVITIES:

1. Board of Directors, Western Society of Allergy, Asthma and Immunology (Jan 2012 - present)
2. Board of Regents, American College of Allergy, Asthma and Immunology (Nov 2011 – Nov 2014)
3. Board of Governors, American Association of Certified Allergists (Nov 2007-present)
4. Board of Directors, California Society of Allergy, Asthma and Immunology (2007-Present)
5. Vice President, California Society of Allergy, Asthma and Immunology (2012-2013)
6. President, California Society of Allergy, Asthma and Immunology (2013-2014)
7. Board of Governors, California Society of Allergy Asthma and Immunology (July 2009- present)
8. American College of Physicians Governors Council, Southern California Chapter, Region II (June 2010 –2013)
9. American College of Allergy Asthma and Immunology (ACAAI) National Fellow-in-Training Representative (Nov 2002 to Nov 2004)
10. ACAAI Board of Regents Member (Nov 2002 to Nov 2004)
11. Chair, ACAAI Basic and Clinical Immunology Committee
12. Chair, ACAAI Young Physicians Committee
13. Chair, ACAAI Membership Committee
14. Chair, ACAAI Immunotherapy and Diagnostics Committee
15. American Academy of Allergy Asthma and Immunology (AAAAI) Immunotherapy and Diagnostics Committee Member (Jan 2004 to present).
16. Reviewer, Springer for Research & Development Journal (April 2013 to present)

PUBLICATIONS:

Original manuscripts:

1. **Carr, Warner W**. et al. The Role of Endomyocardial Biopsy in the Diagnosis and Treatment of Churg-Strauss Syndrome. J. Clin Rheumatology Vol. 5 (2); Apr. 1999.
2. Andrew F. Shorr; Stephanie L. Scoville; Steven B. Cersovsky; G. Dennis Shanks; Christian F. Ockenhouse; Bonnie L. Smoak; **Warner W. Carr**; Bruno P. Petruccelli. Acute Eosinophilic Pneumonia Among US Military Personnel Deployed in or Near Iraq *JAMA*. 2004; 292:2997-3005.
3. **Carr, WW**, Martin, B, Howard, R, Cox, L, Borish, L, the Immunotherapy Committee of the American Academy of Allergy, Asthma and Immunology. Comparison of test devices for skin prick testing. J Allergy Clin Immunol. Vol 116; Aug 2005:341-346.
4. **Carr, Warner W**. Clinical Pearls and Pitfalls: Peanut Allergy. Allergy and Asthma Proceedings. Vol 26; Mar 2005:145-47.
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6. Haymore, B.R., Frank, W.T., **Carr, WW**. Anaphylaxis and Epinephrine Prescribing Patterns in a Military Hospital. Allergy and Asthma Proceedings Vol. 26 (5); Sep 2005: 361-5.
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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and **CIPLA LTD.**,	)	
Plaintiffs,	)	
v.	)	C.A. No. 14-1453-LPS
APOTEX INC. and **APOTEX CORP. ,**	)	
Defendants.	)	

PLAINTIFFS' OPPOSITION TO APOTEX'S FIRST MOTION *IN LIMINE*
TO EXCLUDE TESTIMONY REGARDING FDA'S STATE OF MIND

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U.S. Patent No. 8,163,723 1

U.S. Patent Nos. 8,168,620 1

In this Hatch-Waxman case, Plaintiffs Meda and Cipla assert that Defendant Apotex's Abbreviated New Drug Application ("ANDA"), seeking approval for a generic version of Meda's Dymista® nasal spray, infringes certain claims of U.S. Patent Nos. 8,168,620 and 9,259,428.[1] In its First Motion *In Limine* ("First Motion"), Apotex seeks to exclude Plaintiffs' evidence of FDA skepticism that the azelastine-fluticasone combination in Dymista® could be approved. As an initial matter, this case is set for a ***bench trial,*** which weighs in favor of allowing the evidence. For this and other reasons that follow, Apotex's Motion should be denied.

I. PLAINTIFFS' EXPERTS RELY ON THE FDA'S WRITTEN STATEMENTS, AND NOT "PURE SPECULATION" AS APOTEX CONTENDS

The crux of Apotex's motion rests on a false premise. Apotex states, "Plaintiffs rely solely on inadmissible speculation that lacks adequate foundation to support a theory of 'FDA skepticism.'" (Ap. Br. at 1.) However, Apotex fails to inform the Court that both of Plaintiffs' experts, Drs. Kaliner and Carr, expressly rely on the FDA's *written statements* found throughout the FDA's communications with Meda (and its predecessor, MedPointe) during the Dymista® approval process. Far from being "pure speculation," Plaintiffs' experts have proffered informed opinions based on receiving and reviewing FDA's own written correspondences. These are precisely the sort of opinions endorsed by F.R.E. 703: "An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed."

II. APOTEX HAS NOT SHOWN THAT EXCLUSION OF PLAINTIFFS' EVIDENCE OF FDA SKEPTICISM IS WARRANTED UNDER F.R.E. 703.

While Apotex's motion is purportedly based on F.R.E. 703, the first mention of this rule appears in the conclusion at the end of Apotex's brief. Apotex does not even try to establish how

[1] Plaintiffs are no longer asserting U.S. Patent No. 8,163,723.

F.R.E. 703 would support its arguments, or require exclusion of the opinions and evidence in question. Likewise, none of the cases Apotex cites supports its cause.

To the contrary, Apotex's three cited cases—*In re Mirena IUD Prod. Liab. Litig.*, 169 F. Supp. 3d 396 (S.D.N.Y. 2016); *Kruszka v. Novartis Pharm. Corp.*, 28 F. Supp. 3d 920 (D. Minn. 2014); and *Deutsch v. Novartis Pharm. Corp.*, 768 F. Supp. 2d 420 (E.D.N.Y. 2011)—all favor admissibility of Plaintiffs' expert opinions in question. For example, the court in *In re Mirena* rejected pure *speculation* as to whether the FDA would have approved *hypothetical* language in the disputed label, but expressly permitted the expert to "testify as to what the FDA did, ***and what it said***," concluding that the expert ***"may opine on these documents, including what they mean***." 169 F. Supp. 3d at 466. Apotex's brief omits this critical part of the case. Similarly, Plaintiffs' experts here proffer opinions on how the FDA's own *written statements* relate to skepticism. This is not "pure speculation."

Likewise, the *Kruszka* court similarly rejected "[an] opinion relating to what individuals … with the FDA thought," but permitted expert testimony on what the FDA "***actually did, rather than thought, [as] properly within the scope of admissible testimony***." *Kruszka*, 28 F. Supp. 3d at 931. Finally, the *Deutsch* court noted a distinction between "testifying as to what information ***is reflected in certain documents***, and testifying to what certain individuals at [the defendant] thought about the information and their motivations for characterizing the information in a particular way," and the court rejected only the latter. 768 F. Supp. 2d at 442.

These cases all support admissibility of the evidence regarding FDA skepticism. Here, Drs. Kaliner and Carr's testimony is not "pure speculation." Rather, they will "testify as to what the FDA did, and what it said…[and] what they mean." *In re Mirena IUD Prod. Liab. Litig.*, 169 F. Supp. 3d at 466. [redacted]

[redacted]

III. APOTEX MISSTATES THE FDA EXPERIENCE OF PLAINTIFFS' EXPERTS.

Apotex misstates the facts when it asserts that "neither Dr. Kaliner nor Dr. Carr has any expertise that even arguably could provide a foundation for testimony as to FDA's state of mind or internal deliberations. Neither has worked for the FDA." *Id.* at 3.

