BRITISH PHARMACOLOGICAL SOCIETY

2016 Bill Bowman Travelling Lectureship

The British Pharmacological Society is delighted to invite institutions across Europe to bid for the chance to host a lecture from the 2016 Bill Bowman travelling lecturer.

About the Bill Bowman Travelling Lectureship

The Bill Bowman Travelling Lectureship was established by the British Pharmacological Society in 1995 and supports the professional development of early career pharmacologists. Candidates for the award are assessed on their published work and the strength of their lecture summary.

About the 2016 lecturer

Dr Nicholas Kirkby is a cardiovascular pharmacologist who leads a group in the Vascular Biology section of the National Heart & Lung Institute (NHLI), Imperial College London, UK.

Dr Kirkby's current work centres around the role of cyclo-oxygenase and related enzyme pathways in cardiovascular disease, cancer, inflammation and immunology and is supported by close collaboration with colleagues at NHLI and international leaders in the field. A summary of Dr Kirkby's lecture is enclosed overleaf.

Dr Kirby will be visiting at least two UK sites and **one European site** as part of his lectureship.

Supporting the 2016 lecturer

The British Pharmacological Society covers the cost of the lecturer's travel, accommodation and subsistence for any visit, and makes arrangements for the booking of their travel and accommodation.

The Society will also consider contributing to the cost of a networking event before/after the lecture. Further details will be discussed with the successful European site.

How to bid to host a lecture

Representatives from institutions across Europe can submit expressions of interest directly to the British Pharmacological Society. Please send expressions of interest to Paul Tizard, the British Pharmacological Society's Membership Manager paul.tizard@bps.ac.uk.

The deadline for expressions of interest is **15 July 2016.**

About the 2016 lecture summary

Cardiovascular pharmacology of cyclo-oxygenase: challenging dogma and defining new paradigms

Cyclo-oxygenase (COX) enzymes generate prostaglandin and thromboxane mediators and exist as two isoforms; constitutively expressed COX-1 and inducible COX-2. These enzymes are amongst the most widely exploited targets in human medicine with indications in thrombosis, arthritis, pain and cancer. As a consequence, drugs that work by blocking COX are amongst the most commonly taken medications world wide with billions of doses consumed annually. For example aspirin, which is the mainstay of secondary prevention of heart attacks works by blocking COX-1 in platelets whilst sparing 'protective' vascular prostanoid pathways. By contrast, non-steroidal anti-inflammatory drugs (NSAIDs), which include ibuprofen, diclofenac and rofecoxib (Vioxx), work by blocking COX-2 to reduce inflammation, fever and pain and according to some studies, prevent cancer. However, blocking COX-2 is associated with serious cardiovascular side effects, which have limited drug development and prevented the use of NSAIDs in the treatment of cancer.

Despite the therapeutic importance of the cardiovascular pharmacology of COX enzymes, many controversies have remained about their expression and function in the cardiovascular system. We have used a combination of traditional pharmacological and cutting-edge systems biology approaches to address long-standing unanswered questions and identify novel COX-regulated pathways in the cardiovascular system. Our findings include identifying that COX-1 and not COX-2 is the predominant driver of prostanoid production in the vasculature, that vascular prostanoids may have harmful rather than protective effects in the cardiovascular system, and that renal COX-2 can produce a profound regulation of systemic vascular health. Addressing these outstanding questions in COX biology will allow us to predict and avoid cardiovascular toxicity of NSAIDs, and better harness the therapeutic power of aspirin for the prevention of cardiovascular events.