

Allergic Asthma

Immunology and Inflammatory Disease

Asthma is a heterogeneous disease in which various environmental stimuli as well as different genes, cell types, cytokines and mediators are implicated. This chronic inflammatory disorder of the airways is estimated to affect as many as 300 million people worldwide. Animal models of asthma, despite their limitations, have contributed greatly to our understanding of disease pathology and the identification of key processes, cells and mediators in asthma.

The accuracy of extrapolations from animal models to human asthmatics is highly dependent on the species of animal selected. The mouse demonstrates many features of airway allergy and allergic asthma that are similar to the human conditions. The following features of human asthma can be effectively investigated in a mouse model of the disease: cellular infiltration of the lung, antigen-specific IgE production et al.

The majority of available models of asthma are restricted to the acute inflammatory response following a short period of allergen exposure. The frequently used model of ovalbumin (OVA) sensitization and challenge replicates the inflammatory process in the airways.

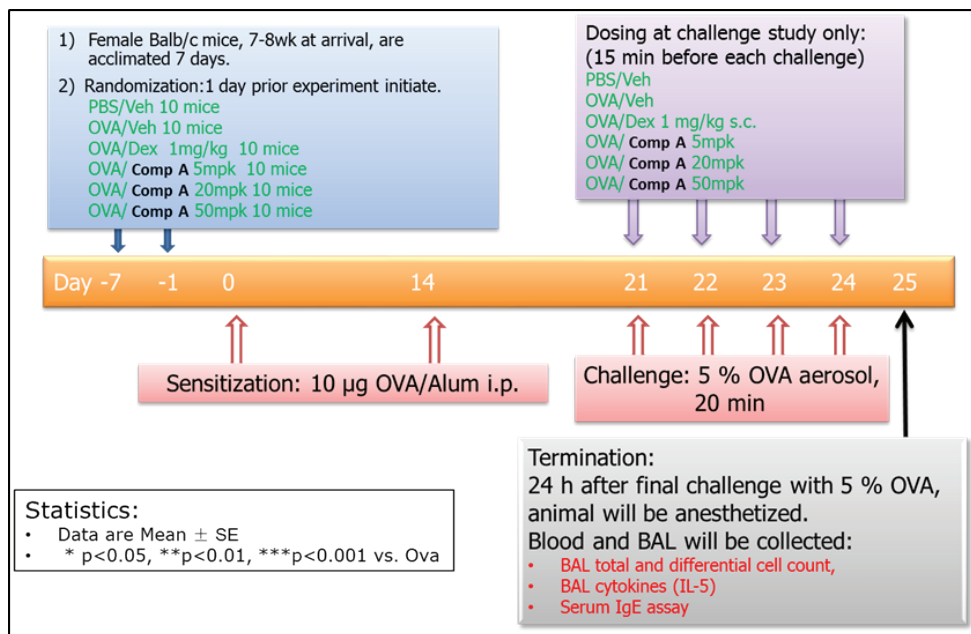
Models Available:

- OVA Induced Allergic Asthma Mice



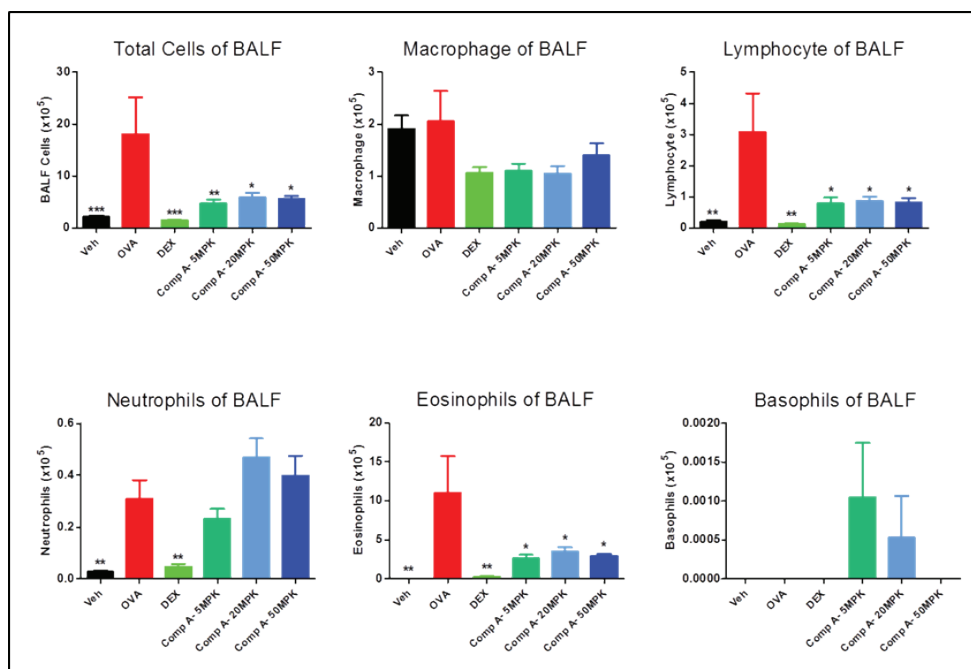
Validation Data: OVA Induced Allergic Asthma Mice