Drs. Kaliner and Carr both worked [redacted], and Dr. Carr worked for the FDA in the Division of Pulmonary and Allergy Drug Products, *see* Aptx Exh. F at 1, the very division responsible for approval of Dymista®, and the one that made the statements forming the basis of Dr. Carr's skepticism opinions. *See, e.g.*, Pltfs' Exhs. 1-4. They are familiar with the FDA's typical practices for the approval of allergic rhinitis treatments, and so they are qualified to testify regarding the differences between the usual process and Dymista®'s approval. These doctors' *actual* experience further supports the admissibility of their opinions. They are eminently qualified to opine on the FDA's statements and their meaning.

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EXHIBIT 1

EXHIBIT 2

EXHIBIT 3

EXHIBIT 4

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS, INC. and CIPLA LTD. Plaintiffs, v. APOTEX, INC. and APOTEX CORP. Defendants.	)	Civil Action No. 14-1453 (LPS)

APOTEX'S REPLY IN SUPPORT OF ITS FIRST MOTION *IN LIMINE*:
TO EXCLUDE TESTIMONY REGARDING FDA'S STATE OF MIND

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Apotex has moved to exclude all testimony from Plaintiffs' witnesses—in particular, their expert witnesses Michael Kaliner and Warner Carr—as to FDA's state of mind concerning purported "skepticism" as to Dymista®'s efficacy. To be clear, Apotex is not moving to exclude FDA correspondence from evidence, or to bar these experts from relying on such correspondence within the scope of the rules of evidence. Instead, Plaintiffs' experts should be barred from speculating as to what FDA had in mind when it wrote the letters at issue. Not only would such testimony be inadmissible as speculative, but it also would lack foundation. Dr. Carr, who was involved in the FDA approval process for Dymista®, admitted FDA did not express skepticism as to Dymista®'s efficacy:

> [Q] My question is: Did any of these people that you're referring to in any of these references or otherwise at FDA ever say in substance to you, we are skeptical that if you take [Dymista] and give it to one of your patients, we're skeptical that it will be more efficacious than azelastine or Flonase given alone? . . .
>
> A Again, I think I've answered that question already. It's out of the purview of the conversation I would have with the FDA. They just don't have those conversations with you and so the answer would be no."

Carr Dep. Tr. at 188:23–189:8

In short, any testimony by Dr. Kaliner or Dr. Carr as to "FDA's skepticism" necessarily would be based on speculation. *See, e.g.*, Kaliner Opening Report ¶ 103 ("[I]n my opinion, the FDA was very skeptical that Dymista® would be a therapeutically effective drug with benefits beyond the individual ingredients."); Carr Opening Report ¶ 67 ("In my opinion, the FDA was very skeptical that Dymista® could be approved[.]"). Such speculation should be barred under Federal Rules of Evidence 401, 702, and 703; *see also Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 590 (1993) ("[T]he word 'knowledge' [in Rule 702] connotes more than subjective belief or unsupported speculation.").

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Exhibit 13

IN THE UNITED STATES DISTRICT COURT
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MEDA PHARMACEUTICALS, INC. and CIPLA LTD.	)	
Plaintiffs,	)	Civil Action No. 14-1453 (LPS)
v.	)	
APOTEX, INC. and APOTEX CORP.	)	
Defendants.	)	

APOTEX'S SECOND MOTION *IN LIMINE*:
TO EXCLUDE HEARSAY SCIENTIFIC REPORT AND RELATED TESTIMONY

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Apotex moves to exclude as hearsay Plaintiffs' Exhibit PTX 129, "Confidential Avomeen Analytical Services Report." This report was produced along with the expert report of Dr. Hugh Smyth, submitted on behalf of Plaintiffs. [redacted] But Plaintiffs never disclosed any of the individuals who conducted the testing as fact or expert witnesses in this matter, never identified them as trial witnesses, and never offered them for depositions. Thus, this report is inadmissible hearsay under Federal Rules of Evidence 801 and 802, and also lacks a proper foundation. The exhibit should be excluded from evidence, and Dr. Smyth should not be allowed to introduce the substance of that report into evidence during his trial testimony.[1]

In *Hutchinson v. Groskin*, the Second Circuit held it was error to permit the defendant's expert to testify about the letters of other experts and to give an opinion about whether his own opinion was consistent with those expressed in the letters. "By asking [its expert] Dr. Bronson to identify the documents, offer his own opinion regarding plaintiff's prognosis, and then state whether his opinion was consistent with those expressed in the documents, defense counsel used Dr. Bronson as a conduit for hearsay testimony. Defense counsel thereby introduced the purported opinions of Doctors Patterson, Rigel, and Karakousis, who were not disclosed as experts during discovery and whom plaintiff had no opportunity to examine." 927 F.2d 722, 725 (2d Cir. 1991). As another court further explained, applying the holding of *Groskin* to exclude certain reports, "the gravamen of the ruling was the lack of disclosure and opportunity to cross examine, factors that also exist here." *Glowczenski v. Taser Int'l, Inc.*, 928 F. Supp. 2d 564, 586 (E.D.N.Y. 2013), *aff'd in part, dismissed in part*, 594 F. App'x 723 (2d Cir. 2014).

[1] PTX 129 is attached as Exhibit G, and the relevant portions of Dr. Smyth's report are attached as Exhibit H. The relevant portions of the claim charts appended to Dr. Smyth's report which should be struck are marked in Exhibits I-N. The relevant portions of Dr. Michael Kaliner's Opening Report, relying on the Avomeen report and which should be stricken, are attached as Exhibit O.

In *In re Imperial Credit Indus., Inc. Sec. Litig.*, the district court excluded parts of an expert report because it relied "upon an excerpts [sic] from an opinion by another expert" that had been generated for another litigation and thus the opposing side had not had any opportunity to depose or cross-examine that expert. 252 F. Supp. 2d 1005, 1012 (C.D. Cal. 2003), *aff'd sub nom.*, *Mortensen v. Snavely*, 145 F. App'x 218 (9th Cir. 2005). And in *Matter of James Wilson Associates*, the Seventh Circuit affirmed the exclusion of testimony critical to a contested issue because it had merely been reported to the expert and the declarant himself should have been the one to testify. 965 F.2d 160, 173 (7th Cir. 1992). "The issue was the state of the building, and the expert who had evaluated that state—the consulting engineer—was the one who should have testified. The architect could use what the engineer told him to offer an opinion within the architect's domain of expertise, but he could not testify for the purpose of vouching for the truth of what the engineer had told him—of becoming in short the engineer's spokesman." *Id.*

Simply put, "Rule 703 does not sanction the simple transmission of hearsay; it only permits an expert opinion based on hearsay." *United States v. Tomasian*, 784 F.2d 782, 786 (7th Cir. 1986). "[O]ne expert may not give the opinion of another expert who does not testify." *Tokio Marine & Fire Ins. Co. v. Norfolk & W. Ry. Co.*, 172 F.3d 44 (4th Cir. 1999) (unpublished) (citing cases); *see also United States v. Grey Bear*, 883 F.2d 1382, 1392-93 (8th Cir. 1989) ("[Rule] 703 does not permit an expert witness to circumvent the rules of hearsay by testifying that other experts, not present in the courtroom, corroborate his views"); *American Key Corp. v. Cote National Corp.*, 762 F.2d 1569, 1580 (11th Cir. 1985) ("Expert opinions ordinarily cannot be based upon the opinions of others whether those opinions are in evidence or not"); *6816.5 Acres of Land etc v. United States*, 411 F.2d 834, 839-40 (10th Cir. 1969) ("the trial court must take steps to exclude any expert opinion that is predicated upon another opinion"); *Taylor v. B. Heller and Co.*, 364 F.2d

608, 613 (6th Cir. 1966) ("expert opinion may not be based upon the opinion of others, either in evidence or not in evidence").

