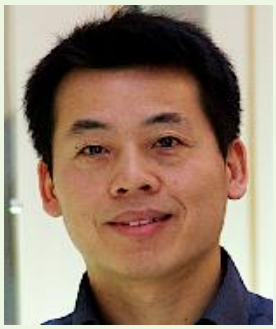
香港中文大學
The Chinese University of Hong Kong

MANCHESTER 1824
The University of Manchester

Thank you for supporting the collaboration on regenerative immunology between The Chinese University of Hong Kong (CUHK) and the University of Manchester (UoM). This e-newsletter aims to keep you abreast of some of the joint projects between the two universities in regenerative immunology, the latest developments of our universities in the field and some funding opportunities.

You are most welcome to provide updates on your joint work for sharing in the future issues. Please also feel free to engage other colleagues who may be interested in joining the collaboration. For enquiries, please contact Olivia Kwok at CUHK (oliviakwok@cuhk.edu.hk) or Annette Barber at UoM (annette.barber@manchester.ac.uk).

Spotlight on Researchers



Professor Qing-Jun Meng

Professor Chun Kwok Wong

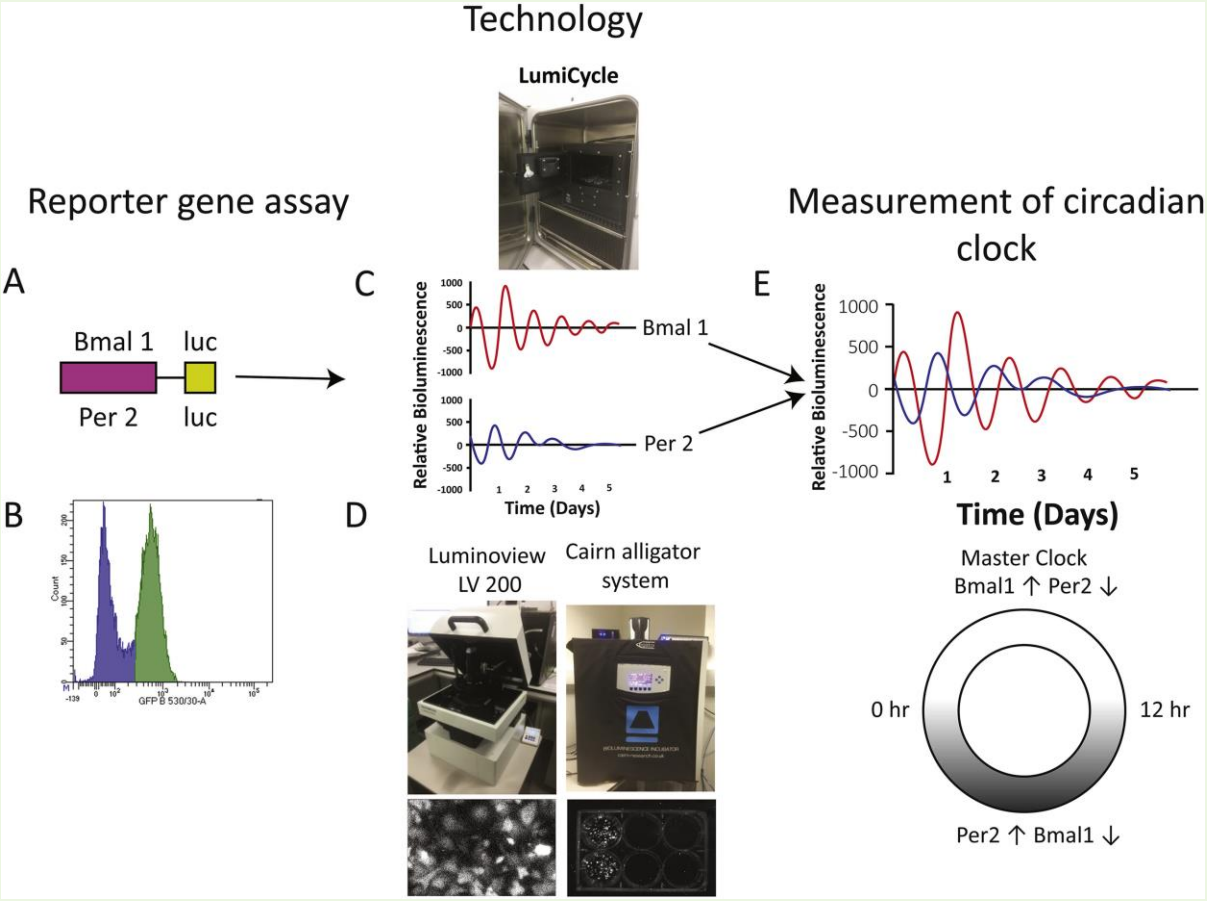
The circadian rhythms of immunological functions in atopic dermatitis

Professor Qing-Jun Meng, Professor of Chronobiology, 'Chrono-Matrix' Theme Leader of the Wellcome Centre for Cell-Matrix Research, Director of Internationalisation (School of Biological Sciences), UoM
and
Professor Chun Kwok Wong, Professor,
Department of Chemical Pathology, Faculty of Medicine
Director, Institute of Chinese Medicine, CUHK

Atopic dermatitis (AD) is an immune-mediated inflammatory skin disorder triggered by allergens, which affects up to 20% of the world's population. The symptom intensity of AD varies across the day, with a strong association between sleep disturbance and AD severity, suggesting a link to the 24-hourly circadian rhythms.

