

# Single Molecule Science

## Special Seminars

### Dr Leo James

*MRC Programme Leader*

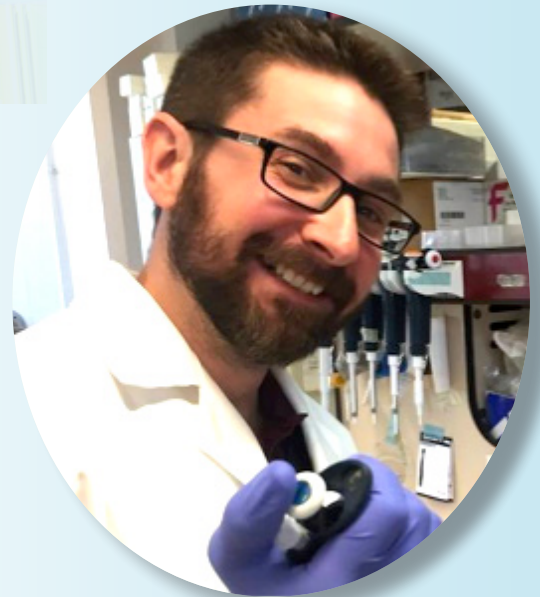
*Medical Research Council Laboratory of  
Molecular Biology (MRC-LMB), UK*

Leo received his Ph.D. from Cambridge University in 2000 and post-doc'd with Prof. Dan Tawfik and Sir Greg Winter, on antibody structure, function and evolution. In 2007, Leo established a lab at the LMB in Cambridge studying host-pathogen interactions using a broad range of *in vitro* and *in vivo* techniques.

In 2010, Leo discovered TRIM21, the most conserved and highest affinity antibody receptor in mammals and uniquely cytosolically expressed. Since then, his lab has shown that TRIM21 prevents infection by intercepting viruses, bacteria and pathogenic proteins inside the cell and targeting them for rapid degradation. This work has also led to the development of 'TrimAway', a technique which exploits TRIM21 for the rapid and specific degradation of cellular proteins.

Leo also investigates HIV post-fusion biology; recent work includes identifying the HIV capsid interface used to recruit import cofactors and dynamic pores in the capsid that are essential for HIV infection. understanding of the basic principles controlling macromolecular assembly.

For more details:  
Contact Dr David Jacques ([d.jacques@unsw.edu.au](mailto:d.jacques@unsw.edu.au))



**“Trim-Away: Targeted  
degradation of pathogens  
& proteins by the cytosolic  
antibody receptor TRIM21”**

**2 pm Monday,  
18 February 2019**

Level 6 Kirby Seminar Room  
Wallace Wurth  
UNSW Sydney



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