Based on this authority and the Federal Rules of Evidence, Apotex requests that the Court (1) exclude from evidence PTX 129, the Confidential Avomeen Report conveying the results of various testing appended to the Smyth Opening Report as Exhibit 5, (2) strike the relevant portions of Dr. Smyth's expert report, and (3) bar Plaintiffs' trial witnesses from discussing the substance of that report at trial. *See* Fed. R. Evid. 801, 802. The barred subject matter should include the so-called "claims charts" appended to the expert report of Dr. Smyth that rely on the Avomeen Report to opine that the products in question meet the limitations of the asserted claims.

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Exhibit G

Exhibit H

Exhibit I

Exhibit J

Exhibit K

Exhibit L

Exhibit M

Exhibit N

Exhibit O

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and **CIPLA LTD.**,	)	
Plaintiffs,	)	
v.	)	C.A. No. 14-1453-LPS
APOTEX INC. and **APOTEX CORP. ,**	)	
Defendants.		

PLAINTIFFS' OPPOSITION TO APOTEX'S SECOND MOTION *IN LIMINE*
TO EXCLUDE HEARSAY SCIENTIFIC REPORT AND RELATED TESTIMONY

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Apotex seeks to exclude as "inadmissible hearsay" portions of Plaintiffs' formulation expert Dr. Hugh Smyth's[1] testimony that rely on PTX 129, a report prepared by Avomeen Analytical Services ("Avomeen Report"), a third-party, FDA-registered testing laboratory. Apotex also seeks to exclude portions of Plaintiffs' clinician expert Dr. Kaliner's opinions relying on Dr. Smyth opinions based on the Avomeen testing.[2] The Court can and should deny Apotex's motion based on either of the following: (1) Plaintiffs experts' reliance on this testing is wholly permissible under F.R.E. 703; and/or (2) the Avomeen Report is not hearsay. Also, this case is set for a ***bench trial***, which further weighs in favor of denying Apotex's motion.

I. THE AVOMEEN REPORT IS ENTIRELY APPROPRIATE FOR RELIANCE BY PLAINTIFFS' EXPERTS

The Avomeen Report is not hearsay. But even if it was hearsay, the Avomeen Report is precisely the type of data the law allows experts to rely upon under F.R.E. 703: "[i]f experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted." Indeed, the Federal Circuit has explained that "numerous courts have held that reliance on *scientific test results prepared by others* may constitute the type of evidence that is reasonably relied upon by experts." *Monsanto Co. v. David*, 2008 WL 304751, at *5 (Fed. Cir. Feb. 5, 2008) (emphasis added).

[redacted]

[2] Dr. Kaliner does not rely on the Avomeen Report at all, but instead appropriately relies on Dr. Smyth's formulation opinions—just the "kinds of facts or data" that a clinician would rely upon. F.R.E. 703.

Here, the Avomeen Report contains data of formulation characteristics—precisely the sort of "facts and data" that formulation experts like Dr. Smyth reasonably rely upon. And, Dr. Smyth independently evaluated Avomeen's testing and found it "appropriate." Pltfs' Exh. 5. In fact, Apotex's formulation expert Dr. Maureen Donovan, in her rebuttal to Dr. Smyth, relied on the Avomeen Report to support her opinions.[3] Pltfs' Exh. 6. Both F.R.E. 703 and the Federal Circuit *Monsanto* case therefore compel denial of Apotex's motion.

II. APOTEX HAD THE OPPORTUNITY TO DEPOSE AVOMEEN

Ignoring *Monsanto*, Apotex cites various inapposite cases that do not support its motion. In Apotex's own words, the "gravamen" of each of its cases was a "lack of disclosure and opportunity to cross-examine." (Ap. Br. at 1.) But that "gravamen" is missing here. Plaintiffs produced the Avomeen Report in June 2016, specifically disclosing Avomeen and four employee technicians who conducted the testing, but Apotex *never sought* their deposition. Aptx Exh. G at MEDA_APTX03504759. Dr. Smyth also relies on (1) other testing conducted by Dr. Matthew Herpin, and (2) the factual statements of another witness Alexander D'Addio but, in contrast, Apotex deposed Dr. Herpin and requested a *second deposition* of Dr. D'Addio. Because Apotex could have, but failed to, at any time since June ask for a deposition of Avomeen, Apotex has no one to blame but itself for having failed to act diligently.

Additionally, the parties reserved the right to call additional trial witnesses to establish the admissibility of any trial exhibit if its admissibility is challenged, so Plaintiffs can call an Avomeen witness to testify that the data reflected in the Avomeen Report were generated by machines used to perform the testing and that the data was not manipulated. *See* Proposed Joint

[3] Dr. Donovan's rebuttal report also does not question the accuracy or authenticity of the Avomeen Report, nor question the reasonableness of Dr. Smyth's reliance upon the data contained therein.

Pretrial Order, Section V(A). Moreover, as stated above, even if it is inadmissible, no Avomeen trial witness is necessary for Dr. Smyth to rely on the Avomeen Report. Apotex's motion should be denied on this basis alone.

III. THE AVOMEEN REPORT IS NOT HEARSAY UNDER F.R.E. 801

Finally, in any event, the Avomeen Report is not hearsay. F.R.E. 801(c) defines hearsay as a "statement" made by a "declarant." And F.R.E. 801(a) defines a "statement" to mean "*a person's* oral assertion, written assertion," while F.R.E. 801(b) defines a "declarant" as "a *person* who made the statement." (emphases added). The Avomeen Report is not a *statement* made by a *declarant*. [redacted] The only human intervention in acquiring the data in the Avomeen Report was the preparation of samples, but as implicitly recognized in *U.S. v. Moon*, such minor intervention does not convert machine-generated data into a "statement." 512 F.3d 359, 362 (7th Cir. 2008).

The Third Circuit and numerous other courts have held that such machine-generated data are not hearsay. *See U.S. v. Khorozian*, 333 F.3d 498, 506 (3d Cir. 2003) (holding that the automatically-generated header on a fax cannot be hearsay because "nothing said by a machine ... is hearsay"); *U.S. v. Washington*, 498 F.3d 225, 231 (4th Cir. 2007) (holding that laboratory machine printouts reflecting the presence of PCP and alcohol in blood samples "generated by the machines were not hearsay statements"); *U.S. v. Hamilton*, 413 F.3d 1138, 1142 (10th Cir. 2005) (holding that "computer-generated" header information was not hearsay); *L-3 Commc'ns Corp. v. Sony Corp.*, 2013 WL 5799867, at *2 (D. Del. Oct. 25, 2013) (citing *Khorozian* with approval). Particularly relevant here, the Seventh Circuit in *Moon*, held that chromatographs—like the chromatographs in this Avomeen Report—were not "statements." 512 F.3d at 362.

Apotex's Second Motion should be denied.

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EXHIBIT 5

EXHIBIT 6

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS, INC. and CIPLA LTD.	)	
Plaintiffs,	)	Civil Action No. 14-1453 (LPS)
v.	)	
APOTEX, INC. and APOTEX CORP.	)	
Defendants.	)	

APOTEX'S REPLY IN SUPPORT OF ITS SECOND MOTION *IN LIMINE*:
TO EXCLUDE HEARSAY SCIENTIFIC REPORT AND RELATED TESTIMONY

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Plaintiffs argue in response to Apotex's motion to exclude the "Confidential Avomeen Analytical Services Report" that it is the kind of report typically relied upon by experts, that it is not hearsay, and that Apotex could have deposed its authors. Not so. To be sure, "[i]f experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted." Fed. R. Evid. 703. But experts in the field of formulation do *not* typically rely on reports *generated in anticipation of litigation*. For example, in *Soden v. Freightliner Corp.*, the Court upheld the exclusion of a report as not reasonably relied upon by experts in the field because, among other reasons, "the statistics on which [the expert] relied were prepared strictly in anticipation of litigation and were based on information received from" an entity related to one of the parties. 714 F.2d 498, 503 (5th Cir. 1983). In the words of another court: "The rules do not permit an expert to rely upon excerpts from opinions developed by another expert for the purposes of litigation." *In re Imperial Credit Indus., Inc. Sec. Litig.*, 252 F. Supp. 2d 1005, 1012 (C.D. Cal. 2003).

