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PHARMACOLOGY

BPS BRITISH
PHARMACOLOGICAL
SOCIETY
Today's science, tomorrow's medicines



2013 Annual Review



**BRITISH
PHARMACOLOGICAL
SOCIETY**

Today's science, tomorrow's medicines

About the Society

The British Pharmacological Society (BPS) is the primary UK learned society concerned with research into drugs and the way they work. Our members work in academia, industry, regulatory agencies and the health services, and many are medically qualified. The Society covers the whole spectrum of pharmacology, including laboratory, clinical, and toxicological aspects.

BPS exists to promote and advance pharmacology (including, without limit, clinical pharmacology) and to be the leading Society for the presentation, promotion, and discussion of all matters relating to both pharmacology and clinical pharmacology and therapeutics (CPT). Specifically, the Society is concerned with the discovery, mechanism of action, use and safety of drugs in humans and animals, in order to contribute to education and the understanding and relief of suffering.

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Message from our President and Chief Executive



Professor Phil Routledge

2013 represented an exciting year in the growth of the Society. Our first five-year Strategy provided structure and direction to BPS activities, meaning a coherent approach could be taken to planning and delivery throughout the year under review and in the future.

We would like to highlight several activities undertaken by the Officers, members and staff of BPS in 2013, which reflect some of the principal objectives of our Strategy, and which support BPS's overarching goal to promote and advance pharmacology and clinical pharmacology.

The 'Your BPS' campaign sought to increase transparency in our governance processes and remind members that they have a vital role to play in the direction of the Society through elections and committees, and we were delighted to see real improvements in the numbers of votes cast (up 76% on 2012) at our AGM in December 2013.

Other initiatives in support of the 'Your BPS' campaign highlighted the importance of pharmacology in drug discovery and development: the Pharmacology Hall of Fame

and Putting UK Pharmacology on the Map. Five individuals were inducted into the Hall of Fame at our inaugural Fellow's Reception in September, while BPS used its first Parliamentary Reception in December to recognize the winners of Putting UK Pharmacology on the Map, in the company of MPs and members of the House of Lords.

BPS also undertook its first major member engagement survey, which provided feedback on the strengths and weaknesses of the Society, and the views of our members across the spectrum of age and experience. The survey highlighted the importance to members of the Society's annual meeting, which is still provided as a benefit of membership. The meeting, now known as *Pharmacology 2013*, was attended by around 900 delegates from across the world, and featured a very fine scientific programme. *Pharmacology 2013* represented a step-change in quality and service, and we are grateful to all those who contributed considerable time, effort and expertise to ensure the meeting was a great success.

BPS balanced its support for members with increased interaction with other disciplines. Much of the activity in this area can be found in the pages of this review, but it is worth highlighting the work of the Drug Discovery Pathways Group (DDPG), of which BPS is a founding member alongside Society of Biology, Royal Society of Chemistry, Biochemical Society and Academy of Medical Sciences. The group aims to collaborate on initiatives and to speak with one voice on matters relating to the health of UK drug discovery and development.

Other collaborative activities grew markedly also. BPS worked with sister societies to support five external educational meetings, and provided funding

for a further nine meetings. Our Policy, Public Engagement and Outreach work resulted in us attending numerous science festivals and arranging presentations across the UK, along with several parliamentary events in Westminster during the year. Underpinning this was our busiest 12 months of policy consultations, during which the Society provided 15 responses – twice as many as in 2012.

Our support for clinical pharmacology, and the role it has to play in the nation's health, has also reaped rewards in 2013, particularly with regard to the Prescribing Safety Assessment (PSA), which tests core competencies in basic prescribing and related therapeutic skills, and has been designed to ensure that doctors graduating from medical schools are able to prescribe safely and effectively. Under the joint leadership of BPS and the Medical Schools Council, the 2013 PSA was piloted with 29 medical schools – around 5,000 medical students – across the UK.

As ever, the Society's publications had an important and productive year. BPS produced its first Publications Strategy in 2013, integrating a wide range of publishing activity and providing clear direction at a time of great change for academic publishing.

Journals continued to go from strength to strength in the period under review. *The British Journal of Pharmacology (BJP)* and *British Journal of Clinical Pharmacology (BJCP)* saw impact factors rise to 5.067 and 3.578 respectively, and both continued to provide significant income for the Society. It is worth noting the remarkable work undertaken on the Society's behalf by the Editors-in-Chief and editorial boards of these publications, who enable the Society to fulfil its charitable remit with the kinds of activities highlighted in this Review.

Our commitment to exploring and supporting open access journals and data can be found in the *Concise Guide to PHARMACOLOGY*, which is available free online. The guide contains overviews of the key properties of over 2,000 targets with pharmacology and links to further information available on www.guidetopharmacology.org. Meanwhile, our new open access journal *Pharmacology Research & Perspectives* was launched in April, with BPS member Mike Curtis as its first Editor-in-Chief, published in tandem with Wiley and our American counterparts the American Society for Pharmacology and Experimental Therapeutics (ASPET). We wish this new venture well.

From an office perspective, BPS continued to attract talented new staff members to our team, and we should welcome in particular Mike Poole, who joined us in July as BPS's new Finance & Commercial Director.

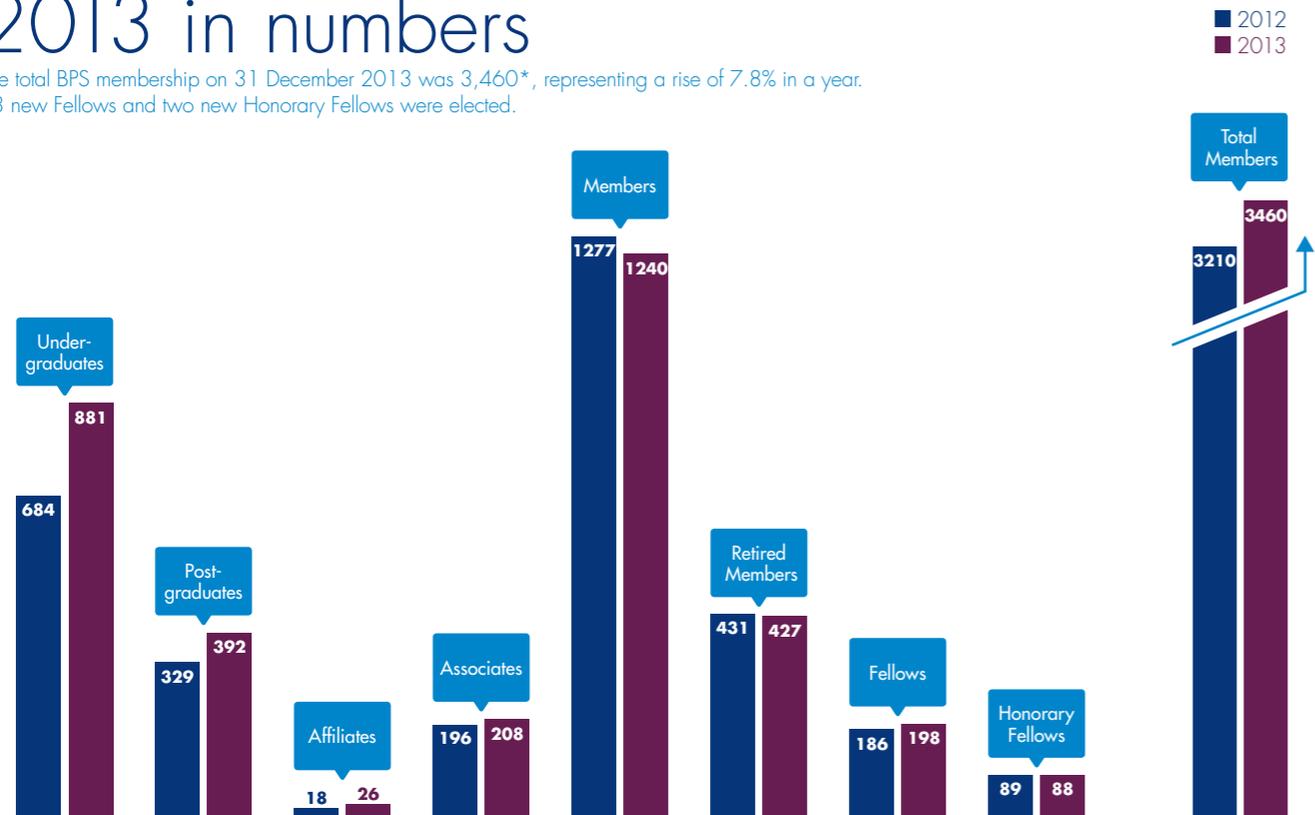
2013 was Phil's last year as President at BPS, so on behalf of both of us, we would like to thank all the talented and committed individuals – Officers, Vice Presidents, committee chairs and members, editorial teams, staff and our membership at large – for all the hard work and creativity they have contributed so generously to BPS in the year under review.