Study Protocol

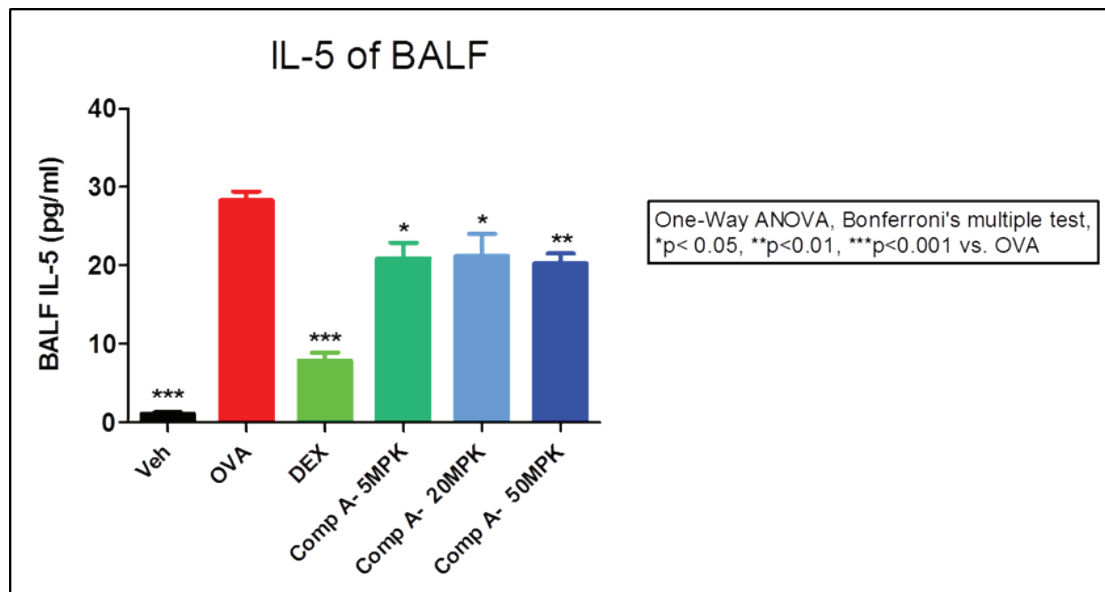


Results

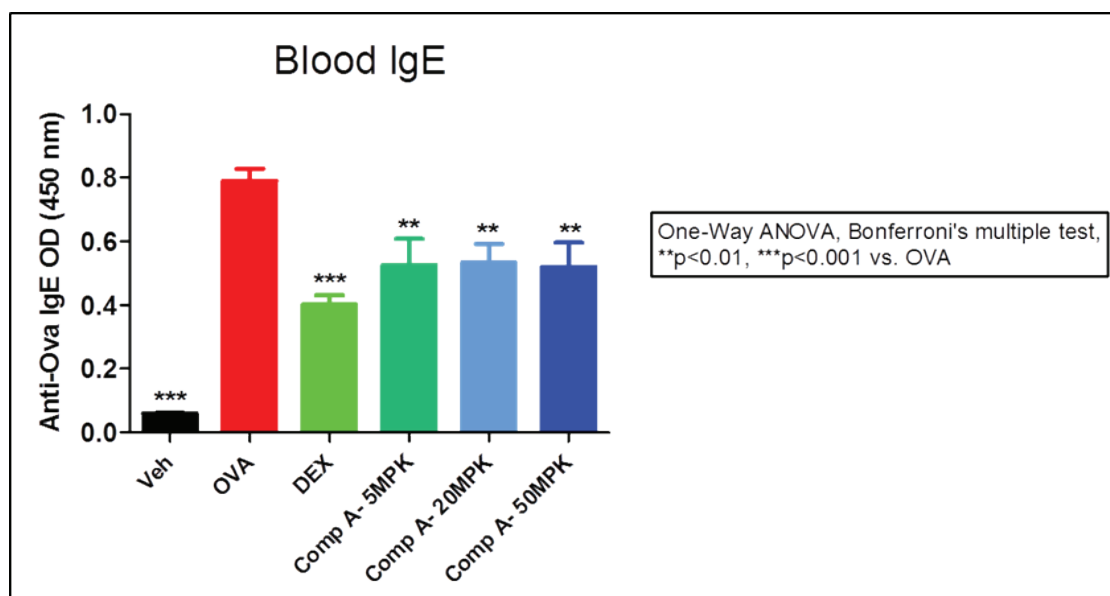
i. Infiltration of inflammatory cells in BALF



ii. IL-5 Production in BALF



iii. Blood levels of IgE



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.

Services

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

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

Therapeutic Focus

- CNS
- Inflammation and Immunology Disease
- Metabolic Disease