Jockey Club College of Veterinary Medicine and Life Sciences
香港城市大學
City University of Hong Kong
In collaboration with Cornell University

JAN 19

JCC RESEARCH SEMINAR

TOPIC

Chromosome deletions in cancer: passengers or drivers?

Prof LIU Yu
State Key Laboratory of Biotherapy
West China Hospital
Sichuan University

HONG KONG TIME
19 January 2022 (WED)
12:00 PM – 01:00 PM

Online Via ZOOM

Abstract:

Genome instability, including deletion, amplification and others, is a hallmark of cancer. Chromosome deletions happens as frequently as gene mutations, often associated with drug resistance and poor prognosis. The impact of deleted chromosome regions on cancer biology is still unclear. Here, we used multiple mouse models to investigate the role of chromosome 17p in tumorigenesis and drug response. We found that 17p13 deletion (including >100 genes) could drive lymphoma formation. Further studies revealed the molecular mechanisms under which a couple of newly identified tumor suppressor genes, locating on chromosome 17p, promoted the tumor initiation and development. Moreover, our study suggested a new therapeutic strategy for chromosome 17p-deleted tumors. Thus, our results demonstrated that the understudied chromosome deletions play an important role in tumor initiation, development and response to therapy.

Speaker's Biography:

Prof. Yu Liu obtained her PhD in Albert Einstein College of Medicine, NY, USA, where she studied quality control of unfolded protein under the supervision of Professor Amy Chang. After that, she performed her postDoc training first in Dr. Pan Zheng/Dr. Yang Liu's lab at the University of Michigan and then in Dr. Scott Lowe's lab in Cold Spring Harbor Laboratory and later Memorial Sloan Kettering Cancer Center. In 2015 spring, she started her own lab in the State Key Laboratory of Biotherapy, Sichuan University.

Prof. Yu Liu's laboratory has been interested in the procession of cancer initiation and the development of new cancer therapy strategies. Specifically, they focused on the role of chromosome copy number variations in cancer biology. They have found that chromosome 17p deletions could drive tumorigenesis through the cooperation of multiple tumor suppressor genes in 17p (Nature 2016). Then, they identified several novel tumor driving genes, revealed the molecular mechanism under which these TSG functioned and found new therapeutic targets (Nature 2016; Cancer Discovery 2021). In summary, Prof. Yu Liu has over 20 research articles published in Nature, Cancer Discovery, Blood, Molecular Cell and other SCI journals.

ALL ARE WELCOME

REGISTRATION
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