Professor Phil Routledge
BPS President (2012–2013)

Jonathan Brüün
BPS Chief Executive

2013 in numbers

The total BPS membership on 31 December 2013 was 3,460*, representing a rise of 7.8% in a year. 13 new Fellows and two new Honorary Fellows were elected.



*Membership figures for 2012 and 2013 have been adjusted to remove pending and suspended members.

Awarded prizes and awards to **70 recipients**

1,069 members completed the membership engagement survey



Responded to **15 consultations** in 2013

PSA was piloted to 29 medical schools and almost **5,000 medical students** across the UK



Five outreach grants were awarded totalling **£1,726**

Supported nine external meetings totalling £16,500

Over **£42,619** allocated in bursaries to attend BPS meetings

BJP's Impact Factor increased to **5.067**

BJCP's Impact Factor increased to **3.578** (its highest ever)

14,403 downloads of *Pharmacology Matters*



Pharmacology 2013 attracted almost 900 registrants, 50 speakers and 23 exhibitors

93% of participants thought the content of symposia was appropriate and informative

95% of participants said that they would be likely to recommend this meeting to a friend or colleague

f 3,052 Facebook followers

t 1,652 Twitter followers

in 363 LinkedIn members

YouTube 122 YouTube subscribers



Member engagement

Highlights from our membership activities throughout 2013:

1. Member engagement survey
2. *Pharmacology 2013*
3. Supporting members
4. Recognizing achievement



1. Member engagement survey

Danielle Jauncey, *Research by Design*

BPS commissioned Research by Design as the research partner for the membership engagement survey following a competitive tender process. The aim of the survey was to help BPS Council, the Executive Committee, staff and key stakeholders better understand the perceptions and needs of members.

BPS was keen to identify ways in which its benefits and activities could be improved and its mission to 'advance and promote pharmacology, including clinical pharmacology' realized.

Right from the outset we were encouraged by the enthusiasm and proactivity of BPS. The team fed into each stage of the process, from the survey design, to reporting.

Member engagement was our goal throughout the project. The initial stages required qualitative interviews with members, and it was from these that we were able to further develop our understanding of member needs. Through these interviews we identified many of the key challenges that members face, and explored what they anticipate the future may look like for pharmacologists.

Having not worked with BPS before we were unsure about how our survey might be received by members and the response rate we would achieve. An online survey that had previously been distributed to BPS members was completed by only 8% of members, but we felt confident that we could engender greater support than that. With a determination to improve BPS's response rates and the application of our proven techniques for maximising participation, 1,069 members completed the survey, 32% in total. Such was the support of members that 11% had completed the survey within 24 hours of it launching. This demonstrates members' enthusiasm to share their views with the Society and help shape the future direction of activities and policies.

The survey explored in detail how members perceive their BPS membership as well as what more the Society needs to do to fulfil its mission. Encouragingly the majority of members suggest that the mission is being achieved, although there is recognition that there is always more that can be done, for example, raising the profile of pharmacology with Government, the general public and the media.

On the whole, the results for BPS are some of the most positive we have seen through our work with membership organizations. Members' overall rating of BPS and their levels of advocacy are higher than our normative data for comparable organizations.

We very much look forward to continuing to support the Society with its member research.

2. Pharmacology 2013

Karen Schlaegel, BPS Head of Meetings and Events

The year ended with *Pharmacology*, our rebranded annual meeting. As the meeting had been fully booked for the two previous years, we secured a larger and a better configured space at the Queen Elizabeth II Conference Centre and so were able to welcome more participants, display more posters and accommodate more exhibitors. The meeting attracted almost 900 participants, with feedback from participants indicating increased satisfaction with the scientific content and speaker quality with 95% of attendees saying that they would be likely to recommend *Pharmacology* to a friend or colleague.

“ I'd never been to a scientific conference before, and I arrived in London very unsure of what to expect. Over the course of three days I was blown away by the openness and warmth of the pharmacology world in welcoming me. As well as massively enjoying myself, I learned an enormous amount. It was fascinating to learn about research that might have a tangible impact for patients. There were fantastic opportunities for engagement and networking; both with other young pharmacologists just starting out, and with legends of pharmacology who write the textbooks I use everyday. ”

Andrew Jenkins, BPS member,
University of Bath, first time participant

“ It is really great supporting and working with BPS. The meetings are always well-organized and worthwhile. The team are always keen to make every effort to accommodate our needs. We have been to many of their events and look forward to coming back next year. ”

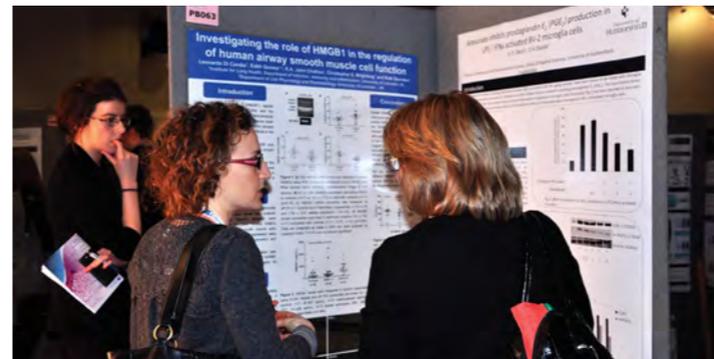
Elizabeth Day,
Product Specialist, Abcam
Biochemicals, exhibitor

“ The Specialty Registrar (StR) training session at *Pharmacology 2013* was my third annual BPS StR training session. The style of the sessions is very focused, with a selection of key concepts covered. The format of the teaching is informal and participation is encouraged. It encourages the trainee to really focus on the teaching sessions as we are aware we will be examined on the content later! The training is really valuable to trainees as it enables us to network, discuss cases and review potential gaps in our knowledge. ”

Dr Lauren Walker, BPS member,
University of Liverpool, participant

“ I gave a presentation at *Pharmacology 2013* as part of the 'Drug Discovery of the year: the key role of pharmacology' symposium. This was a packed symposium with a highly engaged audience and the feedback was very positive. It was a pleasure to be able to discuss the pharmacology behind vismodegib with members of BPS. ”

Dr Rick Graham,
Genentech Inc, speaker



Pharmacology 2013 provided opportunities for engagement and networking

3. Supporting members

BPS provides bursaries and travel grants for our members to assist with the costs of attending symposia, conferences and meetings deemed to be of interest to pharmacologists. In 2013 BPS distributed £42,619 in bursaries to members.

