Single Molecule Science Special Seminars

Professor Eric Barklis

Dept of Molecular Microbiology & Immunology
Oregon Health & Sciences University, USA

Research in the Barklis lab focuses on the assembly & replication of viruses – retroviruses, flaviviruses, and hantaviruses – using molecular genetic, biochemical, and biophysical techniques. These techniques are employed to investigate viral protein interactions, RNA recognition & encapsidation, and cellular factors involved in virus replication & assembly.

To analyze virus particles, proteins, and macromolecular complexes, a variety of biophysical methods are utilized, including sedimentation, crosslinking, fluorescence microscopy, fluorescence anisotropy, transmission electron microscopy (EM), and atomic force microscopy (AFM).

One set of recent investigations concentrates on the identification & analysis of small molecule inhibitors of virus replication. A second avenue of inquiry concerns the mechanisms that govern how HIV structural proteins assemble conical, cylindrical and spherical cores. Our third major area of research focuses on protein-protein and protein-lipid interactions of retrovirus membrane-binding proteins.

Ultimately, we believe our studies will lead to the development of new antivirals, and a better understanding of the basic principles controlling macromolecular assembly.

For more details:
Contact Stuart Turville (sturville@kirby.unsw.edu.au)

"Roles of the HIV-1 Matrix Protein"

1 – 2 pm
Thursday, 29 November 2018

Level 4 Seminar Space
Lowy Cancer Research Centre
UNSW Sydney

Co-hosted with Kirby Institute

Kirby Institute

UNSW SYDNEY

EMBL Australia
Single Molecule Science