At a minimum, the report itself cannot be admitted because it is hearsay. Courts routinely exclude "reports" created by non-testifying experts but relied upon by testifying experts. *See, e.g.*, *Malletier v. Dooney & Bourke, Inc.*, 525 F. Supp. 2d 558, 666 (S.D.N.Y. 2007) ("it is clear" that expert could not disclose regression analysis done by another expert because the "analysis has no probative value independent of [his own] report"). Every case cited by Plaintiffs involves *automatic machine-generated printouts* like fax headers. The Avomeen Report is nothing of this sort. It is nearly 20 pages of text written by human beings, describing results obtained by human testing. It is hearsay.

Finally, Apotex had no reason to depose the authors of the report. The report was submitted after the close of fact discovery, and the authors were not disclosed as experts and did not submit any expert report.

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Exhibit 14

IN THE UNITED STATES DISTRICT COURT
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Plaintiffs,	)	Civil Action No. 14-1453 (LPS)
v.	)	
APOTEX, INC. and APOTEX CORP.	)	
Defendants.	)	

APOTEX'S THIRD MOTION *IN LIMINE*:
TO EXCLUDE EVIDENCE OF COMMERCIAL SUCCESS

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Apotex moves to exclude Plaintiffs' purported evidence of commercial success in this case because a "blocking patent" renders such evidence legally irrelevant in the context of this case.[1]

As the Court is aware, "commercial success" is a potential theory of secondary considerations of non-obviousness. But evidence of commercial success is relevant to the obviousness analysis only to the extent it shows (1) a clear financial incentive to practice the claimed invention existed as of the priority date, and (2) that skilled artisans nonetheless did not practice that claimed invention despite having an opportunity to do so because it was not obvious. *See, e.g.*, *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1376 (Fed. Cir. 2005) ("Commercial success is relevant because the law presumes an idea would successfully have been brought to market sooner, in response to market forces, had the idea been obvious to persons skilled in the art.").

Where, as here, a patent barred skilled artisans from practicing the claimed invention, evidence of later commercial success does not inform the question of obviousness. As the Federal Circuit explained: "Where 'market entry by others was precluded [due to blocking patents], the inference of non-obviousness of [the asserted claims], from evidence of commercial success, is weak.'" *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 740 (Fed. Cir. 2013) (quoting *Merck*, 395 F.3d at 1377) (brackets in original)). This Court applied this principle in *Warner Chilcott Co, LLC. v. Teva Pharm. USA, Inc.*, holding that "Plaintiffs' evidence of the commercial success . . . fails to raise a genuine issue of material fact" because "P&G's U.S. Patent No. 5,583,122, claiming the risedronate compound, would have discouraged development of risedronate products." 37 F. Supp. 3d 731, 739 (D. Del. 2014), *aff'd*, 594 F. App'x 630 (Fed. Cir. 2014).

[1] Apotex recently learned that its commercial success expert will be unable to testify at trial due to a sudden illness, and the parties will be discussing options to address this unfortunate situation. The current *in limine*, if granted, would moot this issue.

This case also involves a blocking patent. United States Patent No. 5,164,194 ("the '194 patent"), of which Astelin® is the commercial embodiment, was filed on July 12, 1990, and did not expire until May 2011. PTX 1650, [redacted] Claim 1 covers methods of using medicaments that "contain" azelastine to treat allergies: "A method for the treatment of irritation or disorders of the nose and eye which comprises applying directly to nasal tissues or to the conjunctival sac of the eyes *a medicament which contains* a member selected from the group consisting of *azelastine* and its physiologically acceptable salts." Ex. P (emphasis added).

This patent claim also covers Dymista®, which is a medicament that contains azelastine and a second drug, fluticasone. Thus, the '194 patent would have blocked others from practicing the invention claimed in the patents-in-suit. In response to this argument, Plaintiffs have asserted that the claim term "contains" limits the method claimed in the '194 patent to medicaments with azelastine or its salts as an active ingredient. In other words, the claim does not cover medicaments with another active ingredient like fluticasone.

Plaintiffs' argument is wrong as a matter of claim construction. It is "well established" that "'containing' is generally an open-ended term that is synonymous with 'comprising' or 'including' and does not exclude additional, unrecited elements." *INVISTA N. Am. S.a.r.l. v. M & G USA Corp.*, 951 F. Supp. 2d 604, 615 (D. Del. 2013); *see also* MPEP § 2111.03. Thus, as a matter of law, any skilled artisan who combined azelastine hydrochloride and fluticasone propionate into a single nasal spray for the treatment of allergic rhinitis before the priority date of the patents-in-suit would have infringed the '194 patent. That is, such a product would have been "a medicament which contains a member selected from the group consisting of azelastine and its physiologically acceptable salts" "for the treatment of irritation or disorders of the nose and eye."

Given the existence of this blocking patent, evidence of commercial success is irrelevant in this case. Even assuming Plaintiffs could show that Dymista® is a "commercial success" (which

is disputed), such evidence would be legally irrelevant because the '194 patent explains why those skilled in the art did not practice the invention claimed in the patents-in-suit before June 2002. This is not a case where the owner of the '194 patent was actively trying to license the patent. *See, e.g.*, Jarosz Dep. Tr. 93:9-18 [redacted] *cf. UCB, Inc. v. Accord Healthcare, Inc.*, 2016 WL 4376346, at *9, *25 (D. Del. Aug. 15, 2016) (holding that commercial success still relevant if the relevant compounds "were available through licensing" and where the inventor actively "tr[ied] to find a licensee" for the patents). [redacted]

In sum, evidence of commercial success should be excluded in this case because it is legally irrelevant. Fed. R. Evid. 401. Even if evidence of commercial success were probative (and it is not), its minimal probative value would be clearly outweighed by the undue waste of time and judicial resources in light of the clear motivation to combine azelastine hydrochloride and fluticasone propionate together in a single nasal spray, as described in Exhibit 5 to the pretrial order and the introductory paragraph to these motions *in limine*. *Agrizap, Inc. v. Woodstream Corp.*, 520 F.3d 1337, 1344 (Fed. Cir. 2008) ("[O]bjective evidence of nonobviousness simply cannot overcome . . . a strong prima facie case of obviousness.").

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS INC. and **CIPLA LTD.**,	)	
Plaintiffs,	)	
v.	)	C.A. No. 14-1453-LPS
APOTEX INC. and **APOTEX CORP. ,**	)	
Defendants.	)	

PLAINTIFFS' OPPOSITION TO APOTEX'S THIRD MOTION *IN LIMINE*:
TO EXCLUDE EVIDENCE OF COMMERCIAL SUCCESS

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III. THE '194 PATENT DOES NOT COVER COMBINATION PRODUCTS 3

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Eli Lilly & Co. v. Teva Parenteral Medicines, Inc.,
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37 F. Supp. 3d 731 (D. Del. 2014) 2

Statutes

35 U.S.C. § 271(e)(1) 3

The Court should deny Apotex's third motion *in limine* ("Third Motion") seeking to exclude Plaintiffs' evidence of "commercial success" of Dymista® (the preferred embodiment of the patents-in-suit) for four reasons. ***First***, this is an issue to be determined on the merits, either at trial or on dispositive motion, not in an *in limine* motion. ***Second,*** U.S. Patent No. 5,164,194 ("the '194 patent") does not qualify as a "blocking patent," contrary to Apotex's arguments.[1] ***Third,*** Apotex misapprehends the scope of the '194 patent's claims; properly construed, the '194 patent does not cover a product that includes fluticasone propionate. ***Fourth***, this is a bench trial, which weighs against exclusion of this evidence.

