Department of Immunology and Pathology

Monash Immunology and Pathology graduate students and postdocs are actively involved in community outreach, including the annual international Day of Immunology.

The Monash University Department of Immunology and Pathology is internationally renowned for its combined expertise in research, teaching and service delivery in immunology and immuno-pathology.

There are extensive research programs in basic and translational immunology, including highly successful collaborations with The Alfred hospital and other AMREP partners. The department’s research activities target diseases including allergy, asthma, autoimmunity, inflammation, diabetes, lupus, organ fibrosis, cancer and malaria. The department also focuses on engineering novel treatments such as nanoparticle-based vaccines in cancer and infection.

See more: www.monash.edu/medicine/ccs/immunology

PROJECTS AVAILABLE:

Function and regulation of alternatively activated Macrophages
Supervisor(s): Professor Nicola Harris & Dr Tiffany Bouchery
Email: Nicola.Harris@monash.edu
Applicable for: Hons, BMedSc

Targeting the blood feeding pathway of the hookworm parasites
Supervisor(s): Professor Nicola Harris & Dr Tiffany Bouchery
Email: Nicola.Harris@monash.edu
Applicable for: Hons, BMedSc

Defining mechanisms underlying pathogenic inflammation in lupus
Supervisor(s): Assoc Professor Margaret Hibbs
Email: Margaret.Hibbs@monash.edu
Applicable for: PhD, M, Hons, BMedSc

The role of the Hck tyrosine kinase in B cell development and function
Supervisor(s): Assoc Professor Margaret Hibbs
Email: Margaret.Hibbs@monash.edu
Applicable for: PhD, M, Hons, BMedSc

The use of diet as a mechanism to subvert the progression of chronic lung disease
Supervisor(s): Assoc Professor Margaret Hibbs
Email: Margaret.Hibbs@monash.edu
Applicable for: PhD, M, Hons, BMedSc

Clinical implications of trans-kingdom microbial interactions in the transplanted lung
Supervisor(s): Professor Benjamin Marsland
Email: Benjamin.Marsland@monash.edu
Applicable for: M, Hons, BMedSc

Implications of antibody repertoires for microbiome composition and susceptibility to asthma
Supervisor(s): Professor Benjamin Marsland & Dr Tomasz Wypych
Email: Benjamin.Marsland@monash.edu
Applicable for: M, Hons, BMedSc

Targeting fungal and bacterial cross-talk for the prevention of asthma
Supervisor(s): Professor Benjamin Marsland
Email: Benjamin.Marsland@monash.edu
Applicable for: PhD

How does the absence of one enzyme block an entire immune response?
Supervisor(s): Professor David Tarlinton
Email: David.Tarlinton@monash.edu
Applicable for: Hons, BMedSc

Molecular basis of CD4+ T cell differentiation and function during tumour development
Supervisor(s): Professor David Tarlinton, Dr Zhoujie Ding & Dr Isaak Quast
Email: David.Tarlinton@monash.edu
Applicable for: Hons, BMedSc

What are the mechanisms allowing protective immunity while preventing autoimmunity?
Supervisor(s): Professor David Tarlinton & Dr Isaak Quast
Email: David.Tarlinton@monash.edu
Applicable for: PhD, Hons, BMedSc

Resolving the conundrum of antibody deficiency and autoimmunity in patients with primary immunodeficiency
Supervisor(s): Assoc Professor Menno Van Zelm & Dr Emily Edwards
Email: Menno.VanZelm@monash.edu
Applicable for: PhD, M, Hons, BMedSc

www.monash.edu/medicine/ccs/education
Immune specificity and memory in asthma and allergic disease
Supervisor(s): Assoc Professor Menno Van Zelm & Dr Craig McKenzie
Email: Menno.VanZelm@monash.edu
Applicable for: PhD, M, Hons, BMedSc

B-cell - T-cell interactions driving granulomatous inflammation in Crohn’s disease
Supervisor(s): Assoc Professor Menno Van Zelm
Email: Menno.VanZelm@monash.edu
Applicable for: PhD, M, Hons, BMedSc

Tetraspanins are key regulators of inflammation
Supervisor(s): Assoc Professor Mark Wright, Prof Michael Hickey & Prof Jennifer Wilkinson-Berka
Email: Mark.Wright@monash.edu
Applicable for: PhD, Hons, BMedSc