Speaker Bio

Ching-Ho Chang is an evolutionary geneticist and Assistant Research Fellow at the Institute of Molecular Biology (IMB), Academia Sinica. His research investigates the dynamic forces shaping genome and cellular organization, focusing on the evolutionary arms races between selfish genetic elements, chromosome architecture, and host defense systems.

Dr. Chang received his Master's degree from National Taiwan University and completed his Ph.D. in Genetics at the University of Rochester, where his doctoral research on meiotic drive and centromere biology was recognized with the Larry Sandler Award from the Genetics Society of America. He conducted his postdoctoral training as a Damon Runyon Cancer Research Foundation Fellow at the Fred Hutchinson Cancer Center in Seattle, Washington. In October 2025, he returned to Taiwan to establish his independent laboratory at Academia Sinica.

His lab focuses on how non-Mendelian genetic conflicts drive structural chromosome divergence and reproductive isolation. Utilizing fly and yeast model systems, the group integrates genomics, functional genetics, computational biology, and high-resolution microscopy to address foundational questions in evolutionary genomics:

Meiotic Drive and Genomic Conflicts: Dissecting the molecular mechanisms of segregation distorters and elucidating how host genomes evolve suppressors—such as spermiogenesis-stage protamines—to neutralize sex-chromosome drive and preserve fertility.

Chromosome Architecture: Resolving the organization, regulation, and rapid turnover of complex heterochromatic regions, pericentromeric satellite arrays, and transposable elements across diverging species.

Cell-Cycle Machinery Evolution: Probing the co-evolutionary dynamics between essential cell-cycle regulators and genomic parasites, uncovering how host machines adapt under recurrent genetic conflict.