



Infectious  
Diseases Labs

ID LABS



## Dr Manoj Puthia

Division of Dermatology, Department of Clinical Sciences  
Lund University, Sweden



**Tuesday, 6 December 2022**  
4:00pm to 5:00pm (SGT)

**Join Zoom Meeting [here](#)**  
Meeting ID: 975 2951 9714  
Passcode: 450361

Webinar is open to all. No registration required

### Exploitation of innate immunity to fight infection and inflammation: therapeutic targets and drug development

Infections continue to threaten human health, and the decreasing efficacy of antibiotics and other antimicrobial agents is a global challenge. Pathogens outsmart routine therapies with extraordinary genetic flexibility. The need for innovative and effective treatments is therefore urgent. Fortunately, the host immune system evolves in parallel to microbial versatility, and molecular maneuvers made by the immune system in response to infection, provide a rich source of ideas and novel therapeutic concepts. Host-directed immunomodulatory therapies are promising, where natural mechanisms in the host are exploited for therapeutic advantage. During this webinar, in the first part, a project will be presented where we identified a therapeutic target for nonantibiotic therapy of bacterial infections. In the second part, an immunomodulatory host defense peptide is used to develop a dual-action hydrogel formulation for the treatment of wound infection and inflammation.

**Dr. Manoj Puthia** is currently a scientist in the Division of Dermatology in the Department of Clinical Sciences at Lund University, Sweden. He earned his Doctor of Veterinary Medicine in India, in 1995, and his PhD in microbiology from the National University of Singapore in 2009. In his thesis work, he demonstrated for the first time that protozoan *Blastocystis* is a potential gastrointestinal pathogen.

During his PhD, in 2006, Manoj accepted a position as a Scientist & Member of Technical Staff at DSO National Laboratories Singapore and worked for 3 years. During that time, he developed animal models of burn infections. In 2009, focusing on developing new therapeutic concepts based on the body's endogenous innate defense to treat infection and cancer, he started his postdoctoral fellowship at Singapore Immunology Network.

In 2011, Manoj accepted a scientist & head in vivo research facility position at Lund University, Sweden, where he has been since that time. While at Lund University, Manoj focuses on translational research in non-antibiotic immunomodulatory therapies for infections and inflammation. His group uses rodent and porcine preclinical models of infection and inflammation. In addition, Manoj has served as CSO in two Swedish biopharmaceuticals.

Manoj has published in reputed journals including *Science Translational Medicine*, *GUT*, *Journal of Clinical Investigation*, *Acta Biomaterialia*, *Nature Biotechnology*, *Immunity*, etc. His work has been featured in *Nature Reviews Gastroenterology & Hepatology* and also highlighted by *Nature Reviews Drug Discovery*.

Questions? Contact us at [seminars@idlabs.a-star.edu.sg](mailto:seminars@idlabs.a-star.edu.sg)

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