Prof Edward William Tate, GSK Chair in Chemical Biology **BSc (Dunelm) PhD (Cantab) FRSC FRSB**

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Current Appointments

2023-date GSK Chair in Chemical Biology, Imperial College London
2014-date Professor of Chemical Biology, Imperial College London
2017-date Satellite Group Leader, The Francis Crick Institute

Prior positions: 2019-2021 Chief Scientific Officer and Founder, Myricx Pharma Ltd; 2012-2014 Reader in Chemical Biology, Imperial College London; 2010-2012 Senior Lecturer in Chemical Biology, Imperial College London; 2006-2011 BBSRC David Phillips Research Fellow, Imperial College London; 2004-2006 Research Associate, Department of Chemistry, Imperial College London; 2002-2003 Howard Trust Research Fellow, Pasteur Institute, Paris, France; 2000-2002 Royal Exhibition of 1851 Research Fellow, Ecole Polytechnique, Paris, France.

Degrees Held: 2000 Ph.D. Organic Chemistry, University of Cambridge; 1996 B.Sc. Chemistry, 1st Class Honours, University of Durham

Fellowships and Awards: 2023 GSK Chair in Chemical Biology; **2020** RSC Corday-Morgan Prize; **2019** Sir David Cooksey Translation Prize; **2015** CRUK Programme Foundation Award; **2014** RSC Norman Heatley Award in Chemical Biology; **2014** Fellow of the Royal Society of Biology (FRSB); **2013** RSC Medimmune Protein and Peptide Science Award; **2013** President and Rector's Award for Excellence in Research Supervision; **2013** Fellow of the Royal Society of Chemistry (FRSC); **2012** The Wain Medal and Lecture, University of Kent; **2011** Junior Scientist Programme Fellowship, 46th Burgenstock Conference; **2006** BBSRC David Phillips Research Fellowship; **2002** Howard Trust Research Fellowship, Pasteur Institute; **1999** Royal Commission for the Exhibition of 1851 Research Fellowship.

Professional Activities and Positions: ● BBSRC Committee D, core member ● Chair, SAB Myricx Pharma ● SAB Samsara Therapeutics ● Director of the Imperial MRes in Drug Discovery and Development ● SAB, Centre for Integrative Biological Signalling Studies, Freiburg, Germany ● ICR/Imperial Cancer Research Centre of Excellence (CRCE), Board Member ● SAB, UCL Alzheimer's Research UK Drug Discovery Institute ● HEI/Crick joint Research Degrees Committee, and Imperial College/Crick Advisory Group ● Steering Committee, Centre for Agri-tech and Innovation.

External Assessment Panels & Examining: ● International review board, Institute for Molecules and Materials, Radboud University ● KU Leuven international advisory board, Cellular & Molecular Medicine ● Leiden Institute of Chemistry quinquennial international advisory board ● Royal Society, BBSRC, and EPSRC funding panels. **Prior**: ● Undergraduate Chemistry, University of Cardiff ● MRes in Drug Discovery, UCL ● Habilitation panel, University of Toulouse.

Editorial Boards: *Cell Chemical Biology*, *Molecular Omics*, *Biochemical Journal*. **Reviewer** for UKRI and CRUK grants, Wellcome Trust Strategic Translation Awards, MRC DPFS; member of BBSRC and EPSRC Peer Review Colleges; reviewer for RSC and ACS journals, *JACS*, *Angew Chemie*, *Cell* and *Nature*. Recognised as *J. Med. Chem*. 'outstanding reviewer' in 2012 and 2015.

Consultancy in chemical biology for: FoldRx Pharmaceuticals (US), Pfizer (US/UK), Ono Pharma (Japan), Novartis (Switzerland/US), Wellcome Trust (UK), Summit (UK), Opal Oncology (UK), MISSION Therapeutics (UK), Myricx Pharma Ltd (UK), Samsara Therapeutics (UK).

Professional Memberships and Fellowships: 2015- The Protein Society; 2015- American Society for Biochemistry and Molecular Biology (ASBMB); 2014- Royal Society of Biology (FRSB); 2014- Society of Chemical Industry (SCI); 2013- The American Chemical Society (ACS); 2012- The Biochemical Society; 2006- Royal Society of Chemistry (FRSC)

Publications and Patents: Total publications: **220**; as corresponding author: **123**. h-index **50**; i10 **153**; total cites 8164 (Google Scholar, 02/2023). Six drug discovery patents. >100 invited lectures since 2016.

