Psoriasis

Immunology and Inflammatory Disease

Psoriasis is an inflammatory disease of the skin affecting 2-3% of the population, characterized by a thickening of the epidermis and immune infiltrates throughout the dermis and epidermis, causing skin lesions that can seriously affect quality of life. The study of psoriasis has historically been hampered by the lack of good animal models. However, a mouse model of psoriasiform dermatitis caused by the repeated topical application of Aldara™ containing 5% imiquimod was described in 2009. Interestingly, the repetitive application of Aldara™ reveals a complex aetiology involving multiple cell types, cytokines, and inflammatory pathways.

This validation study tests the effect of Dexamethasone on Imiquimod-induced psoriasis via PO and Topical treatment in mice.

Models Available:

- Imiquimod-induced psoriasis in mice
Validation Data: Imiquimod-Induced Psoriasis in Mice

Study Protocol

One-way ANOVA, *p<0.05, **p<0.01, ***p<0.001 vs. Vehicle

Results

i. Ear thickness

One-way ANOVA, *p<0.05, **p<0.01, ***p<0.001 vs. Vehicle
ii. Cumulative score

One-way ANOVA, *p<0.05, **p<0.01, ***p<0.001 vs. Vehicle

iii. Pictures

![Images of different treatments: Normal, IMQ, Dex]
iv. HE staining of psoriasis tissue

![HE staining images](image)

v. mRNA expression of psoriatic tissue

![Expression graphs](image)

One-way ANOVA, **p<0.01 vs. Vehicle
BioDuro Pharmacology

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

Imiquimod-Induced Psoriasis in Mice