“ I am very grateful to BPS for their generous travel grant to attend the World Congress on Inflammation in Brazil this year. This conference offered me the opportunity to give an oral presentation to an international audience for the first time, which was an immensely valuable experience, both in terms of gaining confidence as a speaker, and in obtaining input and feedback from experts in inflammation and immunology. ”

Claire Sand, BPS member,
Kings College London, bursary recipient

The European Opioid Conference (EOC 2013) Professor Ian Kitchen, Co-Chair of BPS's Committee Heads of Pharmacology and Therapeutics (CHOPT)

A BPS grant was used to support the attendance of young scientists attending the EOC 2013. Bursaries were awarded to 28 junior scientists from eight different countries. 90 participants from eleven European countries as well as from the Australia, Brazil, Mexico and the USA spent two days presenting and discussing the very latest developments in opioid science, the treatment of pain, drug addiction and mood-related disorders.

“ The 6th European workshop on Cannabinoid Research presented a tremendous opportunity to present some of my research findings and also to interact and share ideas with a wide spectrum of cannabinoid research scientists. Overall, I had a positive experience, and would like to express my gratitude to BPS for the generous travel bursary award, which made it possible for me to participate in this workshop. ”

Bright Okine, BPS member,
National University of Galway,
bursary recipient

4. Recognizing achievement

Case study: Wellcome Gold Medal

Professor Rod Flower, President Emeritus and Wellcome Gold Medal winner

I was thrilled to receive the Wellcome Gold Medal at *Pharmacology 2013*, for my research on the pathophysiology of inflammation and the mechanism of action of anti-inflammatory drugs, and it set me thinking about the origin of the Society's prizes and, in particular, about the story behind this award.

Everyone is familiar with the Wellcome Trust, but far fewer have heard of the Wellcome Foundation Ltd. This was a pharmaceutical company founded by the American pharmacist, entrepreneur and visionary, Henry Wellcome (1853–1936). When Wellcome came to England he opened several new laboratories including the Wellcome Physiological Research Laboratories.

Henry Wellcome was passionate about the importance of basic research in the pharmaceutical industry and one of his master strokes was the appointment in 1904 of Henry Dale, firstly as a staff pharmacologist and subsequently (1906–1914), as Director of the Laboratories. Dale himself subsequently, of course, co-founded BPS and won the Nobel Prize for Physiology or Medicine in 1936.

Commenting, in 1948, on Wellcome's managerial style, C H Kellaway wrote:-
“The scientific workers whom he engaged were allowed to work largely upon subjects of their own choice although he sometimes suggested topics in which he was particularly interested.”

This technique for drug discovery is, to put it mildly, unfashionable today. And yet the company flourished commercially and Dale published his pioneering work on histamine, anaphylaxis and the pharmacology of ergot during this period. Wellcome's will stipulated that, after his death, the profits from the company should be used to further medical research.

This was the origin of the present day Wellcome Trust and its substantial (currently >£14bn) endowment.

John Vane sought to maintain the spirit of Wellcome's approach when he became R&D director in 1973. At one point the Foundation boasted six Nobel laureates as past or present employees and its pharmaceutical legacy included acyclovir, allopurinol, atracurium, AZT, co-trimoxazole, digoxin and lamotrigine, as well as many familiar over-the-counter medicines such as Actifed.

This was the intellectual heritage that Vane wished to celebrate when he established the Society's Wellcome Gold Medal award in 1979. The medal bears a portrait of Henry Wellcome on one side and the famous 'Unicorn' logo of the company, on the other.

The Wellcome Foundation merged with Glaxo in 1995 and the Foundation's name and identity had all but disappeared within a few years.

Gone, but not forgotten, thanks to the Gold Medal!



Professor Rod Flower (right) received the Wellcome medal from Professor Phil Routledge (left) at *Pharmacology 2013*



Professor Graeme Henderson (right) received the JR Vane Medal from Professor Phil Routledge (left) at Pharmacology 2013

Fellowship

The BPS Fellowship was established to recognize members who have demonstrated distinction and peer recognition in pharmacology. We are proud of the substantial contributions made by our Fellows to the discipline of pharmacology, through their work, publications and attendance at Society meetings. The Fellowship was invited to meet for the first time in 2013 to encourage networking and to welcome our newest Fellows. Over 80 BPS Fellows and their guests attended in order to catch up with former colleagues and meet others in the field.

One of the highlights of the evening was undoubtedly the prize lecture from the 2013 JR Vane Medal winner, which is awarded annually for outstanding work in an area designated by BPS Council.

The 2013 winner Professor Graeme Henderson spoke on "Inspirations" and acknowledged the individuals who influenced his career in pharmacology.

We welcomed the following new Fellows in 2013: Dr John Adcock; Dr Steve Alexander; Dr Steven Charlton; Professor Gary Ford; Professor Thomas Griesbacher; Dr Judith Hall; Professor Alun Hughes; Professor Dyfrig Hughes; Dr Charles Kennedy; Dr Martin Landray; Professor Ian Rodger; Professor Donald Singer; Dr Egle Solito & Dr Roger Whiting.



Membership experiences:
Alexandra Cooke, University of Bristol

What was your involvement with BPS in 2013?

“ Throughout 2013 I had the pleasure of being involved with a variety of activities for BPS. It was the final year of my AJ Clark studentship, which I can now happily say has resulted in the successful completion of my PhD. I was also a member of the External Affairs committee and involved in various activities, most notably ‘Putting UK Pharmacology on the Map’. In addition, I participated in a member’s review on the content and formatting of the BPS publication *Pharmacology Matters* ”

Has your relationship with BPS changed over the course of your membership?

“ My initial involvement with the BPS began with the submission for a BPS AJ Clark PhD Studentship award to work in the laboratories of Professor Graeme Henderson and Dr Stuart Mundell, for which I was fortunately successful. I have also had the privilege of sitting on the External Affairs Committee for two years. Being on the External Affairs Committee encompassed a wide variety of activities from providing input into the drafting of policy papers, discussions relating to social media and marketing, through to developing international relations. All of these proved to be an invaluable learning experience. This committee has taught me the importance of promoting pharmacology to both scientists and the wider community.

Through sitting on this committee I have gained a great appreciation for the importance and activities of BPS and its committees, some of which I would hope to join in the near future if the opportunity arises. ”

Has your BPS membership helped develop your career?

