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5 November 2024 (Tuesday), 3pm
The Auditorium (Level 1)

Hosted by: Prof George Augustine

The Hippo Pathway: Players and Regulation in Cancer and Targeted therapy



Professor Hong Wanjin
Biomedical Research Council (BMRC)
A*STAR

Wanjin's earlier works contributed to our current understanding of membrane trafficking in mammalian cells particularly the role and mechanism of SNAREs, small GTPases and Phox domain sorting nexins. His recent work focuses on cancer cell signaling. His lab demonstrated that TAZ is an oncoprotein via interacting with TEAD transcriptional factors. His lab and collaborators resolved the X-ray structures of YAP-TEAD, TAZ-TEAD and Vgll1-TEAD complexes, providing structural basis for rational drug development targeting the interaction of YAP/TAZ with TEADs. In addition, his lab and collaborators discovered that TEADs have a druggable hydrophobic pocket and identified flufenamic acid as the first binder of the pocket which was later shown to be physiologically occupied by palmitate via auto-palmitoylation. The discovery of the druggable pocket of TEADs triggered over 20 biotech and pharma companies, in addition to academic community, to develop inhibitors against TEADs and a few have progressed into phase 1 clinical trials.

Wanjin Hong graduated from Xiamen University in 1982 and did his PhD training in the State University of New York (SUNY Buffalo) via the CUSBEA program. He joined the Institute of Molecular and Cell Biology (IMCB) in 1989. He was the Executive Director of IMCB at A*STAR during the period of November 2011 to July 2023.

Recent Publications:

1. Pobbati, A.V., Kumar, R., Rubin, B.P., and Hong, W. Therapeutic targeting of TEAD transcription factors in cancer. Trends Biochem. Sci. (2023) 48: 450-462.
2. Chakraborty, S., Sampath, D., Yu Lin, M.O., Bilton, B., Huang, C.K., Nai, M.H., Njah, K., Goy, P.-A., Wang, C.C., Guccione, E., Lim, C.T., and Hong, W. Agrin-Matrix Metalloproteinase-12 axis confers a mechanically competent microenvironment in skin wound healing. Nature Comms (2021) 12 (1), 1-18.
3. Pobbati, A.V., Han, X., Hung, A.W., Weiguang, S., Huda, N., Chen, G.Y., Kang, C., Chia, C.S., Luo, X., Hong, W., and Poulsen, A. Targeting the Central Pocket in Human Transcription Factor TEAD as a Potential Cancer Therapeutic Strategy. Structure (2015) 23, 2076-2086.