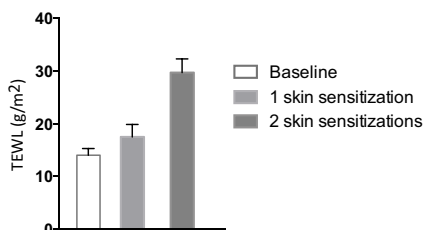
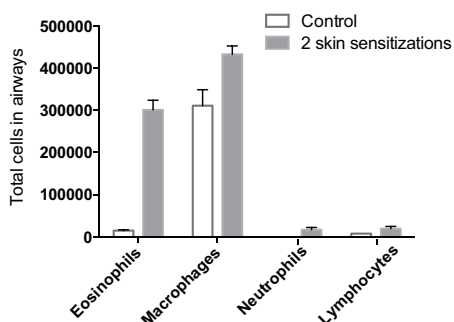


Atopic dermatitis:

Neonatal TEWL following transdermal allergen sensitization



Neonatal airway inflammation following transdermal allergen sensitization and airway challenge



Neonatal mice were exposed to house dust mite extract via skin patches for 1 week, or twice over 2 weeks. TEWL measurements were made at baseline or following skin patch removal. After two sensitizations, mice were exposed to house dust mite allergens per nasal and the resulting airway inflammation was determined 3 days later.

Atopic dermatitis is a type of eczema characterized by skin highly sensitive to many irritants, particularly allergens. It is a disease responsible for widespread morbidity, can affect individuals of all ages, and treatment options are largely limited to topical control of symptoms. Breakdown of skin barrier integrity, such as that found with atopic dermatitis can increase systemic exposure to allergens and is proposed to underlie the development of allergic inflammation in other tissues including the airways. The inflammatory pathways associated with atopic dermatitis include mast cells, classical T helper type 2 cells and cytokines (such as IL-4, IL-5 and IL-13), and T helper type 17 cells. Our models of atopic dermatitis allow for the testing of novel therapeutics both in the local development of the disease (skin) and also the consequences of impaired barrier function and the development of allergic airway diseases.

Experimental readouts:

- Quantification and characterization of skin barrier integrity
- Histology; disease severity score
- Measurement of chemokine and cytokine proteins in tissue
- Quantitative PCR of chemokine and cytokine mRNA levels in tissue
- Airway inflammation and lung function

Duration:

14-30 days dependent upon experimental model and readouts

Please contact us for customized Service Packages
info@preclinbiosystems.com

Service Package I

- Administration of test compounds
- Transdermal allergen sensitization
- TEWL measurements

Service Package II

- Skin histology
- Disease severity score

Service Package III

- Induction of lung inflammation
- Tissue cytokine and chemokine analysis
- Lymphocyte effector function analysis