“ Being a member of the BPS has significantly helped my career not just scientifically but also professionally. Most notably by allowing me the opportunity to undertake a PhD studying the trafficking of G protein-coupled receptors (GPCR), a subject area that as an undergraduate and today, as a postdoctoral researcher I find incredibly interesting and exciting. Regular attendance to the annual *Pharmacology* meetings and biannual Focused meeting on Cell Signalling has enabled me to engage with other scientists, given me the opportunity to present my work and enhance my scientific knowledge. In addition to the role of the BPS in organizing these events, their generous student scholarships have enabled me to continually attend. Through my other activities with BPS I have learnt a wealth of information and have had the privilege to meet with many inspirational senior scientists and other professionals, many of whom have offered insightful careers advice. I hope that throughout my career my relationship and involvement with BPS continues to develop. ”

2013 prizes and awards

Honorary Fellowship

Professor Richard Green, University of Nottingham
Dr Ivor Williams, University of Bath

Wellcome Gold Medal

Professor Rod Flower, Barts and
The London School of Medicine and Dentistry

Sir James Black Award for Contributions to Drug Discovery

Professor John Westwick, Global Head and VP,
Novartis, 1999 – 2012

Drug Discovery of the Year

GlaxoSmithKline, for the development of trametinib

JR Vane Medal

Professor Graeme Henderson, University of Bristol

AstraZeneca Prize for Women in Pharmacology

Professor Mandy MacLean, University of Glasgow

BPS Teaching Prize: "The Rang Prize"

Dr Jamie Coleman, University of Birmingham

Novartis Prize

Dr Deborah Hay, University of Auckland

BPS and ASCEPT Outstanding Young Investigator Award

Dr John Broad, Queen Mary, University of London

BPS AJ Clark Studentship

Florence Johnson, King's College London

GlaxoSmithKline Award for Young Investigators

Anne Katrine Johansen, University of Glasgow

GlaxoSmithKline Prize for CPS Oral Communications

Lalarukh Haris Shaikh, University of Cambridge

Pharmidex Poster Prize

Nura Mohamed, Imperial College London
Francesca Rauzi, William Harvey Research Institute
Robin Wickens, University of Bath

Pfizer CPS Poster Prize

Elizabeth Thorne, St George's, University of London

Schachter Award

Scarlett Gillespie, Imperial College London

BJCP Young Investigator Prize

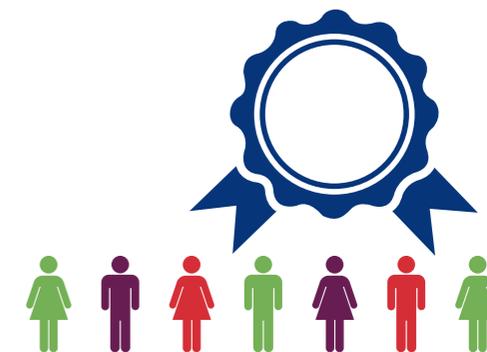
Dr Linda Klumpers,
Centre for Human Drug Research

CPS Undergraduate Prize Winners

Arjun Ardehana, University of Liverpool
Juliet Bottle, University of Nottingham
Jane Crutchfield, University College London
Clare Dagnell, Bristol University
Kimberly Davies, Newcastle University
Patrick Dawson, St George's, University of London
Jack De Wolf, University of Manchester
Laura Elliott, University of Southampton
Anna Ffrench-Constant, University of Edinburgh
Euan Fisher, University of Aberdeen
Christine Hall, University of Warwick
Peter Harries, University of Cambridge
Elizabeth Hird, University of Edinburgh
Thomas Hutton, University of Southampton
Owen Keane, Royal College of Surgeons in Ireland

Ciara Kelly, Trinity College Dublin
Moon-Moon Majumdar, Imperial College London
Felix May, Peninsula Medical School
Ross McMullan, Queen's University Belfast
Alexandra Mercer, University of Glasgow
Jake Moss, St George's, University of London
Jennifer Mullan, King's College London
Kieran Mullins, University College Cork
Agnesa Mustafa, King's College London
Joanna Myers, Hull York Medical School
Rory O'Neill, Peninsula Medical School
Elias Petrou, Barts & The London
School of Medicine and Dentistry
Majd Proty, University of Birmingham
Amandeep Purba, Barts & The London
School of Medicine and Dentistry

Eleanor Quek, University of Oxford
Stephen Ross-Thriepland, University of Warwick
Matthew Steel, St George's, University of London
Feras Sharouf, Cardiff University
Emily Ward, University of East Anglia
Scott Weerasuriya, Bristol University
Rebecca Whatmough, Cardiff University





Congratulations to all of our 2013 prize winners

Prize for the Best National Young Investigators poster in Clinical Pharmacology

1st Prize:
Thomas Hutton, University of Southampton

2nd Prize:
Eleanor Quek, University of Oxford

3rd Prize:
Agnesa Mustafa, King's College London

BSc Pharmacology Prize Winners

Laura Ajram, King's College London
Georgina Anderson, University of Bath
Hollie Appleby, University of Leeds
Laurence Clarke, Bristol University
Alice Fodder, Newcastle University
Ross John Goodson, University College London
Samantha Johnson, University of Cambridge
James Lind, University of Surrey
Elitsa Peeva, University of Edinburgh
Ivona Ruseva, University of Glasgow

BPS Vacation Studentships

Billie Griffith, University of Strathclyde
David Hay, The University of Liverpool
Sophie Martucci, University College London
Alice Robinson, University of Southampton
Alice Tu, King's College London

Young Pharmacologists Committee Undergraduate Poster Prize

Jamie Cartland, MRC Technology
Lyndsey Killian, Royal College of Surgeons, Ireland





Membership experiences:

Professor Richard Green, President Emeritus and 2013 Honorary Fellow

When did you join BPS?

“ I was elected at the December 1973 meeting. In those days to be elected to membership you generally had to have published five papers – two could be abstracts [including one presented to a BPS meeting] and one of the full papers had to be in *BJP*. ”

What was your involvement with BPS in 2013?

“ My involvement was to attend the AGM as I was being elected as a Trustee and of course the official dinner to be awarded Honorary Fellowship of the Society – so a pretty pleasurable meeting overall! ”

Has your relationship with BPS changed over the course of your membership?

“ No change insofar as this has always been the scientific society I have felt closest to and the meetings remain a great place to hear quality pharmacology but also catch up with old friends and colleagues. It has always been a very friendly society that does not take itself too seriously.

However the meetings are now very different from 25 years ago when the winter meeting was huge (upwards of 1,500 persons attending) and large numbers of both oral and poster presentations, but few symposia. This was partly because publishing in journals could take around a year so getting your new work published quickly was important and this could be done via a meeting presentation. ”

Has your BPS membership helped develop your career?

“ Membership of the Society when I joined was pretty much a rite of passage following your PhD, and considered a part of your qualifications. Certainly it significantly influenced my career since I became a *BJP* editor in 1977 and then Meetings Secretary in 1986 and General Secretary (now called President) in 1989. This sort of involvement helped me to meet huge numbers of other pharmacologists and of course a visibility that certainly helped me in my career in both academia and industry. Just meeting and discussing science with senior members at meetings proved a valuable scientific education for me. ”

Public benefit

The following activities helped demonstrate the value of pharmacology to wider society during 2013:

1. Publications
2. Prescribing Skills Assessment
3. Supporting Industry
4. Supporting clinical pharmacology



1. Publications

Professor Graeme Henderson,
President Emeritus and Vice President – Publications

The position of Vice President – Publications is now one year old, and it's been a very busy year! The membership voted to create this position, alongside a reformed Publications Committee at the AGM in 2012 to ensure that the journals continue to publish high quality science, and our members continue to benefit from free access to our excellent journals.

