

“Wnt regulation of Planar Cell Polarity”

by

Dr. Bo Gao
Assistant Professor
The University of Hong Kong

Date: 14 Dec 2016

Time: 11:00am to 12:30pm

Venue: P4704, 4/F, Academic 1, City University of Hong Kong

Abstract

During the morphogenesis of multicellular organisms, directional information has to be provided in order to form functional tissues and organs with specific organization and morphology. Planar Cell Polarity (PCP) is an evolutionarily conserved fundamental mechanism that provides such directional information in development and physiological functions. However, how PCP is established in a three dimensional tissue or organ with respect to the body axes remains a long-standing unresolved question. My recent studies by employing genetic, biochemical and cell biological strategies are revealing the molecular nature of how PCP is established under the regulation of Wnt signaling and its implication in human diseases.

About the Speaker

Dr. Gao obtained his bachelor and doctoral degrees from the Shanghai Jiao Tong University in Shanghai, China, with three years of his PhD training at The University of Hong Kong as an exchange student. He received his research training in the fields of human and mouse genetics. After completing a postdoctoral fellowship in mammalian developmental genetics in the laboratory of Dr. Yingzi Yang at U.S National Human Genome Research Institute, he worked as staff scientist at the National Institutes of Health (NIH). In 2015, Dr. Gao joined The University of Hong Kong as Assistant Professor. He is interested in studying major signaling pathways in both normal developmental processes and human diseases, with a focus on skeletal/connective tissue disorders.

The laboratory of Dr. Gao's group is interested in understanding the molecular mechanism of how Wnt signaling regulates Planar Cell Polarity (PCP), which is an evolutionarily conserved developmental process whereby a field of cells is able to point in the same direction. Perturbation of Wnt/PCP signaling underlies skeletal disorders, polycystic kidney disease and a broad spectrum of neural tube defects. They use molecular, cellular, developmental and genetic approaches to investigate how Wnt signals are integrated to establish PCP and their functions in development and disease.

Contact

Dr. Ming Chan (34424346, ming.chan@cityu.edu.hk)

Miss Janice Leung (3442-4902, janice.leung@cityu.edu.hk)

All are welcome