Overview

The Infectious Disease Research Group, within the Griffith Health Institute, brings together a range of academics and clinicians to capture their energy and enthusiasm in investigating the microbial, genetic and immunological factors that are involved in common human infections.

Researchers focus on the complex pathways that mediate microbial infection and human immunity in order to better understand a range of infectious diseases and processes relevant to human health including respiratory tract and middle ear infections, probiotics, vaccines, urinary tract infections, structure-function studies of host proteins critical for viral infections, ecological relationships between microbes, HIV, oral fungal infections, and microbes as gene therapy and vaccination vehicles.

The goal is to understand precisely how microbes cause infection and how the human immune system responds to disease in order to develop new approaches for prevention, therapy and improved clinical management.

Understand infection mechanisms and discover new ways of disease prevention and therapy with:

- microbial genetics
- immune system targeting
- interventional in vivo model systems
- clinical resources
- bioinformatics in disease-relevant scenarios
- in vitro assays for studying infection
- high resolution imaging of microbe and host
Key research focuses

Members of the Infectious Disease Research Group are currently involved in a wide variety of clinically relevant research topics. These include, but are not limited to:

- the development of novel therapies for the treatment of cancer
- the function of antigen sensing cells in the gastrointestinal tract
- immune mechanisms in the middle ear of children
- use of immunomodulating interventions to ameliorate perturbations in both innate and acquired mucosal immunity
- the development of mucosal immunisation strategies for bacteria responding to infections.
- immunopathogenesis of orofacial complications amongst cancer patients and attitudes and knowledge of dental professionals on oral mucosal lesions and potentially malignant diseases.
- oral manifestations of HIV disease and oral *Candida dubliniensis* amongst HIV positive individuals
- head and neck squamous cell carcinoma
- breast cancer
- treatment of lower respiratory tract infections
- bone marrow transplants: risk factors, therapy, outcomes and significance

Collaborative research partnerships

The Infectious Disease Research Group has more than 20 research staff and research higher degree students with experience in diverse microbial and immunological studies that deliver useful medically-oriented research outcomes.

Researchers in the Infectious Disease Research Group are involved in national and international collaborations with a number of eminent research institutes including:

- Harvard University (USA)
- Guangdong Pharmaceutical University (China)
- University of Illinois (USA)
- University of Queensland (AUS)
- University of Hong Kong
- Beijing University (China)
- University of Adelaide (AUS)
- University of Birmingham (USA)
- University of Strasbourg (France)
- Nanyang Technological University (Singapore)
- Georgia Institute of Technology (USA)
- Johann Wolfgang Goethe University Frankfurt (Germany)
- MacFarlane Burnet Institute for Medical Research and Public Health (AUS)
- Queensland Institute of Medical Research (AUS)

Support the research into infectious diseases

Support from sponsors makes it possible to achieve new discoveries that can improve the health and quality of life for people world wide.

All Australian gifts made to the Infectious Diseases Research Group through the Griffith University Fund are eligible for tax deduction within the guidelines established by the Australian Taxation Office.

Contact details:

**Professor Lyn Griffiths**
Director, Molecular Basis of Disease & Griffith Health Institute
Gold Coast campus
Griffith University Queensland 4222
Australia
Telephone: +61 7 5552 8664
Email: l.griffiths@griffith.edu.au

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