Atopic dermatitis is a chronic inflammatory disease characterized by an impaired epidermal barrier function combined with a chronic Th2-type inflammatory response and an intense pruritus. Here, we used an experimental mouse model for Th2-type contact hypersensitivity (CHS) to fluorescein isothiocyanate (FITC) to validate the effect of Dexamethasone in FITC-induced Contact Dermatitis in Mice. We examined ear swelling responses, and bouts of scratch.

Models Available:

- FITC Induced Contact Dermatitis in Mice 7 Days Study
- FITC Induced Contact Dermatitis in Mice 22 Days Study
Validation Data: FITC Induced Contact Dermatitis in Mice 7 Days Study

Study Protocol

Female Balb/c mice 18-20g at arrival
Acclimated for 7 days

Sensitized with 460 ul 0.5% FITC on the shaved abdomen

Treatment: (10ml/kg)
Gr1 Vehicle, PO
Gr2 Dex 3 mpk, PO

Day -7 Day -1 Day 0 Day 1 // -20 min Day 6 (challenge 0h) 4 h (24 h) Day 7

Animals randomized to 2 groups (n=10)
Gr1 Vehicle, PO
Gr2 Dex 3 mpk, PO

1. Challenge with 20 ul 0.5% FITC on both sides of ears
2. Ear Thickness Measurement on day 6 before challenge as baseline

Ear Thickness Measurement and Ear Tissue Harvest
H.E and MPO

Statistics:
- One-way ANOVA, Dunnett’s Multiple comparison test; or T-test
- Data are Mean ± SEM
- * p<0.05, **p<0.01, ***p<0.001 vs. Vehicle

Results

i. Ear thickness

![Graphs showing ear thickness and delta ear thickness](image-url)
Validation Data: FITC Induced Contact Dermatitis in Mice 22 Days Study

Study Protocol

Female Balb/c mice
18-20g at arrival
Acclimated for 7 days

Sensitized with 400 ul
0.5% FITC on the
shaved abdomen

Treatment (10ml/kg)
Gr1 Vehicle, PO
Gr2 Dex, 3 mpk, PO

Day -7
Day -1
Day 0
Day 1
Day 14
Day 15
// -20 min
Day 21
4 h
24 h

Animals randomized to 2
groups (n=10)
Gr1 Vehicle, PO
Gr2 Dex, 3 mpk, PO

Sensitized with 400 ul
0.5% FITC on the
shaved abdomen

1. Challenge with 20 ul0.5%
FITC on both sides of ears
2. Ear Thickness Measurement
   On day 21 before challenge

Ear Thickness Measurement
and Ear Tissue Harvest
H&E and MPO

Statistics:
- One-way ANOVA, Dunnett’s Multiple comparison test; or T-test
- Data are Mean ± SEM
- * p<0.05, **p<0.01, ***p<0.001 vs. Vehicle

Results

i. Ear thickness

![Graphs showing ear thickness and delta ear thickness](image-url)
ii. Bouts of scratching

![Graph showing FITC Induced Contact Dermatitis in Mice]

The BioDuro Advantage

BioDuro's pharmacology team has extensive drug discovery and development experience in the pharmaceutical industry enabling us to support fully integrated programs, including study design and data interpretation. Special expertise in metabolic and inflammatory diseases is coupled with a commitment to working with clients to develop customized models for rare diseases.

Our team has successfully collaborated with 9 of the top 20 large pharmaceutical companies and numerous small companies. The success of these collaborations is highlighted by the quality data provided that have informed key project decisions and regulatory filings. Beyond providing analysis, our senior team’s expertise allows for the development of a consulting relationship with client partners.

The Pharmacology Team

- **Dr. Yong Qi**, Directory of Pharmacology, has over 16 years of experience in leading and advancing drug discovery projects in metabolic and other disease areas at several pharmaceutical companies, including GlaxoSmithKline
- Group leader-level scientists with strong background and training in metabolic diseases
- A team of 20 well-trained bench scientists focused on in vitro and in vivo metabolic disease drug discovery services. They are skilled in different animal models/assays and excel in problem-solving and trouble-shooting

Services

- Translational research
- Biomarker discovery & development
- Compound efficacy evaluation
- Consultation

Therapeutic Focus

- CNS
- Inflammation and Immunology Disease
- Metabolic Disease

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