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Department of Biomedical Sciences

Departmental Seminar

The role of KLF5 transcription factor in triple negative breast cancer

By

Prof CHEN Ceshi

Professor,
Key Laboratory of Animal Models and Human Disease Mechanisms of Chinese Academy of Sciences & Yunnan Province,
Kunming Institute of Zoology

Date: 12 November 2015 (Thursday)

Time: 3:30 pm- 5:00 pm

Venue: Room G4302, 4/F Green Zone, Academic 1,
City University of Hong Kong
Tat Chee Avenue, Kowloon Tong

For abstract, please refer to the attachment.

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~ All are Welcome ~

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Abstract

The transcription factor KLF5 is highly expressed in basal triple-negative breast cancer (TNBC) and promotes breast cancer cell proliferation, survival and tumor growth. However, the mechanism by which KLF5 functions and is regulated in breast cancer remains unclear. In this study, we demonstrate that TNFAIP2, a TNFα-induced gene, is a direct KLF5 target gene. Functionally, KLF5 promotes cancer cell proliferation, migration and invasion in part through TNFAIP2. Furthermore, we performed a genome-wide siRNA library screening against deubiquitinases (DUBs) and identified BAP1 as a bona fide KLF5 DUB. BAP1 knockdown inhibits tumorigenicity and lung metastasis, which can be partially rescued by ectopic KLF5 expression. Finally, we demonstrated that Mifepristone (MIF) reduced the TNBC cancer stem cell (CSC) population through down-regulating KLF5 expression.

About the Speaker

Ceshi Chen, Ph.D.
Kunming Institute of Zoology, Chinese Academy of Sciences Kunming, Yunnan, China
Upon completion of his doctorate in Shanghai Research Center of Biotechnology, Chinese Academy of Sciences in 1999, Dr. Chen accepted his postdoctoral training at the University of Virginia. In 2002, he moved to Emory University at Atlanta. He was promoted to Instructor in 2004. Dr. Chen joined the faculty of the Center for Cell Biology and Cancer Research at Albany Medical College in 2006 where he is a tenure track Assistant Professor. Dr. Chen was promoted to Associate professor in 2009. In 2010, Dr. Chen was appointed as full professor at Kunming Institute of Zoology (KIZ), Chinese Academy of Sciences. Dr.Chen is interested in study the roles of protein ubiquitination in breast cancer. He published more than 50 papers/reviews in prestigious journals such as Nature Communications, Cancer Research, Cell Death & Differentiation, Oncogene, JBC, Am J Path, J Pathology, Carcinogenesis, and Mol. Endocrinology. He has been reviewers for prestigious funding agents such as DoD, Komen for the Cure, and Natural National Science Foundation of China and more than 20 prestigious journals including Cancer Research, Oncogene, and Cell Death & Differentiation.