Current Grants (>£100k)

Agency	Brief grant title	Dates	Value	Role
CRUK	Protein lipidation in cancer	04/2022-03/2027	£1.9m	PI
InnoHK	Synthetic and Chemical Biology Lab	01/2021-12/2025	£2.2m	Co-I
CRUK	Novel senolytics as anticancer agents	10/2021-09/2025	£150k	PI
EU Horizon	Photoswitchable lipidation to control trafficking	07/2023-06/2025	€225k	PI
WWCR	Targeting Rab27A in lung cancer	06/2022-05/2025	£217k	PI
MRC	Regulatory crosstalk between human Caspases	10/2021-10/2024	£700k	Co-I
CRUK	Multidisciplinary targeting of MYC in cancer	10/2020-09/2024	£150k	PI
Industry	Collaborations targeting PTMs	01/2019-03/2024	£2.8m	PI
EU H2020	Non-classical pharmacological modalities	10/2021-03/2024	€225k	PI
BBSRC	A next generation proteomics platform	08/2022-08/2023	£780k	PI
BBSRC	Hedgehog acyltransferase structure & function	10/2020-09/2023	£827k	PI
CRUK/EPSRC	S-acylation chemical proteomics	04/2019-06/2023	£500k	PI
EU H2020	Chemical biology of hedgehog acyltransferase	06/2021-05/2023	€225k	PI
CRUK	Dynamic S-acylation in metastatic cancer	10/2018-09/2022	£148k	PI
CRUK	Targeting the membrane attack complex	10/2018-09/2022	£148k	Co-I

Selected Peer-Reviewed Publications

- "CRISPR-based oligo recombineering prioritizes apicomplexan cysteines for drug discovery", *Nature Microbiol* 2022, **7**, 1891, doi:10.1038/s41564-022-01249-y.
- "A KLK6 Activity-Based Probe Reveals a Role for KLK6 Activity in Pancreatic Cancer Cell Invasion", *J Am Chem Soc* 2022, **144**, 22493, doi:10.1021/jacs.2c07378.
- "Structure, mechanism, and inhibition of Hedgehog acyltransferase", *Mol Cell* 2021, **81**, 5025, doi: 10.1016/j.molcel.2021.11.018.
- "Proteome-wide analysis of protein lipidation using chemical probes", *Nature Protocols* 2021, **16**, 5083, doi: 10.1038/s41596-021-00601-6.
- "Substrate-biased activity-based probes identify proteases that cleave receptor CDCP1", *Nat Chem Biol* 2021, **17**, 776, doi: 10.1038/s41589-021-00783-w.
- "A suite of activity-based probes to dissect the KLK activome in drug-resistant prostate cancer", *J Am Chem Soc* 2021, **143**, 8911, doi: 10.1021/jacs.1c03950.
- "Photochemical probe identification of a small-molecule inhibitor binding site in Hedgehog acyltransferase (HHAT)", *Angew Chemie* 2021, **60**, 13542, 10.1002/anie.202014457.
- "Discovery of a Potent and Selective Covalent Inhibitor and Activity-Based Probe for the Deubiquitylating Enzyme UCHL1", *J Am Chem Soc* 2020, **142**, 12020, doi: 10.1021/jacs.0c04527.
- "Antibody-PROTAC Conjugates Enable HER2-Dependent Targeted Protein Degradation of BRD4", *ACS Chem. Biol.* 2020, **15**, 1306-1312, doi:10.1021/acschembio.0c00285.
- "D-Cycloserine destruction by its target and the limits of irreversible inhibition", *Nat Chem Biol* 2020, **6**, 686-694, doi: 10.1038/s41589-020-0498-9.
- "High-resolution snapshots of human *N*-myristoyltransferase illuminate a unique mechanism promoting Lys and Gly myristoylation", *Nature Commun* 2020, **11**, 1132.
- "FSP1 is a glutathione-independent ferroptosis suppressor", *Nature* 2019, **575**, 693. doi: 10.1038/s41586-019-1707-0.
- "Dual chemical probes enable quantitative system-wide analysis of protein prenylation and prenylation dynamics", *Nature Chemistry* 2019, **11**, 552-61.
- "Fragment-derived inhibitors of human *N*-myristoyltransferase block capsid assembly and replication of the common cold virus", *Nature Chemistry* 2018, **10**, 599–606.
- "Validation of N-myristoyltransferase as an antimalarial drug target using an integrated chemical biology approach", *Nature Chemistry* 2014, **6**, 112-121.