At Experimental Biology in April 2013 we launched a new open access journal – *Pharmacology Research & Perspectives (PR&P)* in partnership with the American Society for Pharmacology and Experimental Therapeutics (ASPET) and the publisher

Wiley. Open access articles are immediately available to read, download or share, and comply with the mandates of many research funding bodies. Dr Mike Curtis (King's College, London) is our founding Editor-in-Chief, with Dr Darrell Abernethy (John Hopkins University) as Deputy Editor. This journal was launched to engage with open access publishing and to provide our members with a new vehicle in which to publish their research. Mike and Darrell have agreed, in conjunction with our Industry Committee, to accept papers that describe target validation, pharmacological hypotheses and replication studies.

The Impact Factors for *British Journal of Pharmacology (BJP)* and *British Journal of Clinical Pharmacology (BJCP)* were released in June. *BJP*'s Impact Factor increased to 5.067 and *BJCP*'s Impact Factor increased to 3.578 (it's highest level ever). We are indebted to the Editors-in-Chief, Senior Editors, Editors and referees for their commitment and contributions to our journals.

“ I became the founding Editor-in-Chief of *Pharmacology Research and Perspectives (PR&P)* in 2013. The journal has the potential to be hugely useful to BPS members in different ways. For example, we have an editor training mechanism that may be transferrable to other BPS journals. Additionally we have a selection of distinctive article types, including ‘target validation’ which offers a rare chance to publish unequivocal negative findings. ”

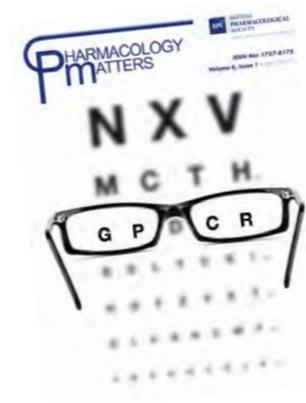
Dr Mike Curtis,
Editor-in-Chief *Pharmacology and Research Perspectives*

In October 2013, BPS hosted a publications strategy retreat as a way of bringing together members of Council, the Publications Committee, representatives of the journals and young pharmacologists to discuss and plan our strategy for the next four years. This was the first publications strategy and it generated a lot of discussion and debate. From this, we came up with some concrete actions and long term plans that I am sure will ensure we continue to advance and promote pharmacology and clinical pharmacology in the rapidly changing publishing environment.

In December 2013, *BJP* published the *Concise Guide to PHARMACOLOGY*, in conjunction with IUPHAR. The guide provides overviews of the key properties of over 2,000 human drug targets and their pharmacology. It is a synopsis of the data in the IUPHAR/BPS Guide to PHARMACOLOGY and allows side-by-side comparison of members of families of drug targets such as receptors and ion channels. We encourage you to cite the Guide as a way of ensuring use of the official IUPHAR nomenclature and classification of human drug targets. We also strongly recommend the IUPHAR/BPS Guide to PHARMACOLOGY as a really helpful and up-to-date research and teaching resource.

Last but by no means least we published three editions of *Pharmacology Matters* in 2013 under the leadership of Editor-in-Chief Dr Tim Atkinson. *Pharmacology Matters* is an important publication for Society members downloads for the year totalled 14,403 and it received excellent feedback in the recent membership survey.

Here's to another successful year for BPS's journals in 2014!



BPS publications

“ I was invited as the Young Pharmacologists representative to the 2013 publications strategy retreat. The retreat was full of conversation about our three journals, open access and an overview of a surprising breadth of educational materials that the Society has developed over the years. It was good to hear that there is a collaborative air to the strategy, with basic pharmacology and clinical pharmacology journals working together, as well as a move towards social media (like many other societies) to promote the research in our journals; opening up interaction with a huge, previously untapped audience. It was a very enjoyable insight into the workings of the BPS, and it's heartening to see that the Society is interested in the input of members at every level. ”

Maria Fernandes,
BPS member, King's College London

Concise Guide to PHARMACOLOGY

Dr Steve Alexander, Editor, the *Concise Guide to PHARMACOLOGY*

The *Guide to Receptors and Channels* was produced in five *BJP* editions between 2004 and 2011. The newest iteration in that genre is the *Concise Guide to PHARMACOLOGY 2013/14*. This presents the nomenclature and pharmacology of the druggable spectrum of G protein-coupled receptors, ligand-gated ion channels, ion channels, nuclear receptors, catalytic receptors, transporters, and a proportion of the enzymes. This latest version comes about through a closer link with the Nomenclature Committee of IUPHAR and their database. This closer link, together with financial support from BPS, IUPHAR and the Wellcome Trust, means that the data on the website is presented in an open access, logical fashion for anyone to peruse with the assurance of the expertise behind it.

The *Concise Guide to PHARMACOLOGY 2013/14*, which appeared in the final issue of *BJP* for 2013 is a snapshot in time of the material presented in the database. In particular, the organization of the Guide focuses on the best available ligands for the drug targets and, where appropriate, provides a tabular orientation for ready comparison of selective ligands for individual members of a family. The database, on the other hand, is constantly being updated with the aim of generating an up-to-date comprehensive catalogue, in readily accessible fashion, of all the targets of drugs, medicinal and experimental.

The two resources allow different views and different detail of the same core data. Fundamental to both of them is the capacity to inform scientists, particularly those starting to move into a new area, and thereby expanding their horizons.

2. Prescribing Safety Assessment (PSA)

Jess Strangward, BPS Head of Education

The PSA continued to gain momentum throughout 2013 with just under 5,000 students opting to take the assessment.

The PSA is growing in popularity and prominence at a time of great change in the NHS with an increasing demand for transparency and focus on safety, following the 2013 Francis Report. It was felt that renaming the PSA as the Prescribing Safety Assessment would make it clearer to stakeholders, including medical students and patients, the goal of the assessment as well as demonstrating competent prescribing is a critical element of the assurance of patient safety in the modern NHS.

“ Good, safe prescribing is a key skill for a newly qualified doctor and something that can be difficult to practise as a medical student. The PSA tests realistic, practical scenarios similar to those that I will encounter on the wards. The PSA has helped me to reflect on my competence to prescribe safely and ensure good patient care as I begin my career. ”

Angus McKnight,
Final Year Medical Student,
Cambridge

“ These pilots were the culmination of three years' work developing an online question authoring and delivery tool that has enabled medical students around the UK to assess their prescribing skills. We have been greatly encouraged by feedback during this process. It indicates that prescribing is considered to be a particularly challenging area of medical training and, indeed, that students have widely welcomed the opportunity to assess themselves against realistic challenges they will face in NHS settings. We hope that the emergence of a new assessment of prescribing will make a contribution to future improvements in patient safety. ”

Professor Simon Maxwell,
BPS member, PSA Medical Director

3. Supporting Industry

Dr Ann Hayes, Chair of BPS Industry Committee

During my first year as Chair of the Industry Committee we have seen a number of significant closures of sites in the pharmaceutical industry and a great deal of policy activity around clinical trials ethics. The Industry Committee is charged with acting as coordination group for industry-related matters in the Society, so we have been kept active this year!

