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JCC RESEARCH SEMINAR

TOPIC

Targeting MT1-MMP: Therapeutic Opportunities in Age-related Diseases

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3:00 PM - 4:00 PM

Online Via ZOOM

Abstract:

The pace of population ageing around the world, especially in the developed countries, is increasing dramatically. Ageing is a multifactorial process modulated by diverse molecular and cellular events, such as genome instability, epigenetic and transcriptional changes, inflammation, cell death and senescence, and metabolic dysfunction. The signaling mechanisms and factors that contribute to individual aspects of ageing pathology remain largely unclear, increasing the difficulty in identifying the therapeutic targets for promoting longevity. Recently, we identified MT1-MMP (MMP14), a membrane-bound metalloprotease, as a new ageing-related factor. In this talk I will introduce molecular mechanisms by which MT1-MMP contributes to the development of age-associated disorders including type 2 diabetes, obesity and increased susceptibility to infection. This breakthrough paves a new way to potentially treat or forestall age-related diseases, thereby promoting healthy ageing.

Speaker's Biography:

Dr. Xavier Wong graduated with B.Sc. in 2009 and then received his PhD degree from Department of Biochemistry at the University of Hong Kong in 2013. After receiving postdoctoral trainings in both HKU and CUHK, he joined School of Chinese Medicine at Hong Kong Baptist University as a Research Assistant Professor in late 2016 and became a tenure-track Assistant Professor in 2020.

Dr. Wong is particularly interested in understanding how pericellular proteolysis is linked to intracellular signaling in a timely and spatially controlled manner to coordinate the key cellular functions. He demonstrates for the first time that matrix metalloproteases (MMPs), a protease family responsible for extracellular matrix remodelling, serve as critical regulators for multiple signaling cascades in diverse biological events. His work has been published in internationally renowned journals including Nature Metabolism, Developmental Cell, Nature Communications and The EMBO Journal.

ALL ARE WELCOME

REGISTRATION / ENQUIRIES

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