Delayed-Type Hypersensitivity

Immunology and Inflammatory Disease

Delayed-Type Hypersensitivity (DTH) is immunologically a process similar to cell-mediated immunity, involving T cells and cytokines. The activation and recruitment of cells into an area of inflammation is a crucial step in the development of DTH responses. Macrophages accumulate at the site of DTH and become activated through the CD4 Th1 cell-cytokine-macrophage axis. However, DTH leads to pathologic responses, such as granulomatous inflammation, calcification, caseation necrosis, and cavity formation.

Application of Oxazolone (OX) to the skin of mice increased the delayed-type hypersensitivity (DTH) response to challenge, serum titres of OX-specific IgG1 and IgG2a, and draining lymph node cell (LNC) numbers. The synthesis and role of several lymphokines were examined during contact sensitization to oxazolone (OX).

Models Available:

• Oxazolone Induced DTH in ICR-1 mice
Validation Data: Oxazolone Induced DTH in ICR-1 mice

Study Protocol

Results

i. Baseline ear thickness
ii. Ear thickness after challenge
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