Notable achievements include: working with the Society's open access journal, *Pharmacology Research & Perspectives*, on a new format for publishing target validation studies (including negative clinical trial data); our Drug Discovery of the Year symposium at *Pharmacology 2013*; involvement with the Drug Discovery Pathways Group and sponsorship of Exchange Fellowship workshops; and the second year of running the Drug Discovery of the Year (DDOTY) Award.

The high quality submissions for DDOTY have demonstrated the high-quality and high-value pharmacology being done in industry and I look forward to a busy and successful 2014.



Pictured: Dr Rick Graham accepted the Drug Discovery of the Year Award on behalf of the team behind vismodegib

“Hearing the vismodegib development team had been selected to receive the BPS Drug Discovery of the Year Award provided important motivation to the team.”

Drug Discovery of the Year 2013

Dr Rick Graham, Clinical Pharmacologist, Genentech Inc, member of Drug Discovery of the Year 2013 winning team

Vismodegib was named 2013 BPS Drug Discovery of the Year. The award celebrates the importance of pharmacology in the development of new medicines and was given for the detailed pharmacokinetic/pharmacodynamic analysis that was completed during the drug development process.

Receiving the Drug Discovery of the Year award from BPS was extremely meaningful to the vismodegib development team. We heard that we had won the award in December 2012 and at that time the team was in the midst of complex global health authority interactions and seeking approval for the use of vismodegib in patients with advanced basal cell carcinoma. During these challenging times, teams can lose sight of the significant accomplishments that have been made. Hearing that the vismodegib development team had been selected to receive the BPS Drug Discovery of the Year Award provided important motivation to the team. We're hopeful that this award will continue to recognize, motivate, and inspire scientists who work in industry developing new medicines.

Drug Discovery Pathways Group

Professor Ray Hill, President Emeritus and BPS representative on the Drug Discovery Pathways Group (DDPG)

The DDPG is a partnership of learned societies (BPS with Royal Society of Chemistry, Society of Biology, Biochemical Society, Academy of Medical Sciences) working together to support current and future generations of drug discovery scientists in the rapidly moving pharmaceutical research and development sector. It grew out of an initial meeting with Simon Campbell, when he was President of the Royal Society of Chemistry, where it was clear we were both concerned about the threat to our disciplines as a result of the contraction of pharmaceutical R&D in the UK. Working together has allowed us to have meetings with high level Scientific Advisors to government such as Sir John Bell in order to pass our concerns to policy makers. The significant numbers of members who have lost their jobs as a result of industry changes make our involvement in this group a most important one and we hope that the future will see reinvestment and job creation.

Key activities of the DDPG in the past year include: publishing a letter in the *Financial Times* to address concerns about the future of pharmaceutical research in the UK, working with the Royal Society of Chemistry on a successful and productive workshop on target validation, as well as BPS leading the DDSG – Drug Discovery Skills Group – which is undertaking skills mapping research to feed into training provision.

DDPG is important to highlight that the discipline of pharmacology is a vital part of drug discovery and is crucial for our current (and future) members in terms of their training in pharmacology and preparing them for opportunities throughout their scientific careers. In my view it is a good model for other areas where the BPS mission to promote and advance pharmacology might be best achieved as an essential part of a multidisciplinary group.



Dr Lauren Walker,
BPS member, StR representative
for clinical pharmacology, University of Liverpool

“ I attended two careers fairs as a trainee representative in 2013. I noted a keen interest from recent medical graduates in pharmacology and the future of the specialty. In particular, the specialty appears to appeal to those completing the postgraduate course who often already have research experience from a previous basic science degree. In addition, as general medicine currently seems to play a decreasing role in many of the organ based specialties, many graduates who are as yet undecided on a career path were keen to discuss the role of clinical pharmacologists in the future and what job opportunities they could expect. The careers fairs provide a vital opportunity for publicising the specialty, particularly to those who are keen to consider an academic career pathway. ”

4. Supporting clinical pharmacology

Professor Munir Pirmohamed, *Chair of Clinical Section Committee*

2013 was another busy year for the Clinical Section; two major events were with the European Association of Clinical Pharmacology & Therapeutics (EACPT). BPS hosted the EACPT Summer School in Edinburgh with over 120 clinical pharmacologists in attendance to learn from our panel of speakers on subjects including translational medicine, toxicology and therapeutics. BPS supported two symposia, provided member bursaries and exhibited at the EACPT Congress in Geneva. Our two symposia, *Frontiers in Pharmacology* and *Assessing and Supporting Tomorrow's Prescribers* were well received, and demonstrated the excellent work done by our members. BPS Honorary Fellow Professor Sir Michael Rawlins won the EACPT Lifetime Achievement Award alongside Professor Carlo Patrono and BPS Member Professor Michael Orme was awarded a special award for services to EACPT.

We provided sponsorship for a number of regional meetings allowing members to host meetings in their locality and supported student societies raising awareness of clinical pharmacology as a specialty in medical schools. The range of events was impressive, from supporting the Caledonian Society of Clinical Pharmacology's meeting to sponsorship of the programme book for the Southampton University Medical Students' Research Day.

At *Pharmacology 2013*, Professor Nick Bateman was awarded the Lilly Prize for distinction in pharmacology over many years and joins an eminent list of winners of this award. We also had a packed house for the StR training session, as well as 23 members sitting the StR assessment. This indicates the increasing value of the teaching session and the assessment. It not only provides a training opportunity for StRs, but is a great forum to interact with other trainees and BPS members.

The Clinical Section has been heavily involved in the Society's policy activity – producing a position statement on value based pricing and leading on eight of the Society's consultation responses. This is a useful way of promoting clinical pharmacology to a wider audience, and so thank you to everyone for contributing their thoughts and comments.

On a final note, much of 2013 was preparatory work for a project planned for 2014 on communicating the value of CPT (clinical pharmacology and therapeutics) to the NHS, as well as two clinically-focused meetings.

Promoting pharmacology

Our mission to promote and advance pharmacology was integral to activities throughout 2013:

1. Pharmacology Hall of Fame
2. Putting UK pharmacology on the map
3. Policy highlights
4. Consultation responses and position statements
5. Work with other societies
6. Teaching grants
7. Diploma in Advanced Pharmacology
8. Outreach

1. Pharmacology Hall of Fame

Professor Chris Garland,
BPS Vice President – External Affairs (2011 – 2013)

In September 2013, BPS members elected five trailblazers in drug discovery and development to a newly-formed Pharmacology Hall of Fame. The initiative was launched by the External Affairs Committee, in order to raise awareness of distinguished individuals, based upon their distinction and peer recognition in science and/or long and valuable service to BPS.

The External Affairs Committee established annual elections from 2013 onwards, and over 200 BPS members participated in the inaugural year for the Pharmacology Hall of Fame, by voting online for their top five from a shortlist of names. At the 2013 Fellows' Reception, BPS President Phil Routledge officially announced the names of the five individuals from the history of pharmacology who had been chosen by members:



Sir James Black

Nobel Prize winner and trailblazer in drug discovery and analytical procedures



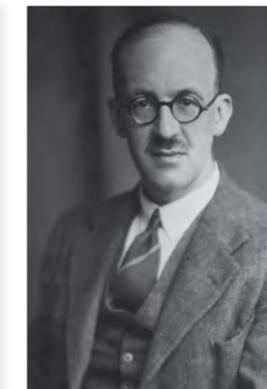
Edith Bülbring

Pioneer in smooth muscle pharmacology and inspiration to investigators around the world



Sir Henry Dale

Nobel Prize winner and co-founder of the British Pharmacological Society



Sir John Gaddum

Discovered new chemical transmitters in the brain and defined basic concepts of pharmacological analysis



Sir John Vane

Nobel Prize winner and pioneer in anti-inflammatory and cardiovascular pharmacology

While the Pharmacology Hall of Fame quickly took up permanent residence in the BPS office, it was also showcased as part of the Society's ongoing activities, including scientific meetings, workshops and science fairs across the UK.

