

MATTHEW J. FUCHTER FRSC *Department of Chemistry, Imperial College London, London W12 0BZ.*
Email: m.fuchter@imperial.ac.uk; Tel: +02075945815. www.imperial.ac.uk/fuchtergroup

RESEARCH FOCUS

The development of organic chemistry-led approaches to interrogate function in chemistry, materials and medicine.

QUALIFICATIONS

PhD, Chemistry with **Prof. A. G. M. Barrett FRS FMedSci** 2002 to 2006 Imperial College London, UK
MSci Hons, Chemistry (1st Class Honours, Richard N. Dixon prize) 1998 to 2002 University of Bristol, UK

CAREER

Professor of Chemistry. Department of Chemistry, *Imperial College London (ICL)*, UK Sept 2018 to present
Founder, Non-Executive Director and Head of Chemistry. *NK:IO Ltd.* UK Jan 2021 to present
Lecturer (2008), Senior Lecturer (2012), Reader (2015). Department of Chemistry, *ICL* Jul 2008 to Aug 2018
Research Councils UK (RCUK) Fellow. *School of Pharmacy*, University of London, UK Aug 2007 to Jun 2008
Research Associate. *University of Melbourne*, Australia with **Prof. A. B. Holmes AC, FRS** Oct 2006 to Jul 2007
Research Associate. *ICL* with **Prof. A.G.M. Barrett FRS FMedSci** Jan 2006 to Aug 2006

RESEARCH HIGHLIGHTS

- Lead the development of chiral conjugated organic thin film materials (e.g. *Nature Chem.* **2022**) and their use in technological applications. These include chiral materials to control the (chiral) polarisation state of light emitted (*Adv. Mater.* **2013**, *JACS* **2016**, *Nature Photon.* **2023**) or detected (e.g. *Nature Photon.* **2013**, *Adv. Mater.* **2021**) in devices, all underpinned by expert molecular design, synthesis and fundamental analysis (e.g. *Nature Comm.* **2020**).
- Pioneered the development of high-performance heteroaromatic azo photoswitches (e.g. *JACS* **2014**, *JACS* **2017**) that are beginning to replace azobenzenes in many optically-addressable applications, including applications showcased by the Fuchter group and collaborators: *in vivo* photopharmacology (*JACS* **2020**), energy storage materials (*JACS* **2020**, *JACS* **2021**, *JACS* **2022**) and supramolecular chemistry (*Science* **2023**).
- Leader in medicinal chemistry efforts towards transcriptional regulatory targets. Representative examples include validation of chemical scaffolds for epigenetic therapeutics (e.g. *Nature Chem. Bio.* **2013**), identification of epigenetic therapeutic strategies for malaria (e.g. *PNAS* **2012**, *Nature Med.* **2014**, *ACS Infect. Dis.* **2018**), and a new approach to immuno-oncology via nuclear receptor inhibition (WO2018158587, WO2018178666, WO2020002911).
- Played a leadership role in translational drug discovery at Imperial College, from novel screening approaches (*Nature Comm.* **2018**) to the development of several clinical candidates for cancer therapy including GCN2 and CDK7 (*Mol. Cancer Ther.* **2018**). The latter candidate, now called Samuraciclib, has entered Phase II clinical evaluation for multiple cancers, and has been FDA fast tracked.

SELECT AWARDS

- **Royal Society of Chemistry (RSC) Malcolm J. Campbell Memorial Prize 2023.** Awarded by the RSC's Biological and Medicinal Chemistry Sector 'for the discovery and early development of first-in-class cyclin-dependent kinase (CDK7) inhibitor, Samuraciclib, for breast cancer' (together with Profs Coombes, Ali and Barrett).
- **RSC Stephanie L Kwolek Award 2022.** A Horizon Prize awarded by the RSC Materials Division 'for the discovery of chiral organic materials that allow high control of photon and electron spin'.
- **RSC Corday-Morgan Prize 2021.** Awarded by the Royal Society of Chemistry (UK) for the most meritorious contributions to chemistry. Specific citation: 'For the development of chemistry-led approaches to interrogate function in chemistry, materials and medicine.'
- **2020 Blavatnik Award for Young Scientists in the UK.** Awarded by Blavatnik Family Foundation and the New York Academy of Scientists to "honor exceptional young scientists and engineers by celebrating their extraordinary achievements, recognizing their inspiring promise, and accelerating their innovations through unrestricted funding."
- **Tetrahedron Prize Young Investigator Award for Bioorganic and Medicinal Chemistry 2018:** Presented annually to an individual under 40 years of age who has exhibited "exceptional creativity and dedication" in the fields of Bioorganic and Medicinal Chemistry
- **RSC Harrison-Meldola Memorial Prize 2014.** Awarded by the Royal Society of Chemistry (UK) for the most meritorious and promising original investigations in chemistry and published results of those investigations.