I. A "BLOCKING PATENT" IS NOT A PROPER GROUND FOR *IN LIMINE* EXCLUSION.

Apotex claims to "move[] to exclude Plaintiffs' purported evidence of commercial success in this case because a 'blocking patent' renders such evidence legally irrelevant in the context of this case." Third Motion at 1. However, in *Merck & Co. v. Teva Pharm., USA, Inc.*, cited by Apotex, the Court did not find that a blocking patent renders evidence of commercial success irrelevant; rather, it held that where "market entry by others was precluded [by a blocking patent], the inference of non-obviousness from evidence of commercial success is *weak*." 395 F.3d 1364, 1377 (Fed. Cir. 2005) (emphasis added). Even if the '194 patent is a blocking patent (it is not), that goes to the *weight* of the commercial success evidence, not its *admissibility*. *See, e.g., Eli Lilly & Co. v. Teva Parenteral Medicines, Inc.*, 2013 WL 3936210, at *4 (S.D. Ind. July 29, 2013) (denying motion *in limine* to exclude commercial success testimony due to the existence of a blocking patent).

Accordingly, a court can determine the applicability of a potential blocking patent only

[1] Plaintiffs respectfully submit that the illness to its expert described in Fn. 1 of Apotex's brief, while unfortunate, should have no bearing on the Court's decision on this *In Limine* motion.

after the court considers and weighs the evidence. Tellingly, Apotex cites no *In Limine* determinations on this subject matter. Rather, Apotex simply seeks to have the Court determine blocking patent/commercial success during the motion *In Limine* process, in order to exclude from trial *disputed facts* such as (1) whether the '194 patent covers Dymista®;[2] (2) whether it would have precluded a skilled artisan from launching a competing combination product; and (3) whether the '194 patent has any effect on Plaintiffs' commercial success evidence.

II. BECAUSE THE '194 PATENT EXPIRED BEFORE DYMISTA®'S LAUNCH, IT IS NOT A BLOCKING PATENT.

The '194 patent expired in May 2011, a year before Dymista®'s launch in May 2012. This fact is fatal to Apotex's contention that the '194 patent is a "blocking patent." First, all Dymista® sales figures that support Plaintiffs' commercial success objective indicia are from sales *after the '194 patent expired*. Plaintiffs do not assert any commercial success in the U.S. during the term of the '194 patent. This is a key distinction from Apotex's cases, where the asserted blocking patents expired *after* the alleged commercial success. *See Merck*, 395 F.3d at 1376 (commercial sales beginning 2003, blocking patent exclusivity expiration 2008); *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 740 (Fed. Cir. 2013) (commercial sales beginning in 2007, blocking patent expiration in 2010); *Warner Chilcott Co., LLC v. Teva Pharm. USA, Inc.*, 37 F. Supp. 3d 731, 739 (D. Del. 2014), *aff'd*, 594 F. App'x 630 (Fed. Cir. 2014) (commercial sales beginning in 2005, blocking patent expiration in 2013).

Next, Apotex wrongly focuses on the priority date (2002) of the patents-in-suit to examine whether the '194 patent is a blocking patent. Third Motion at 2. But the appropriate

[2] Apotex has not submitted any evidence that the '194 patent is a blocking patent. Apotex's reliance on a *hypothetical* question posed to Plaintiffs' expert, John Jarosz, during deposition does not support its position. *See* Third Motion at 3.

question is whether the invention "would successfully have been brought to ***market sooner***," not necessarily before the priority dates for the patents-in-suit. *Merck*, 395 F.3d at 1376 (emphasis added). Here, others had a full year between the '194 patent's expiration in May 2011 and Dymista®'s launch in May 2012 to market a competing product. None did so. Moreover, the 35 U.S.C. § 271(e)(1) safe harbor would have insulated any R&D activities in support of filing an FDA application for a competing combination product even during the unexpired term of the '194 patent. So a competitor could have obtained FDA approval and been ready to launch a competing product on the first day after expiration of the '194 patent. Again, none did so.

Finally, the '194 patent not only could not, but in fact ***did not***, block others from pursuing the inventions claimed by the patents-in-suit. The '194 patent was assigned to Asta Pharma, and it eventually was acquired by Plaintiff Meda. But it was Plaintiff Cipla—a completely unrelated and separate competing entity—that developed the patents-in-suit, without assignment, license, or other conveyance of the '194 patent. Cipla was not blocked, and neither were the many companies that copied Cipla's Duonase product. This explains why Apotex's motion is silent as to Plaintiffs' commercial success evidence related to Duonase or the Indian copycat products.

III. THE '194 PATENT DOES NOT COVER COMBINATION PRODUCTS.

Contrary to Apotex's contention, the '194 patent does not cover *all* medicaments containing azelastine. The '194 patent claims a closed *Markush* group wherein the active ingredient is a member "selected from the group ***consisting of*** azelastine and its physiologically acceptable salts." "Consisting of" is a closed transition phrase that, when used in a *Markush* group, limits the scope of the claims to only those alternatives in the group. *See Multilayer Stretching Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1357-58 (Fed. Cir. 2016). Because the '194 patent is limited to medicaments containing *only* azelastine or its salts as active ingredients, it cannot cover Dymista®, which contains fluticasone propionate.

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Dated: November 6, 2016

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MEDA PHARMACEUTICALS, INC. and CIPLA LTD.	)	
Plaintiffs,	)	Civil Action No. 14-1453 (LPS)
v.	)	
APOTEX, INC. and APOTEX CORP.	)	
Defendants.	)	

APOTEX'S REPLY IN SUPPORT OF THIRD MOTION *IN LIMINE*:
TO EXCLUDE EVIDENCE OF COMMERCIAL SUCCESS

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Plaintiffs have failed to explain how their purported evidence of commercial success is relevant in this case. First, Plaintiffs admit that evidence of commercial success is "weak" when there exists a "blocking patent." Opp. at 1. While they argue that such evidence can still be relevant, they have failed to explain why that is the case here. As their own expert explained, commercial success is relevant because "[i]f [the invention] had been obvious, one would have expected economically rational sellers to have adopted the patented technology before patenting occurred." Ex. Q, Jarosz Report ¶ 73. But when asked to assume the existence of a blocking patent, he admitted: "If there's no way to do it [practice the claimed invention] legally, then I'm not sure it would be rational to attempt to do it." Ex. R, Jarosz Dep. Tr. 86:14-24. As Plaintiffs' own expert concedes, a skilled artisan before the priority date would not have had a "rational" economic basis to practice the claimed invention, thus defeating the point of a "commercial success" theory.

Second, Plaintiffs cannot salvage their commercial success theory by arguing that the '194 patent is not a blocking patent because it expired in 2011, one year before Dymista® launched. "Commercial success" for purposes of obviousness is assessed as of the priority date—here, June *2002*—not in 2011. Regardless, Plaintiffs ignore that, since 2003 (and certainly by 2011), their application for the patents-in-suit had become public—thus discouraging others from practicing the claimed combination of azelastine and fluticasone. *See* DTX 136 ('620 patent PCT publication date December 24, 2003).

Finally, Plaintiffs misconstrue the scope of the '194 patent when arguing it does not claim combinations that contain azelastine and other drugs, such as fluticasone. But the plain language of the patent claims "a medicament *which contains* a member selected from the group consisting of azelastine and its physiologically acceptable salts." Ex. P (emphasis added). Under patent law, "contains" is a non-limiting term. *See* Mot. at 2. Thus, the '194 patent covers medicaments that include, but are not limited to, azelastine (or its salts)—e.g., azelastine combined with fluticasone.

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Exhibit P

US005164194A

United States Patent [19]

Hettche

[11] Patent Number: 5,164,194

[45] Date of Patent: Nov. 17, 1992

[54] **AZELASTINE CONTAINING MEDICAMENTS**

[75] Inventor: **Helmut Hettche**, Dietzenbach, Fed. Rep. of Germany

[73] Assignee: **Asta Pharma AG**, Fed. Rep. of Germany

[21] Appl. No.: **551,644**

[22] Filed: **Jul. 12, 1990**

Related U.S. Application Data

[63] Continuation of Ser. No. 268,772, Nov. 9, 1988, abandoned.