In addition, the achievements of these individuals help the Society demonstrate the impact on drug discovery and development in the UK on the international standing of UK science and our economy.

The initiative also meant a lot to the families and those who worked closely with the five winners, many of whom attended the Fellows' Reception for the official announcement and/or provided notes of thanks. (opposite)

Based on the success of the first year, Pharmacology Hall of Fame will return in 2014, under the stewardship of the External Affairs Committee and newly-elected Vice President – External Affairs, Professor Iain Greenwood.

“I am delighted that Edith Bülbring's distinguished work in pharmacology is being recognized... I am sure that Edith herself would welcome this honour and want it to be an encouragement to other scientists to overcome formidable obstacles.”

Dr Frances Lannon,
Principal of Lady Margaret Hall, Oxford

“I am proud and delighted to receive the news that John has been elected by BPS members to be inducted into the Pharmacology Hall of Fame in its inaugural year... A star shines again in his darkened skies!”

Lady Daphne Vane,
Sir John Vane's wife

“The family is delighted that his work continues to inspire generations of pharmacologists almost half a century after his death.”

Phyllis Champion,
Sir John Gaddum's daughter

“I am sure that my dear husband would be truly grateful for the honour bestowed on him today.”

Professor Rona Mackie Black,
Sir James Black's wife

“On behalf of the Dale family I would like to express our delight that my late grandfather, Sir Henry Dale, is to be honoured as one of the first five members of the Hall of Fame. His achievements, like those of the other four members, are fundamental to a substantial part of modern pharmacology.”

The Hon. Mrs Helen Brown
Sir Henry Dale's granddaughter



BPS UK PHARMACOLOGY
ON THE MAP



THE UNIVERSITY OF STRATHCLYDE

Led by pharmacologist Bill Bowman, Strathclyde and Organon Laboratories collaborated to develop new muscle relaxants, which have since been used extensively in anaesthesiology

ASTRAZENECA, ALDERLEY PARK

Important advances made at Alderley Park during its 40-year history, include anti-cancer treatments and the first successful beta-blocker discovered by pharmacologist and Nobel Prize winner Sir James Black

WADHAM COLLEGE, THE UNIVERSITY OF OXFORD

The British Pharmacological Society was formed in 1931, at a meeting of 19 pharmacologists at Wadham College. The Society aims to promote and advance pharmacology, including clinical pharmacology

THE JAMES BLACK LABORATORY, KING'S COLLEGE LONDON

In 1988, in collaboration with Johnson & Johnson, Sir James Black established his own laboratory, primarily concerned with the development of drugs that inhibit the hormone gastrin

2. Putting UK pharmacology on the map

Alexandra Cooke, External Affairs Committee member (2010 – 2013), University of Bristol

Being a member of the External Affairs Committee gave me the opportunity to participate in 'Putting UK Pharmacology on the Map', a new initiative created in 2013 to recognize the outstanding scientific achievements of UK pharmacologists and their contributions to the field of drug discovery and development.

The Committee's intention was to raise awareness of the significance of UK research amongst both pharmacologists and wider external audiences. This presented the opportunity to bridge the gap, facilitating the interaction between science and other professions, to demonstrate the importance of the field to both the UK economy and the health of the nation. My involvement with this campaign proved to be an invaluable and educational experience.

The External Affairs Committee was involved in various aspects throughout: offering guidance on selection criteria, proposing potential candidates for the judging panel and providing input into the formatting of the ballot paper that would be sent to our judges (MPs, Lords and senior representatives of the scientific community). Hearing the suggestions and advice from other committee members proved to be a rich learning experience, providing an insight into the complexities of organizing such an event and highlighting the importance of political and media involvement, to raise the profile of our specialism.

The experience of reviewing the 26 sites that had been nominated by BPS members and accompanying information was very informative and educational, highlighting that the UK has a proven and abundant heritage of important scientific discoveries, with many talented individuals and outstanding institutes. It was with great pleasure that I was able to attend the Parliamentary Reception in the House of Commons, an outstanding opportunity for any scientist embarking on their career. The event was a memorable and inspiring evening, which provided me with the opportunity to discuss the importance of pharmacology with representatives from the House of Commons and House of Lords and also to converse with senior scientists and clinicians.

To observe the prize presentations and speeches provided further motivation for my career in pharmacology. It has been particularly rewarding to reflect back on the process and understand the degree of hard work and logistics that goes into the organization of such an initiative and how important BPS is in promoting awareness of pharmacology and clinical pharmacology within the UK, and ensuring the work undertaken by members is appreciated and understood by wider society.



Membership experiences:
Professor Rod Flower, BPS Honorary Fellow

When did you join BPS?

“ I joined in 1974. ”

What was your involvement with BPS in 2013?

“ Last year I attended several committee meetings, visited the Wellcome Trust archives on behalf of BPS, attended the Winter meeting, received the Wellcome Gold Medal and presented two BPS-sponsored public engagement lectures at the Cheltenham and Brighton Science Festivals. ”

Has your relationship with BPS changed over the course of your membership?

“ I suppose that the biggest change has been in the structure of the meetings and how I interact with them. When I first joined, most of our lab attended pretty much every meeting (four every year in those days) and made it a point of honour almost to have a communication in every meeting that we went to.

I knew almost all of the BPS members by sight if not by name, and this contributed to the feeling of being part of a large and evolving community.

With the changing structure of the society, the proliferation of scientific meetings around the world, the shortage of cash and the increased demands on academic time, I tend to attend much less frequently. There are fewer and fewer people that I recognize at meetings and so less sense of overall coherence. This is partly because of wider trends in science (fewer people would describe themselves simply as ‘pharmacologists’ these days)

and partly because there is less personal incentive to attend all annual meetings when half of them are generally focused on areas other than mine.

The society is much more ‘professional’ than it was when I started. There was no ‘headquarters’ and everything in those days was run by ‘amateur’ academics on a rotating basis from their university offices. BPS has a much wider sphere of influence than it did and this is obviously essential for the discipline. I think that it has responded very well to changes in the nature of science and the way that it is practised. ”

Has your BPS membership helped develop your career?

“ Absolutely fundamental. Becoming part of a large community of like-minded scientists was vital for fostering a sense of professional identity and the networking opportunities were fantastic. In addition, BPS trained us rigorously to deliver scientific talks in a particular way. It still shows today!

At least when I first joined, senior members used to look out pro-actively for the careers of up-and-coming people by, for example, informing them of upcoming posts and suitable jobs and providing paternal guidance on their career choices. I know that this still goes on today, but it seems to be mainly confined to more formal ‘mentor-pupil’ relationships and may be there is less spontaneous pro bono advice. This may be have been driven by changes in employment law.

It has been (and is) a fantastic society and I couldn’t have had the career I have without it! ”

3. Policy highlights

Ruth Meyer, BPS Publications and Policy Manager

In addition to our Putting UK Pharmacology on the Map parliamentary reception, BPS has supported two parliamentary events in 2013.

