NANYANG TECHNOLOGICAL UNIVERSITY

School of Biological Sciences

Seminar Announcement

HPV Latency and Reactivation - Reprogramming Factors and Mechanism

Date: 07 July 2015 Tuesday

Time: 11:00am to 12:00pm

Venue: SBS Meeting Room 1 (SBS-01n-36)

Host: Asst/Prof Su I-Hsin



Speaker: Prof Cheng-Ming Chiang

Professor of Biochemistry and Pharmacology
Simmons Comprehensive Cancer Center
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Abstract

Transcription in higher eukaryotes is controlled by an array of transcription factors, including the general transcription machinery, general cofactors, and gene-specific activators and repressors. The complexity of gene regulation is further conferred by the existence of multiple protein family members recognizing consensus or non-canonical DNA-binding sequences. The chromatin structure in the human genome and posttranslational modification on protein molecules provide an additional level of control in modulating gene activity. In this lecture, I will review these control mechanisms using human papillomavirus (HPV) E6 and E2 proteins as examples to illustrate how DNA tumor virus-encoded transcriptional regulators are able to reprogram cellular activities by targeting p53 tumor suppressor protein and activator protein-1 (AP-1), respectively, via recruitment of distinct coregulators, such as p300 histone acetyltransferase and the epigenetic regulator bromodomain-containing protein 4 (BRD4), to control viral latency and reactivation. The interplay among these viral and cellular proteins and the crosstalk between different posttranslational modifications regulate gene activity in response to various environmental stresses.