The duo is combining their expertise on AD and skin immunology at CUHK with the well-established single cell real time circadian clock imaging expertise in UoM to investigate the circadian biology of AD pathogenesis. Specifically, the collaboration explores the time-of-day dependent activation of eosinophils and skin cells, investigates the circadian clock protein expression and monitors the fluctuations of cytokine secretion released in the co-culture with air-lift 3D human epidermal-dermal tissues *in vitro*. With the skin samples delivered to UoM, the initial results showed that the expression of BMAL1, a master regulator of the core molecular clock, is upregulated in AD skin tissue as compared to normal skin tissue. These initial findings support the involvement of circadian rhythms in AD pathogenesis. Further mechanistic experiments are being conducted.

Fig. 1 Real-time molecular clock recording and imaging in live cells and tissue explants (Meng's lab in Manchester)



Interested to explore more of our work on immunology?

UoM

The Lydia Becker Institute of Immunology and Inflammation is home to internationally renowned immunology and inflammation expertise in a vast array of basic and applied disciplines. Researchers perform fundamental and translational exploratory science, applying the latest technologies to address the key new concepts in health and many areas of unmet clinical need. The institute covers great breadth and diversity of research including barrier immunology; cancer immunology; cardiovascular immunology and multi-morbidities; cellular immunology; immune tolerance; immuno-informatics; immuno-matrix; life course immunology; neuro-immunology; pathogens, parasites and commensals.

CUHK

CU Medicine has contributed to advancing a wide spectrum of immunology research. One of the leading basic and clinical studies is on the anti-inflammatory application of translational medicine in autoimmune disease, atopic dermatitis, allergic asthma and COVID-19 infection. Other pioneering areas include endocrine immunology, neuro-immunology, structural immunology, tumour immunology, viral immunology, immunomodulatory Chinese medicine and natural products, immunology in

gastroenterology, dermatology, respiratory medicine, infectious diseases and rheumatology. If you wish to seek collaboration in these areas, please contact Olivia Kwok at CUHK (oliviakwok@cuhk.edu.hk).

Updates

Regenerative immunology project awarded by CUHK-UoM Seed-corn Fund

Professor Sarah Cartmell

Professor Elmer Ker

Congratulations to Professor Sarah Cartmell of the Department of Materials at UoM and Professor Elmer Ker of the School of Biomedical Sciences at CUHK on being awarded by the CUHK-UoM Seed-corn Fund for their joint project on ‘Studying the Mechanical Conditioning of Tendon-like Biomaterials’. They will receive GBP10,000 for their work on elucidating the interactions between biomechanical forces and biomaterial topography, which will aid the development of novel tendon-like grafts for tissue repair and regeneration.

First International Fellow of Tissue Engineering and Regenerative Medicine International Society from Hong Kong

Professor Rocky S. Tuan, Vice-Chancellor and President of CUHK, has been elected as an International Fellow of the 2021 Fellow Class (FTERM) of the Tissue Engineering and Regenerative Medicine International Society, one of the most distinguished academic honours accorded in tissue engineering and regenerative medicine. He is the first-ever Hong Kong scholar named a FTERM.

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Professor Judi Allen named ‘Highly Cited Researchers 2021’

Professor Judi Allen, Professor of Immunobiology, Lydia Becker Institute of Immunology and Inflammation, has been named a ‘Highly Cited Researcher’ for 2021 by Web of Science. The list identifies scientists and social scientists who produced multiple papers ranking in the top 1% by citations for their field and year of publication, demonstrating significant research influence among their peers.

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Funding Opportunities

CUHK Strategic Seed Funding for Collaborative Research Scheme

The scheme aims to provide strategic seed funding to support incubation of preliminary proposals or elevation of research work that can result in competitive and high quality CUHK-led collaborative research proposals for securing external grants. Collaborative research involving international researchers is welcome. Up to HK$500,000 will be awarded for each selected project. The application deadline is 18 March.

Read more (CUHK login required)

Hong Kong Food and Health Bureau - The Health and Medical Research Fund

The fund aims to build research capacity and to encourage, facilitate and support health and medical research to inform health policies, improve population health, strengthen the health system, enhance healthcare practices, advance standard and quality of care, and promote clinical excellence. It welcomes collaborators from abroad. Up to HK$1.5m will be awarded for each selected project. The application deadline is 31 March.

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