

Warwick Chemistry Departmental Seminar



Prof Ed Tate

Imperial College London

25th January 2018

4.00 pm, Physics Lecture Theatre, Science Concourse

Proteins, lipids and drug discovery: from malaria to the common cold

My group develops chemical biology approaches to identify and validate potential drug targets, particularly in the field of protein post-translational modification. In this talk I will discuss our recent work in the field of protein lipidation (acylation, cholesterylation and prenylation), where we have contributed to validation of protein targets in infectious diseases caused by parasites (malaria, leishmaniasis, trypanosomiasis), bacteria and viruses, and in cancer. I will also illustrate how we have used chemical tagging technologies in an analytical platform for quantification and identification of protein lipidation in live cells and animals, providing the first insights into how lipidation changes in response to drug treatment at the whole proteome level. This research has enriched our understanding of these traditionally challenging classes of protein modification, and delivered novel small molecules into pre-clinical development.

Biography: Edward Tate is Professor of Chemical Biology in the Department of Chemistry at Imperial College London, and a Satellite Group Leader and the Francis Crick Institute. He completed his Ph.D. in organic chemistry at the University of Cambridge in the group of Prof. Steve Ley. Following postdoctoral research in chemistry and biology on an 1851 Research Fellowship at Ecole Polytechnique and the Pasteur Institute in Paris, he moved to Imperial College London on a BBSRC David Phillips Fellowship, where he was promoted to a Chair in 2014. He leads a team of more than 50 scientists working on the design and application of chemical

approaches to understand and manipulate living systems, with a particular focus on drug target discovery and validation. He is a Fellow of the Royal Societies of Chemistry (FRSC) and of Biology (FRSB), and Director of Imperial's Centre for Drug Discovery Science. He received the 2012 Wain Medal, the 2013 MedImmune Protein and Peptide Science Award, the 2014 Norman Heatley Award, and a 2015 Cancer Research UK Programme Foundation Award in recognition of his group's research in chemical biology and drug discovery.

Website: <http://www.imperial.ac.uk/people/e.tate>.