

sa[Speaker Abstract & Biography]

Speaker Name: Dr. Chun-Yu Lin

Position & Affiliation: Assistant Professor / Institute of Bioinformatics and Systems Biology, National Yang Ming Chiao Tung University (NYCU)

Title of talk: From protein interaction to network medicine: membrane protein-regulated networks across human cancers



Abstract:

As an increasing number of cancer omics data become available, there is a growing need to integrate these data with the biological networks to reveal cancer mechanisms. Nevertheless, two open issues remain challenging. First, the interactomes in most of the organisms are still incomplete. Second, the static networks cannot reflect the variations in cells. For example, alterations in membrane proteins (MPs) and their regulated pathways have been established as cancer hallmarks; however, the analysis of MP-interacting proteins and downstream pathways across human malignancies is still an unmet need. In support of this pursuit, we develop a systematically integrated method to generate a resource of cancer membrane protein-regulated networks (CaMPNets) across 15 human cancers. CaMPNets can reveal the cancer-wide atlas of MPs and their regulated pathways, with significant implications for facilitating the identification of gene set-based prognostic biomarkers as well as therapeutic targets and agents.

Biography:

Dr. Lin received his M.Sc. and Ph.D. degrees both in Bioinformatics and Systems Biology from National Chiao-Tung University (NCTU), in 2010 and 2014, respectively. From 2014 to 2017, he was at National Chiao Tung University as a postdoctoral fellow and assistant research fellow. During 2017-2019, he was supported by the JSPS International Fellowship as a postdoctoral fellow to join the Bioinformatics Center, Institute for Chemical Research, Kyoto University, Japan. His major research interest is the integration of multi-omics data with the biological networks for establishing disease-focused regulatory network models.

Curriculum Vitae:

<https://reurl.cc/zb1AOe>