Dr. Carol Prives ANDREW F. HOLMES DEAN OF MEDICINE DISTINCTION LECTURES



Dr Carol Prives, DaCosta Professor of Biology, Department of Biological Sciences, Columbia University, New York

Title

Regulation of wild-type and cancer-related mutant forms of the p53 tumor suppressor protein

When

Wednesday, May 28, 2014 4:30 p.m. 6:00 p.m.

Where

McIntyre Medical Building 3655 Promenade Sir William Osler, Montreal, QC Charles Martin Amphitheatre (6th floor)

Carol Prives is the DaCosta Professor of Biological Sciences at Columbia University. She was educated in Canada, receiving her BSc and PhD from McGill University. After postdoctoral training at Albert Einstein College of Medicine and the Weizmann Institute, she became a faculty member at the Weizmann after which she joined the Biological Sciences Department at Columbia University where she was appointed to a named professorship in 1995. Dr Prives

focused on the p53 tumor suppressor protein, the product of the most frequently mutated gene in human cancers. She established conditions for purifying and characterizing the p53 protein

biochemically and her group was among the first to show that p53 is a sequence specific transcriptional activator. She also found that tumor-derived mutant forms of p53, especially those that are mutated with high frequency, are defective in such transactivation. Her laboratory has continued to study p53 as a DNA binding transactivator, with special focus on mechanisms by which p53 selects its target genes. She and her colleagues also provided the first model for stabilization of p53 by genotoxic stress by showing that p53 become phosphorylated after DNA damage at sites that weaken its interaction with its negative regulator Mdm2. She has continued to study the structure and functional regulation of Mdm2 and its relationship to p53. After the p53 homologues, p63 and p73, were identified, she developed and tested the hypothesis that one of the modes by which some tumor derived mutant forms of p53 elicit pro-oncogenic activities is through down-regulation of the apoptotic functions of p63/p73. Since then her work has focused on many aspects of the p53 family and on mutant p53. Recently her laboratory examined mutant p53 pro-oncogenic activities is through down-regulation at its relative in the structure is the structure form and the p53 family and on mutant p53. Recently her laboratory examined mutant p53 pro-oncogenic activities in breast cancer cell li