Mechanisms and regulation of the APC/C ubiquitin ligase during the cell cycle

by

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Abstract:
We study a cellular enzyme that plays a key role in selective protein destruction; the anaphase-promoting complex/cyclosome (APC/C). The APC/C is a multi-subunit cullin-RING E3 ligase and controls many events including genome DNA duplication and segregation, cell growth, differentiation and death alongside DNA damage repair, brain and metabolic functions. Although 20 years have passed since its discovery, our understanding of the APC/C function and control is still limited. This is partly due to the sheer size and complexity of the enzyme. The APC/C comprises 14 subunits, many of which are phosphorylated at multiple sites and very little is known about the control of these phosphorylation and dephosphorylation. We have developed a unique approach that can now be used to study these controls. We reconstitute the entire APC/C enzyme by making the subunits in a surrogate production system. We have been investigating the function and regulation of these reconstituted APC/C complexes in Xenopus cell free extracts. In this seminar, I will give an overview on the APC/C and discuss the control mechanisms with our recent data.

Date : 24 August 2018 (Friday)
Time : 4:00 p.m.
Venue : Lecture Theatre J
The Hong Kong University of Science & Technology
Clear Water Bay, Kowloon

(Host faculty: Prof. Randy Poon)

All are Welcome!!