



PUTTING UK PHARMACOLOGY ON THE MAP – FROM BENCH TO BEDSIDE



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Pharmacologists have improved the lives of millions of people in the UK and worldwide. Thanks to their knowledge and expertise, the over 3,500 members of the British Pharmacological Society have a track record of tackling the most pressing problems facing society.

The British Pharmacological Society has, at its heart, the development and promotion of pharmacology and of its members who are training and working in academia, government, industry and the health service. The Society takes great pleasure in celebrating these achievements and campaigns for pharmacologists to continue to benefit the health and wealth of the UK.

THE ACHIEVEMENTS OF UK PHARMACOLOGY

The British Pharmacological Society recognised the achievements of UK Pharmacology with the announcement of its annual 'Putting UK Pharmacology on the Map' vote in Parliament on 15 December 2014.

The vote selected sites of special scientific interest linked to achievements in pharmacology based on a ballot of MPs, peers and senior members of the scientific community. For the second year Andrew Miller MP kindly took on the role of Returning Officer and revealed the names of the winning sites, judged to have made outstanding contributions to the discovery and development of medicines:

• Marischal College, The University of Aberdeen

Heather Wallace, Professor of Biochemical Pharmacology and Toxicology at the University of Aberdeen, said: "The University of Aberdeen has been at the forefront of research and innovation throughout its 500 year history. Pharmacology has been part of that history for over 50 years and the University can claim the rare distinction of two British Pharmacological Society Wellcome Gold Medal winners. This research on opioids and cannabinoids was carried out at Marischal College by Professors Kosterlitz and Pertwee and their teams. We are delighted the

pharmacology has been recognised with this award. It could be argued that, through his pioneering studies on the chemistry of drug action, Alfred J Clark was both Chair of Pharmacology at Edinburgh and the father of the modern subject. That aside the ground breaking work of Edinburgh researchers has been of high impact across the decades. This is highlighted by the outstanding contributions of Sir John Gaddum and Marthe Vogt on neurotransmitters that continues to aid our understanding and treatment of mental illness. Work by Eric Horton on prostaglandins opened the door

... benefit the health and wealth of the UK ...

importance of that early, and indeed continuing, work has been recognised in this way. Our research continues with vigour at the Institute of Medical Sciences on our Foresterhill health campus."

• The Department of Pharmacology, the University of Edinburgh:

Mark Evans, Professor of Cellular Pharmacology at the University of Edinburgh, explained: "The University of Edinburgh has a long tradition of discovery and innovation in the field pharmacology. I am delighted that its contribution to

to advances in the treatment of pain and inflammation that continues to this day."

• The Department of Molecular & Clinical Pharmacology, the University of Liverpool

Professor Munir Pirmohamed, from the University of Liverpool's Institute of Translational Medicine, commented: "We are delighted to have been chosen as one of the winning sites for Putting UK Pharmacology on the Map. The Department of Molecular and Clinical Pharmacology in Liverpool has maintained its identity, and

continues to promote leading edge research with seamless working between basic and clinical scientists. Its multi-disciplinary approach with collaborative working with academia, healthcare and industry is key to its success."

• **Sir William Dunn School of Pathology, the University of Oxford**

Professor Christoph Tang of the Sir William Dunn School of Pathology at Oxford University said: *"In the 1940s, treatment with penicillin seemed nothing short of miraculous. The discovery banished the threat posed by many infectious diseases that were leading killers of the time. The dedicated work at the Dunn School by the team*

... research on opioids and cannabinoids ...

of Florey, Chain and Heatley ushered in the age of modern medicine, and paved the way for drug discovery since then. I am delighted that this remarkable achievement has been recognised with this prestigious award, and I am proud to accept it on behalf of the scientists and staff at the Dunn School."

These winning sites joined four sites previously elected to the initiative in 2013:

- AstraZeneca, Alderley Park
- The James Black Foundation, King's College London
- The University of Strathclyde
- Wadham College, The University of Oxford

The back page of this issue includes the Society's members and parliamentarians who were able to join the celebrations: Stephen Metcalfe MP and Andrew Miller MP on behalf of the House of Commons Science and Technology Committee; Deputy Speaker Eleanor Laing MP; Dame Anne Begg MP and

Frank Doran MP congratulating the team from Aberdeen; and Louise Ellman MP congratulating the winners from Liverpool.

RECENT CAMPAIGNS

1. Advancing pharmacology in the UK

To coincide with the 'Putting UK Pharmacology on the Map' result, the Society identified what it believes are the secrets of success for sites where cutting edge research is nurtured in the UK.

"These sites of special pharmacological interest have made outstanding contributions to the discovery and development of medicines, and also to the health and economy of the UK. By learning from our

rich history, we can ensure that the UK remains at the cutting edge of research," explained Professor Humphrey Rang, President of the British Pharmacological Society. *"The UK has been a world-leader in medicines research and development, but recent changes have put this position under threat. Where are the next breakthroughs going to come from? There are obvious similarities in the sites that have been successful in the Putting UK Pharmacology on the Map*

... treatment of pain and inflammation ...

vote for the last two years. I hope these will be encouraged by team leaders, employers, funders and policy-makers in order to nurture future breakthroughs."

The secrets of success identified by the Society were:

- **Team identity:** successful sites have benefited from distinct identities, whether as standalone organisations or

working within much larger universities or companies.

- **Leadership:** the achievements of these sites can often be traced to the effectiveness of their charismatic, imaginative and determined leaders.

... help the NHS surmount the biggest financial challenge ...

- **Adequate resources:** while scientists have been able to work creatively within limitations, confidence in the longer-term availability of resources, including funding, is important.

- **Championing talent:** successful sites have attracted and developed skilled scientists.

The Society is a committed member of the Drug Discovery Pathways Group, which works to develop solutions to the needs of the wider medicines research community in three main areas: industry-academia partnerships, knowledge and skills.

2. Advancing clinical pharmacology in the NHS

The British Pharmacological Society launched a new report in November calling for an increase in the number of clinical pharmacologists across the four UK nations (available from:

bit.ly/NHSandCPT). The medical specialty of clinical pharmacology and therapeutics (CPT) is the only one focusing on the safe, effective and economic use of medicines, and is well placed to help the NHS surmount the biggest financial challenge since its creation.

Lord Robert Winston kindly hosted a reception to launch the report and noted, *"The NHS*

faces increasing demand for services and a decreasing budget. Evidence shows that clinical pharmacology is going to be vital if we are to meet this challenge, but the speciality has perhaps been a little too shy in coming forward. I am therefore pleased to help draw attention

to this under-recognised group of doctors and the steps needed to increase their number."

Clinical pharmacologists make a particularly valuable contribution to the NHS in areas including:

- Providing specialist and generalist **patient care**
- Leading clinical **toxicology** services
- Advising on **medicines policy** and **management**
- Providing **education** and **training** for undergraduates and postgraduates
- **Working with industry** to enhance the development of innovative new medicines
- Bringing innovation to the NHS through **experimental medicine**

In 2012, there were only 77 CPT consultants in the UK, with startling inequalities in provision across different regions, and significantly fewer than the 440 recommended by the Royal College of Physicians.

The Society is calling for a substantial increase in the number of registrar training posts and believes an increase in the number of consultants to 150 over the next decade is achievable – and necessary if the NHS workforce is to meet current and future demands.