

# 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](http://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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto:Menno.VanZelm@monash.edu)

Applicable for: PhD, M, Hons, BMedSc

[Immune specificity and memory in asthma and allergic disease](#)

Supervisor(s): Assoc Professor Menno Van Zelm & Dr Craig McKenzie

Email: [Menno.VanZelm@monash.edu](mailto: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](mailto: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](mailto:Mark.Wright@monash.edu)

Applicable for: PhD, Hons, BMedSc