[30] **Foreign Application Priority Data**

Nov. 13, 1987 [DE] Fed. Rep. of Germany 3738681

[51] **Int. Cl.**[5] **A61K 9/14**; A61K 31/55

[52] **U.S. Cl.** **424/489**; 424/43; 424/45; 424/464; 424/422; 514/212

[58] **Field of Search** 424/43, 464, 422, 45, 424/489; 514/212; 222/394; 141/24; 239/302; 248/108

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Attorney, Agent, or Firm—Cushman, Darby & Cushman

[57] **ABSTRACT**

A medicament for nasal use or for use in the eye which contains as active ingredient azelastine or a physiologically acceptable salt.

12 Claims, No Drawings

PLAINTIFFS' TRIAL EXHIBIT PTX0073 exhibitsticker.com

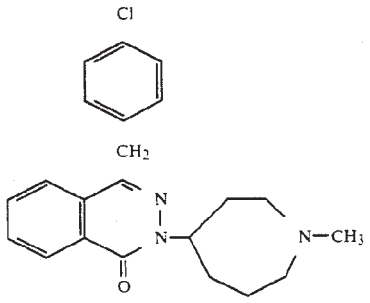
AZELASTINE CONTAINING MEDICAMENTS

This is a continuation of application Ser. No. 07/268,72, filed Nov. 9, 1988, now abandoned.

The present invention relates to the treatment of nasal and eye tissues with azelastine.

BACKGROUND OF THE INVENTION

Azelastine is a phthalazinone derivative having the following structural formula:



The chemical designation is: 4-(4-chlorobenzyl)-2-(perhydro-1-methyl-azepine-4-yl)-1-(2H)phthalazinone. Azelastine is used in particular for prophylactic treatment of asthma. Azelastine also has anti-allergic and antihistamine properties, see German Patent No. 21 64 058.

SUMMARY OF THE INVENTION

It has now been found that azelastine and its physiologically acceptable salts display particularly advantageous and surprising effects when the corresponding formulations are applied directly in the nose and/or to the conjunctival sac of the eye.

Elimination or marked relief has thus been achieved not only in allergy-related rhinitis, but also in the normal common cold (caused, for example, by rhino viruses) as well as in the vasomotor cold and the symptoms of illness triggered thereby.

It is surprising in this context that local nasal application also has a favorable effect on the mucous membrane of the eye (elimination or relief of reddening of the eye and of eye irritation) so that the additional use of eye drops is frequently superfluous.

Other indications for the application/use of the invention are, for example: non-specific conjunctivitis, allergy-related conjunctivitis, allergic blepharoedema, catarrhal conditions in the eye or nose, coryza.

Surprisingly, in addition, none of the tiredness that arises with other applications was observed with use according to the invention.

Furthermore the invention provides a way to overcome problems which arise because of azelastine's exceptionally penetrating, bitter taste. The degree of the bitter taste is so intense that it is even found to be unpleasant in a dilution of 1 : 706. This problem has hitherto prevented oral application of azelastine solutions, since patients refuse to take such azelastine solutions or suspensions. It wa surprisingly found in trial subjects that this bitter taste was no longer in evidence when the azelastine formulations of the invention were sprayed into the nose. As a result, it is possible in this manner to apply solutions or suspensions of azelastine and its salts nasally without taste impairment. Moreover the bitter taste is barely perceptible when the sprayed azelastine solution or suspension runs down into the pharynx.

Therefore, the object of the present invention is to provide a well tolerated and improved remedy based on azelastine or its salts for the treatment both of the allergy-related and vasomotor-related conditions as well as rhino virus-related cold and its accompanying symptoms.

A further object of the present invention is to provide medical formulations which are adapted to direct application to nasal and eye tissues.

The preferred embodiment of the invention is a sterile and stable aqueous solution of azelastine or one or more of its salts which can be used in the form of drops, ointments, creams, gels, insufflatable powders or, in a particularly preferred embodiment, in the form of a spray (preferably a nasal spray). The spray can be formed by the use of a conventional spray-squeeze bottle or a pump vaporizer. In addition, it is also possible to use compressed gas aerosols. For example 0.03 to 3 mg of azelastine base should be released per individual actuation.

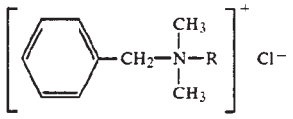
Through the use of nasal drops or a nasal spray, the dosage of azelastine required for the treatment of the cold is lowered approximately tenfold and hence the incidence of the appearance of side effects is considerably lower than in the case of the application of azelastine in orally taken dosage forms such as tablets or syrups which distribute the active substance throughout the entire body. In the treatment of a banal illness such as a cold, a low incidence of side effects is particularly important and thus represents a considerable medical advance.

Solvents which may preferably be used for the formulations of the invention are: water, saturated aliphatic mono and polyvalent alcohols which contain 2-3 carbon atoms (for example ethanol, isopropanol, 1,2-propylene glycol, glycerine), liquid polyglycols (molecular weight 200 to 600).

The solvent used is preferably water or mixtures of water with other physiologically acceptable solvents (for example those mentioned above). Preferably, the amount of the latter solvent in the aqueous mixture should not exceed 15% by weight.

The solutions or formulations preferably contain preservatives and stabilizers. These include, for example: ethylene diamine tetra-acetic acid (edetic acid) and their alkali salts (for example dialkali salts such as disodium salt, calcium salt, calcium-sodium salt), lower alkyl p-hydroxybenzoates, chlorohexidine (for example in the form of the acetate or gluconate), phenyl mercury borate. Furthermore, it is possible, for example, to use sodium-(2- ethylmercurithio)-benzoate generally known as "thimerosal" which may be present in an amount of 0.001 to 0.05, preferably from 0.005 to 0.02, for example 0.01% (weight/volume in liquid formulations, otherwise weight/weight). Other suitable preservatives are: pharmaceutically useful quaternary ammonium compounds, for example cetylpyridinium chloride, tetradecyltrimethyl ammonium bromide, generally known as "cetrimide", benzyldimethyl-[2-[2-[p-(1,1,3,3-tetramethyl- butyl)]phenoxy]ethoxy]-ammonium chloride, generally known as "benzethonium chloride" and myristyl-:-picolinium chloride. Each of these compounds may be used in a concentration of 0.002 to 0.05, for example 0.02% (weight/volume in liquid formulations, otherwise weight/weight). Preferred preserva-

tives among the quaternary ammonium compounds are, however, alkylbenzyl dimethyl ammonium chloride and mixtures thereof, for example the compounds generally known as "benzalkonium chloride". These latter consist of a mixture of the compounds of formula,



in which R represents an alkyl group having the formula C_nH_{2n+1}, wherein n represents a whole number from 8 to 18. The use of a mixture of compounds in which n represents 10 to 14 is particularly preferred and in particular the special compound in which $R=C_{12}H_{25}$ "Benzalkonium chloride" and the compounds of the above formula can be used in concentrations of 0.005 to 0.10, preferably of 0.005 to 0.05, for example of 0.01% (weight/volume for liquid formulations, otherwise weight/weight) and they may optionally be used in combination with 0.2 to 2.0, for example 0.4% (weight/ volume) of 2-phenylethanol.

The formulations of the invention (solutions, suspensions as well as oily solutions or suspensions, ointments, emulsions, creams, gels, dosage aerosols) contain 0.0005 to 2, preferably 0.001 to 1, in particular 0.003 to 0.5% (weight/weight) of azelastine (related to the free azelastine base). Should the azelastine be present-as a salt, the amounts should be recalculated as necessary to give the amounts of azelastine itself mentioned above. In the case of the eye drops, the same azelastine concentrations apply as in the case of the nasal forms.