SELECT ENTREPRENEURIAL ACTIVITY

- One of the inventors of ICEC0942/CT7001, now called Samuraciclib, which has entered Phase II clinical evaluation for multiple cancers, and has been [FDA fast tracked](#). The origins of this project are described [here](#).

- **Founder, Non-Executive Director and Head of Chemistry** of a new immuno-oncology spin-out company that aims to exploit natural killer cell biology for therapy. NK:IO Ltd commenced commercial activities in January 2021 and has successfully raised >£5M in seed fund investments from a syndicate of investors including Start Codon, Meltwind, UKI2S, CRUK and Innovate UK.

- Lead investigator on Apollo Therapeutics Ltd. project developing a new treatment for acute myeloid leukaemia and potentially other liquid tumors. Key inventor on the patent surrounding the resulting candidate drug.

Filed >10 patents based on the science developed in his lab

PUBLICATIONS

>130 peer reviewed papers, 13 book chapters.

COMMUNITY CONTRIBUTIONS AND LEADERSHIP

- **UK representative to the [EuChemS Division of Organic Chemistry](#)**. Nov 2018 – March 2023

- **Editorial Board Membership:** [RSC Medicinal Chemistry](#) and [Chirality](#). 2020 – present

- **Elected Member, [RSC Organic Division Council \(OD\)](#)**. July 2017 – July 2020. Appointed Member 2015 – 2017

- **Associate Editor** of the journal [RSC Medicinal Chemistry](#) (formally MedChemComm). 2015 – 2020

- Member of **Cancer Research UK-ESPSC Multidisciplinary Award Expert Review Panel**. 2015 – 2019

- **Royal Society of Chemistry panels:** OD J-NOST (2014-2019); Researcher Mobility Grants (2015 – 2016); Undergraduate bursaries (2014 – 2016)

- **Conference organisation:** 2015: South East RSC OD Regional Meeting (2015); Inaugural UK meeting focused on chiral materials (2019); London Chemical Biology Symposium (2019); Design, synthesis and application of next-generation organic semiconductors, London (2022)

- **Select peer Review:** >15 different journals; EPSRC (since 2011), BBSRC (since 2012), CRUK (since 2014) Leverhulme Trust (since 2010), CNRS and INSERM (2013), Strasbourg Institute for Advanced Study (2020), U.S. Department of Energy (2020).

POSITIONS OF RESPONSIBILITY AT IMPERIAL COLLEGE

- **Director of [Centre for Drug Discovery Science](#)**, Imperial College London. 2017 – present

- **Management Board Member, [Centre for Processible Electronics](#)**. Imperial College London. 2022 – present

- **Theme Champion, Emerging Technologies, [Centre for Processible Electronics](#)**. Imperial College. 2020 – present

- **Director of Postgraduate Studies**, Department of Chemistry. October 2016 – September 2019

- Member of the Department of Chemistry's Flexible Working Group (2020 – present). Previously, a member of the Athena Swan Committee ahead of the Department of Chemistry's Gold Award.

- Member of >8 multidisciplinary centres/networks at ICL, including the Institute of Chemical Biology, the Imperial College Network of Excellence in Malaria, the Cancer Research Centre of Excellence, the Antimicrobial Research Collaborative, the Centre for Processible Electronics and the London Centre for Nanotechnology.

SELECT TEACHING EXPERIENCE

- **Director of Imperial College [MRes in Drug Discovery and Development](#)**. Coordinated all aspects of this popular MRes course, which I designed together with Prof. Ed Tate. 2011 – 2023

- **UG Organic Chemistry Core Course Lecturer:** Language of Chemistry. Yr1 introductory course covering all aspects of stereochemistry, conformation, hybridisation and nomenclature. 2019 – present

- **UG Organic Chemistry Elective Course Lecturer:** Introduction to Chemical Biology. Yr3 introductory course on state-of-the-art techniques in chemical biology. 2021 – present

- **UG Tutor in Organic Chemistry:** Tutoring in all aspects of Yr 1 and Yr 2 Organic Chemistry. 2008 – present

- **Organic Laboratory Supervision.** Lab supervisor for Yr 2 and Yr3 synthesis lab. 2008 – present

MEMBERSHIP OF PROFESSIONAL BODIES

Fellow: Royal Society of Chemistry (22 years)

Member: American Chemical Society (15 years), New York Academy of Sciences, British Association of Cancer Research, European Association of Cancer Research.