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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/669,450	01/15/2010	Guoxian Wu	P401165	4251

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EXAMINER	
WANG, SHENGJUN	
ART UNIT	PAPER NUMBER
1627	

MAIL DATE	DELIVERY MODE
06/29/2012	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	12/669,450	WU ET AL.	
	Examiner	Art Unit	
	SHENGJUN WANG	1627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 May 2012*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-17* is/are pending in the application.

5a) Of the above claim(s) *8-17* is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-7* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/15/2010;4/12/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 8-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on May 17, 2012.

Applicant's election with traverse of invention group I in the reply filed on May 17, 2012 is acknowledged. The traversal is on the ground(s) that there is no undue burden for search group I and II. This is not found persuasive because search of group II will not be required for group I. A separated search will be required for group II. Applicants are remind that if group I is found allowable, group II will be rejoined, provide that claims in group II depending from or otherwise requiring all the limitation of the allowable subcombination and are free of 112 issues.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected on the judicially-created basis that it contains an improper Markush grouping of alternatives. See *In re Harnisch*, 631 F.2d 716, 721-22 (CCPA 1980) and *Ex parte Hozumi*, 3 USPQ2d 1059, 1060 (Bd. Pat. App. & Int. 1984). The improper Markush grouping includes species of the claimed invention that do not share both a substantial structural feature and a common use that flows from the substantial structural feature.

The members of the improper Markush grouping do not share a substantial feature and/or a common use that flows from the substantial structural feature for the following reasons:

When the Markush grouping is for alternatives of chemical compounds, the alternatives are regarded as being of a similar nature where the following criteria are fulfilled:

(A) all alternatives have a common property or activity; AND

(B)(1) a common structure is present, that is, a significant structural element is shared by all of the alternatives; OR

(B)(2) in cases where the common structure cannot be the unifying criteria, all alternatives belong to a recognized class of chemical compounds in the art to which the invention pertains.

The phrase "significant structural element is shared by all of the alternatives" refers to cases where the compounds share a common chemical structure which occupies a large portion of their structures, or in case the compounds have in common only a small portion of their structures, the commonly shared structure constitutes a structurally distinctive portion in view of existing prior art, and the common structure is essential to the common property or activity.

The phrase "recognized class of chemical compounds" means that there is an expectation from the knowledge in the art that members of the class will behave in the same way in the context of the claimed invention, i.e. each member could be substituted one for the other, with the expectation that the same intended result would be achieved.

In instant case, the claims read on numerous possible distinct species; there is no substantial structural feature shared by all species, the halogen and nitrogen substituted phenyl moiety is only a small portion of the complex structural herein. Such moiety is old and well - known in various compounds. see, e.g., WO 2007/002325, cited in the PCT report; and WO 2006/137376 (US 8067638 is an English equivalent, see, the abstract and the tables). Further, the compounds do not belong to a recognized class of chemical compounds.

In response to this rejection, Applicant should either amend the claim(s) to recite only individual species or grouping of species that share a substantial structural feature as well as a

common use that flows from the substantial structural feature, or present a sufficient showing that the species recited in the alternative of the claims(s) in fact share a substantial structural feature as well as a common use that flows from the substantial structural feature. This is a rejection on the merits and may be appealed to the Board of Patent Appeals and Interferences in accordance with 35 U.S.C. §134 and 37 CFR 41.31(a) (1) (emphasis provided).

This rejection may be overcome by amending the claims to include only the species that share a single structural similarity (i.e. Ar, L1 and L2 are as defined in the elected species and R3 is lower alkyl or cycloalkyl).

Claim Rejections 35 U.S.C. 103

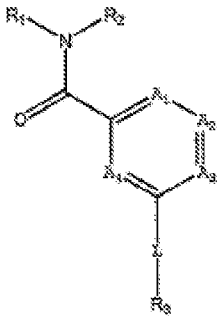
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

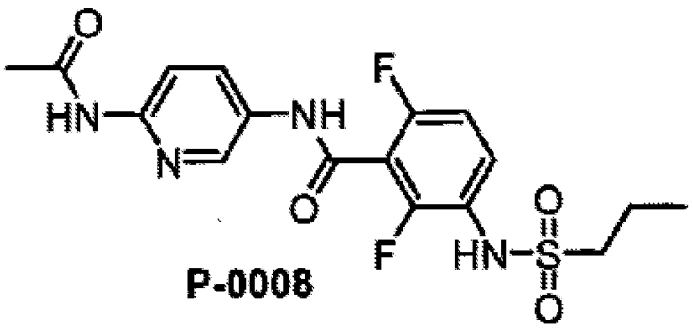
4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimauro et al. (WO 2007/022380).

5. Dimauro et al. teach compounds having a general formula of



I wherein A^1 is CR^4 or N; A^2 is CR^5 or N; A^3 is CR^6 or N; , A4 is CR7 or N, R1 is a pyridyl, wherein the pyridyl may be further substituted with variious substituents, L is –NR7S(O)2-; R3 is alkyl, cycloalkyl, see pages 26-31, and each of R4, R5, R6 and R7 may be hydrogen or halogens. The compounds are useful for modulating the activity of protein cytokinase and for treating cytokinase mediated disease. See, particularly, the abstract, and the claims.

6. Dimauro et al. do not teach expressly the elected compound having the structure of



P-0008 , corresponding to the general formula of Dimauro as R1 is substitued pyridyl, R2 is hydrogen, A1 is CR4 and A4 is CR7, R4 and R7 is fluoros, A2 and A3 are CH, L is -NH-S(O)2-, R3 is propyl.

7. However, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to make a compound according to the general

formula of Dimauro et al. wherein R1 is substitued pyridyl, R2 is hydrogen, A1 is CR4 and A4 is CR7, R4 and R7 are halogen, such as fluoros, A2 and A3 are CH, L is -NH-S(O)2-, R3 is alkyl, such as propyl.

8. A person of ordinary skill in the art would have been motivated to make a compound according to the general formula of Dimauro et al. wherein R1 is substitued pyridyl, R2 is hydrogen, A1 is CR4 and A4 is CR7, R4 and R7 are halogen, such as fluoros, A2 and A3 are CH, L is -NH-S(O)2-, R3 is alkyl, such as propyl because Dimaruo et al. provide such a detailed instruction to reach such a compound. One of ordinary skill in hte art would have reasonably expected that such a compound be active as protein cytokinase modulator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang whose telephone number is (571) 272-0632. The examiner can normally be reached on Monday to Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Shengjun Wang/
Primary Examiner, Art Unit 1627

9.