In the case of powders, the concentration of azelastine base is 0.0005 to 2 percent by weight related to the solid carrier substances.

In the case of solutions, the dosage per nostril is, for example, 0.01 to 0.2 ml, in particular 0.05 to 0.15 ml. Such a dosage should be applied once to several times, preferably 1 to 5 times daily (optionally also hourly).

In the case of use at the eye (eye drops) the dosage is for example 1 drop (about 0.05 ml) of the solution or corresponding amounts of the semi-solid formulation forms.

Possible acid components for azelastine salts are, for example: hydrohalic acids (HCl, HBr), sulphuric acid, phosphoric acids (H_3PO_4, metaphosphoric acid, polyphosphoric acids), nitric acid, organic mono-, di- or tricarboxylic acids of aliphatic, alicyclic, aromatic or heterocyclic organic acids (embonic acid, citric acid, tartaric acid), aliphatic and aromatic sulfonic acids (for example camphorsulfonic acid).

The total amounts of preservatives in the formulations (solutions, ointments, etc.) is between 0.001 to 0.10, preferably 0.01 g per 100 ml of solution/suspension or 100 g of formulation.

In the case of preservatives, the following amounts of individual substances can, for example, be used:

thimero sal 0.002–0.02%;

benzalkonium chlorie 0.002 to 0.02% (in combination with thimero sal the amount of thimero sal is, for example =0.002 to 0.005%;);

chlorhexidine acetate or gluconate 0.01 to 0.02%;

phenyl mercuric/nitrate, borate, acetate 0.002–0.004%;

p-hydroxybenzoic acid ester (for example a mixture of the methyl ester and propyl ester 7 : 3): 0.05–0.15, preferably 0.1%.

The preservative used is preferably a combination of edetic acid (for example as the disodium salt) and benzalkonium chloride. In this combination, the edetic acid is used in a concentration of 0.05 to 0.1%, benzalkonium chloride being used in a concentration of 0.005 to 0.05%, preferably 0.01%.

In the case of solutions/suspensions reference is always made to percent by weight/volume, in the case of solid or semi-solid formulations to percent by weight/-weight of the formulation.

Further auxiliary substances which may, for example, be used for the formulations of the invention are: polyvinyl pyrrolidone, sorbitan fatty acid esters such as sorbitan trioleate, polyethoxylated sorbitan fatty acid esters (for example polyethoxylated sorbitan trioleate), sorbimacrogol oleate, synthetic amphotensides (tritons), ethylene oxide ethers of octylphenolformaldehyde condensation products, phosphatides such as lecithin, polyethoxylated fats, polyethoxylated oleotriglycerides, polyethoxylated fatty alcohols. In this context, polyethoxylated means that the relevant substances contain polyoxyethylene chains, the degree of polymerization of which is generally between 2 to 40, in particular between 10 to 20. These substances are preferably used to improve the solubility of the azelastine components.

In the case of dosage forms containing water, it is optionally possible to use additional isotonization agents. Isotonization agents which may, for example, be used are: saccharose, glucose, glycerine, sorbitol, 1,2-propylene glycol, NaCl.

The isotonization agents adjust the osmotic pressure of the formulations to the same osmotic pressure as nasal secretion. For this purpose these substances are in each case to be used in such amount that, for example, in the case of a solution, a reduction in the freezing point of 0.50° to 0.56° C. is attained in comparison to pure water. In Example 1, for instance, such substances would be used in such an amount which is iso-osmotic with 68 g of sodium chloride (0.68%).

In Example 1, it is possible to use instead of NaCl per 100 ml of solution, for example:

Glucose $1H_2O$ 3.81 g ; saccharose 6.35 g ; glycerine 2.2 g; 1,2-propylene glycol 1.617 g ; sorbitol 3.84 g (in the case of mixtures of these substances correspondingly less may optionally be used).

Moreover, it is possible to add thickening agents to the solutions to prevent the solution from flowing out of the nose too quickly and to give the solution a viscosity of about 1.5 to 3, preferably 2 mPa.s. Such thickening agents may, for example, be: cellulose derivatives (for example cellulose ether) in which the cellulose-hydroxy groups are partially etherified with lower unsaturated aliphatic alcohols and/or lower unsaturated aliphatic oxyalcohols (for example methyl cellulose, carboxymethyl cellulose, hydroxypropylmethylcellulose), gelatin, polyvinylpyrrolidone, tragacanth, ethoxose (water soluble binding and thickening agents on the basis of ethyl cellulose), alginic acid, polyvinyl alcohol, polyacrylic acid, pectin and equivalent agents. Should these substances contain acid groups, the corresponding physiologically acceptable salts may also be used.

In the event of the use of hydroxypropyl cellulose, 0.1% by weight are, for example, used for this purpose.

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It is also possible to add to the formulations buffer substances such as citric acid / sodium hydrogensulphate borate buffer, phosphates (sodium hydrogenorthophosphate, disodium hydrogenphosphate), tromethamol or equivalent conventional buffers in order, for example, to adjust the formulation to a pH value of 6 to 7.5, preferably 6.5 to 7.1.

The amount of citric acid is, for example, 0.01 to 0.14, preferably 0.04 to 0.05 g, the amount of disodium hydrogenphosphate 0.1 to 0.5, preferably 0.2 to 0.3 g per 100 ml of solution. The weights given relate in each case to the anhydrous substances.

In the case of solutions and suspensions, the maximum total concentration of active agent and buffer should be less than 5%, in particular less than 2% (weight-/volume).

For the nasal application a solution or suspension is preferably used which is applied as an aerosol, i.e. in the form of a fine dispersion in air or in another conventional carrier gas, for example by means of a conventional pump vaporizer.

Application as a dosage aerosol is, however, also possible. Dosage aerosols are defined as being pressure packings which contain the azelastine or its salts in the form of a solution or suspension in a so-called propellant. Propellants are pressurized liquid chlorinated, fluorinated hydrocarbons or mixtures of various chlorinated, fluorinated hydrocarbons as well as propane, butane, isobutane or mixtures of these among themselves or with chlorinated, fluorinated hydrocarbons which are gaseous at atmospheric pressure and room temperature. The pressure packing has a dosage valve which, on actuation, releases a defined amount of the solution or suspension of the medicament. The subsequent very sudden vaporization of the propellant tears the solution or suspension of azelastine into the finest droplets or minute particles which can be sprayed into the nose or which are available for inspiration into the nose. Certain plastic applicators are used to actuate the valve and to convey the sprayed suspension into the nose. Propellants that may, however, also be used are: CO_2, nitrous oxide and compressed air.

In the case of application as an aerosol, it is also possible to use a conventional adapter.

When suspensions are used, the maximum particle size of the solid substances (azelastine +auxiliary substances) should not exceed 30 μm.

In the case of use in the form of an insufflatable powder, the maximum particle size of the substances should not be greater than 20 μm.

What occurs is, for example, a vaporizing of solid azelastine or its salts. In this case the azelastine or its salt is, for example, mixed with inert carrier substances or drawn up onto inert carrier substances. Carrier substances which may, for example, be used are: sugars such as glucose, saccharose, lactose and fructose. Also starches or starch derivatives, oligosaccharides such as dextrins, cyclodextrins and their derivatives, polyvinylpyrrolidone, alginic acid, tylose, silicic acid, cellulose, cellulose derivatives (for example cellulose ether), sugar alcohols such as mannitol or sorbitol, calcium carbonate, calcium phosphate. The concentration of azelastine is 1 part by weight of azelastine to 50 to 200,000 parts by weight of carrier substance (0.0005 to 2% of azelastine).

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The invention is illustrated by the following examples.

