THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY
Division of Life Science

Adhesive and Cytoskeletal Control of Synapse Development and Stability

by

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Abstract

A major goal of our work is to identify the molecular mechanisms that stabilize synapses and dendrites for the long-term and to understand how these mechanisms become compromised in neurodegenerative and psychiatric disease. One important focus has been on adhesion receptors and their signaling links to the synaptic and dendritic cytoskeleton, which are critical for long-term neuronal stabilization. I will discuss our latest discovery of a new extracellular matrix molecule that is deposited at synapses and controls their maturation and stabilization as well as the molecular mechanisms by which we believe it signals to the synapse.

Biography:

Anthony J. Koleske is an expert in understanding the biochemical mechanisms that control changes in cell shape and movement. After receiving a B.S. in Biochemistry and Molecular Biology at the University of Wisconsin-Madison, Dr. Koleske performed his Ph.D. studies with Dr. Richard Young at the Whitehead Institute/Massachusetts Institute of Technology. For his Ph.D. thesis, Dr. Koleske discovered the RNA polymerase II holoenzyme, an important advancement in understanding how gene transcription is turned on. Dr. Koleske went on to do a postdoctoral fellowship with Nobel Laureate Dr. David Baltimore at M.I.T., where he began his work studying cellular functions of Abl family kinases, which his laboratory has shown are essential regulators of the cytoskeleton in diverse cell types. Dr. Koleske joined the Department of Molecular Biophysics and Biochemistry at Yale University in 1998, where he currently is Professor and holds a joint appointment in the Department of Neuroscience. Dr. Koleske is the recipient of numerous awards including a Jane Coffin Childs Postdoctoral Fellowship, Special Fellowship and Scholar Awards from the Leukemia and Lymphoma Society, a NARSAD Young Investigator Award, and an Established Investigator Award from the American Heart Association.He has served widely on review panels, including terms as Chair of the Basic Science Study Section for the American Heart Association and the Neurodifferentiation, Plasticity, Repair, and Rhythmicity Study Section of the NIH. He currently directs the combined Ph.D. programs in the Biological and Biomedical Sciences at Yale, the China Scholarship Council-Yale World Scholars Program, and co-directs (with Mike Nitabach) the Medical Research Scholars Program at Yale.

Date : 12th Dec 2017 (Tuesday)

Time : 2:00 – 3:00 pm

Venue : Classroom 1511 (near Lift 27/28)

(Host faculty: Prof. Ning Li)

All are Welcome!!