



Infectious
Diseases Labs

A*STAR IDL



Asst. Prof Baptiste Didier Jose Janela

Adjunct investigator, A*STAR IDL
Joint appointment at SRIS as Assistant Professor
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Assistant Professor of Skin Immunology, LKCMedicine / NTU, Singapore



Thursday 21st Aug 2025

11:00 AM to 12:00 PM (SGT)

Venue: Codon A & B, Matrix Level 5

Deciphering Immune Mechanisms of Skin Diseases to Enable New *In Vitro* Modelling for Treatment Discovery

The skin is a complex immune organ that must balance defence against external threats with tolerance to self and environmental antigens. In this presentation, I will share our latest findings in the field of autoimmune bullous diseases (AIBDs), where we have identified novel markers of autoreactive B cells and uncovered a promising new biomarker to monitor disease progression. These discoveries provide critical insight into disease mechanisms and open new avenues for targeted therapies. I will also present our ongoing efforts in bioengineering immunocompetent 3D human skin using induced pluripotent stem cells (iPSCs). Traditional mouse models and existing 3D skin equivalents lack the immune complexity necessary to accurately model human skin diseases. Our work addresses this gap by integrating iPSC-derived macrophages into 3D skin constructs. Combined with advanced technologies such as high-dimensional flow cytometry, CyTOF, single-cell RNA sequencing, and spatial imaging, this platform allows us to dissect skin immune responses at unprecedented resolution. Together, these approaches offer powerful tools to study skin inflammation, severe cutaneous adverse reactions (SCARs), and autoimmune conditions, and support the development of next-generation immunotherapies.

Asst. Prof Baptiste Janela graduated in Cell Biology and Physiology from the University of Rouen, France. He obtained his Master degree (2005) and PhD (2010) in Skin Immunology from the University Paris Diderot, Paris VII, France. He came to Singapore for his postdoctoral fellowship at the Singapore Immunology Network, A*STAR. In 2019, Asst Prof Baptiste Janela became an independent researcher and joined the Skin Research Institute of Singapore. In 2023, Asst Prof Baptiste Janela joined LKCMedicine where his laboratory is currently focusing on deciphering the cellular/molecular mechanisms and signalling pathways that contribute to the immunopathology of skin diseases notably on Cutaneous Inflammatory Diseases, Wound Healing, Autoimmune Bullous Diseases and Severe Cutaneous Adverse Drug Reactions. His team is also working on the bioengineering of new immunocompetent 3D skin equivalents from Induced Pluripotent Stem Cells (iPSCs).

Hosted by: Dr Stefan Oehlers

Seminar is open to all. No registration required.

Questions? Contact us at seminars@idlabs.a-star.edu.sg

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