

INFORMAL SEMINAR
MOLECULAR STRUCTURE AND FUNCTION PROGRAM

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New methods for studying large multi-protein complexes: Insights into the function of Fanconi Anaemia core complex

Abstract: My laboratory studies the molecular mechanisms of large macromolecular machines including those that control mRNA 3' poly(A) tails to regulate gene expression, and the Fanconi Anaemia core complex involved in DNA repair. We use a hybrid approach combining structural (cryo-EM, x-ray crystallography, NMR), biochemical, biophysical and genetic techniques. We have recently purified the intact multisubunit Fanconi Anaemia core complex and reconstituted its E3 ubiquitin ligase activity in vitro. Our genetic and biochemical data reveal some surprising features about this DNA repair complex. To better study these challenging complexes, we are developing methods to improve sample preparation for electron cryo-microscopy (cryo-EM). I will describe a new method for using graphene to control protein distribution.

Date : Tuesday, June 3, 2014

Time : 2:30 - 3:30 pm

Location : Event Rooms 2a/2b (Room 02.9310, 2nd floor), PGCRL
Peter Gilgan Centre for Research and Learning, 686 Bay Street

Host: Dr. John Rubinstein

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