EXAMPLE 1

Nasal spray or nasal drops or eye drops with 0.1% azelastine hydrochloride as active ingredient

The following are dissolved, in the following order, into 9.00 kg of water: 10 g of azelastine hydrochloride, 5 g of edetic acid disodium salt. 2 H_2O, 68 g of sodium chloride, 1.25 g of alkyl-benzyldimethylammonium chloride (benzalkonium chloride), 4.38 g of citric acid, 64.8 g of sodium monohydrogen-phosphate. 12 H_2O as well as 10 g of hydroxypropylmethyl cellulose.)[1]

[1] Commercially available product, for example methocel E4M premium.

The solution obtained is diluted to 10.05 kg = 10 liters with water. The solution is filtered through a membrane filter of pore size 0.2 μm after careful mixing, the first 500 ml of filtrate being discarded. The filtrate has a pH value of 6.8 ±0.3. This is filled into plastic bottles which are closed with a conventional spray insert or into plastic or glass bottles which are closed with a conventional pump sprayer. In the latter case, pumps with nasal spray inserts are, for example used, which spray about 0.14 ml of solution per actuation. In this manner, 0.14 mg of azelastine hydrochloride are sprayed into the nose per actuation in the form of the solution.

If the above obtained filtrate is filled into the bottles with dropper pipettes conventionally used for nasal drops or eye drops, the solution can be dripped into the nose or eye using a dropper pipette.

EXAMPLE 2

Nasal ointment with 0.1% of azelastine hydrochloride

5 kg of polyoxyethylene stearate[2], 8 kg of cetylstearyl alcohol (Lanette 0), 20 kg of white Vaseline, 15 kg of liquid paraffin and 0.5 kg of silicon oil are melted together in a heatable vessel. 126 g of p-hydroxybenzoic acid methyl ester and 53 g of p-hydroxybenzoic acid propyl ester are dissolved in the melt (temperature of the melt 80° C.). Subsequently, a solution heated to 70° C. of 0.1 kg of azelastine hydrochloride, 140 g of p-hydroxybenzoic acid methyl ester and 60 g of p-hydroxybenzoic acid propyl ester in 51.021 kg of purified water are emulsified with the aid of a high speed stirrer and the emulsion obtained is stirred until cold and repeatedly homogenized at regular time intervals.

[2] Polyoxyethylene-40-stearate, solid, white to cream-colored mass, $D.^{25}$ ca. 1.1, F. 40°–44° C. Solidification point ca. 41° C.

The ointment is filled into tubes which have a tubular extension beyond the thread and are thus particularly suitable for applying the ointment into the nose.

EXAMPLE 3

Dosage aerosol giving off 0.5 mg of azelastine hydrochloride per stroke

About 8.0 kg of a mixture of 70 parts by weight of difluorodichloromethane and 30 parts by weight of 1,2dichlorotetrafluoroethane are cooled to about −55° C. in an appropriate cooling vessel. A mixture of 0.086 kg of precooled sorbitantrioleate and 0.8600 kg of precooled trichlorofluoromethane are dissolved with stirring into this mixture at −55° C. 0.0688 kg of micronized azelastine hydrochloride and 0.0688 kg of micron-

ized lactose are then incorporated in portions into the solution thereby obtained with intensive stirring. The total weight of the suspension thereby obtained is made up to 9.547 kg through addition of more of the mixture of 70 parts by weight of difluorodichloromethane and 30 parts by weight of 1,2-dichlorotetrafluoroethane cooled to about −55° C.

Following closure of the cooling vessel the suspension is again cooled to about −55° C. under intensive stirring. It is then ready to be filled.

With continued stirring the suspension is filled into the conventional suitable aluminum monobloc tins. The monobloc tins are closed immediately after the suspension has been filled using conventional dosage valves which release 0.05 ml of suspension per valve actuation. Actuation of the valve thus releases 0.5 mg of azelastine hydrochloride. Presentation is effected in conjunction with a conventional applicator which permits introduction of the active substance into the nose of the patient.

EXAMPLE 4

Eye drops with 0.05% of azelastine hydrochloride

140 g of polyvinylalcohol (trade name for example: Mowiol 26–88 / Hoechst AG, Frankfurt 80) are stirred into 4 liters of cold water for injection purposes, the suspension is heated to 90° C. and left at this temperature for 45 minutes. After cooling, the solution obtained is mixed with the following solutions:

5 g of azelastine hydrochloride in 1 liter of water for injection purposes, 0.2 g of phenyl mercuric nitrate in 2 liters of water for injection purposes, 70 g of sodium chloride in 1 liter of water for injection purposes.

The mixture is adjusted to a pH value of 6.8 through addition of 0.1 N sodium hydroxide solution, mixed with a solution of 15 g of sodium dihydrogen phosphate.2 H_2O and 21 g of disodium hydrogen phosphate.2 H_2O in 1 liter of water for injection purposes and filled up to 10 liters with water for injection purposes.

Following careful mixing the solution is filtered through a membrane filter of pore size 0.2 μm with glass fiber pre-filter and filled into sterile eye drop bottles under aseptic conditions after discarding a first 500 ml of filtrate.

What is claimed is:

1. A method for the treatment of irritation or disorders of the nose and eye which comprises applying directly to nasal tissues or to the conjunctival sac of the eyes a medicament which contains a member selected from the group consisting of azelastine and its physiologically acceptable salts.

2. A method as set forth in claim **1** in which the medicament contains 0.0005 to 2% (weight/weight) of azelastine or an amount of a physiologically acceptable salt of azelastine which contains 0.0005 to 2% (weight/-weight) azelastine.

3. A method as set forth in claim **2** in which the medicament contains 0.001 to 1% (weight/weight) of azelastine or an amount of a physiologically acceptable salt of azelastine which contains 0.001 to 1% (weight/weight) azelastine.

4. A method as set forth in claim **1** in which the medicament contains 0.003 to 0.5% (weight/weight) of azelastine or an amount of a physiologically acceptable salt of azelastine which contains 0.003 to 0.5% (weight/weight) azelastine.

5. A method as set forth in claim **1** in which the medicament contains a pharmaceutically usable preservative in an amount of 0.001 to 0.1%.

6. A method as set forth in claim **1** in which the medicament is a solution.

7. A method as set forth in claim **1** in which the medicament is an aqueous solution.

8. A method as set forth in claim **1** in which the medicament is a solution which contains 0.001 to 0.05% (weight/volume of solution) of sodium-2-(ethylmercurithio)-benzoate or 0.001 to 0.1% (weight/volume of solution) of alkylbenzyldimethyl ammonium chloride.

9. A method as set forth in claim **1** in which the medicament is applied by spraying.

10. A method as set forth in claim **1** in which the medicament is applied as drops.

11. A method as set forth in claim **1** in which the medicament is a powder.

12. A method for the treatment of a patient suffering from allergy-related, or vasomotor or rhino-related colds or symptoms which comprises applying directly to the patient's nasal tissues or to the conjunctival sac of the patient's eye a medicament which contains a member selected from the group consisting of azelastine and its physiologically acceptable salts.

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APOTEX_AZFL 0054364

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE EXTENDING PATENT TERM
UNDER 35 U.S.C. § 156

PATENT NO.	:	5,164,194
ISSUED	:	November 17, 1992
INVENTOR(S)	:	Helmut Hettche
PATENT OWNER	:	Asta Medica, AG

This is to certify that there has been presented to the

COMMISSIONER OF PATENTS AND TRADEMARKS

an application under 35 U.S.C. § 156 for an extension of the patent term. Since it appears that the requirements of the law have been met, this certificate extends the term of the patent for the period of

349 days

from November 17, 2009, the original expiration date of the patent, subject to the payment of maintenance fees as provided by law, with all rights pertaining thereto as provided by 35 U.S.C. § 156(b).

I have caused the seal of the Patent and Trademark Office to be affixed this 27th day of February 1998.

Bruce A. Lehman

Bruce A. Lehman
Assistant Secretary of Commerce and
Commissioner of Patents and

Exhibit Q

Exhibit R