Five BPS Young Pharmacologists attended ‘Voice of the Future’ an event at the House of Commons. This was an opportunity for BPS members to put their questions to a panel of Science and Technology Select Committee members and policy makers including Sir John Beddington and Rt Hon David Willets. The event was organized by Society of Biology on behalf of its member organizations.

Parliamentary Links Day is the largest annual science event in Parliament with the aim of building links between the science community and Parliament. The 2013 event was themed on ‘Science and Diversity’. Former BPS Women in Pharmacology Chair, Professor Amrita Ahluwalia was a panellist and shared the BPS perspective on diversity in science to a packed audience including the Rt Hon David Willets MP.



Liang Yew-Booth (above right) was one of five young pharmacologists representing BPS at Voice of the Future.



The Journal of the Parliamentary and Scientific Committee
www.scienceinparliament.org.uk

Animal research policy

In late 2012 we committed to contributing to an Openness Concordat on animal research. More than 50 bioscience sector organizations have contributed to developing the Concordat, which sets out commitments by the sector to be clear about how, when and why animals are used in research and to be proactive in providing information to the public.

Over the course of 2013, the Society contributed to the drafting of the Concordat, supported a public dialogue project run by Ipsos MORI to understand issues that the general public have with openness at present and the Concordat went forward for further public consultation.

As part of our ongoing commitment to animal welfare and research BPS has been an active member of the UK Biosciences Coalition, contributing to numerous consultations.

BPS has also become an organizational signatory of the Basal Declaration, which commits signatories to working to promote the 3Rs:

- **Replacement** - use of non-animal methods
- **Reduction** - methods which reduce the number of animals used
- **Refinement** - methods which improve animal welfare and to transparency in use of animals

The majority of this work is undertaken by the Animal Welfare and Integrative Pharmacology Committee, chaired by Dr Dom Spina. The Committee were the organizers of the *Pharmacology 2013 symposia Animal Research in the UK: what is the EU Directive doing for us?*

Dr Bella Williams, Head of Engagement,
Understanding Animal Research (UAR)

“ Over the past year UAR has been taking steps to move the biomedical-science sector forwards with regards to openness. Support from our friends in the sector – those organizations, such as BPS, with whom we share core values and have close relationships – have been vital for success in these areas.

Through working to develop the Concordat and participation in supporting initiatives such as the Public Dialogue, BPS have provided support that is vital to the success of these work streams. We also value connection with the BPS membership, and general help and advice that BPS has been able to provide on an as-needed basis. All our voices are amplified when we work together, and we value the support that BPS has given to UAR’s work. ”

Supporting policy initiatives

All Trials

This call for all trials to be registered and reported has led to a huge amount of activity to address the issue of clinical trials transparency with which BPS has been fully engaged. BPS also released a statement jointly with the Royal Pharmaceutical Society committing to explore the role of professional organizations in transparency, which looks to identify practical solutions delivered via societies.

Antibiotic Action

The signatories of this petition request that politicians and policy makers across the world take global action to discover research and develop new antibacterial drugs and treatments. Failure to act now means that the treatment of bacterial infections will be seriously compromised.

Science is Vital

We urge the Government to unfreeze the science budget and increase its research and development spend in 2015-16. Further, to demonstrate its vision that science is vital for the UK, we ask the Government to set itself the long-term target of raising R&D spending to at least 0.8% of GDP – the G8 average.

Declaration on Research Assessment (DORA)

This declaration calls for better evaluation of the outputs of scientific research, including eliminating the use of journal-based metrics in funding, promotion and appointment considerations and to capitalise on the opportunities provided by online only format to improve the presentation of research, and look to new forms of measuring impact.

4. Consultation responses and position statements

Thank you to all members who contributed their thoughts on a wide range of topics – from the European Medicine Agency's consultation on draft policy on access to clinical trial data to HEFCE's consultation on open access requirements for the post-2014 REF exercise, BPS covered a number of topics.

BPS produced a position statement on value-based pricing highlighting the potential of the system, but sounding concern about implementation. Our response to the Science and Technology Committee's Women in STEM inquiry was quoted in the Committee report. BPS also contributed through Society of Biology to SCORE (Science Community Representing Education), which advises government on school-level educational reforms.



5. Work with other societies

BPS worked with sister societies to support five external educational meetings, and provided funding for a further nine meetings. We have selected just a few of the highlights from across the year:

Chinese Pharmacological Society

Xin Wang, Editor, *British Journal of Pharmacology*

The second symposium between the Chinese Pharmacological Society (CPS) and BPS took place in Shanghai and comprised of two sessions; state of the art in mechanisms and treatments of neurodegenerative diseases and Recent advances in cardiovascular pharmacology. Scientists from China and the UK delivered excellent talks followed by lively discussion. We believe that this conference opened up more opportunities for future collaborations on pharmacology between CPS and BPS.

“ We believe that this conference opened up more opportunities for future collaborations on pharmacology between CPS and BPS ”

Xin Wang, Editor,
British Journal of Pharmacology

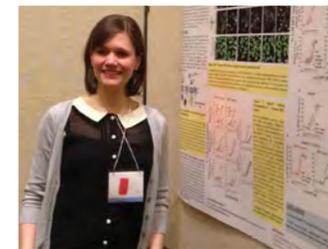


ASPET

Summary of BPS activities at the joint ASPET/BPS meeting at Experimental Biology 2013:

- A welcome reception hosted by ASPET, BPS and Wiley to launch our new jointly-published journal *Pharmacology Research & Perspectives*
- Nobel prize winner and BPS honorary fellow Professor Robert Lefkowitz delivering the Sir James Black Lecture, as part of the GPCR Colloquium
- Five BPS symposia on erectile dysfunction and BPH, cAMP, cardiovascular disease, the 5-HT_{2C} receptor, and stem cell therapeutics
- Joint ASPET-BPS poster session and student social mixer that encouraged interaction between members
- A busy BPS exhibition stand hosting sessions with our journal editors across three days
- Productive meetings with our counterparts at ASPET and IUPHAR
- At the exhibition stand: 58 leads across all Society activities, including 15 membership leads (two of which have already joined BPS)
- 11 Young Pharmacologists entered the poster competition, which was won by Laura Kilpatrick
- Over 200 attendees for the Sir James Black lecture – it was standing room only to hear Professor Lefkowitz

“ The meeting in Boston was an opportunity to observe research from a wide range of biological disciplines presented by highly esteemed international researchers. Both the scale and multidisciplinary nature of the conference made me further appreciate the importance of collaboration in science. I was honoured to be awarded the BPS Young Scientist Award for best abstract, where I had to present a poster of my research. ”



Laura Kilpatrick, BPS member, Experimental Biology attendee, University of Nottingham

It was standing room only to hear Professor Lefkowitz (right) with Humphrey Rang

Laura Kilpatrick, winner of the BPS Young Scientist Award for best abstract (above)



International Union of Basic and Clinical Pharmacology (IUPHAR)

The BPS Young Pharmacologists' Committee have fundraised by selling T-shirts at UK and International events. By the end of the period under review donations and T-shirt sales raised over £17,000 towards bursaries for African scientists to attend the 17th World Congress of Basic and Clinical Pharmacology 2014, in Cape Town, South Africa.



BPS met with the hosts of the 17th World Congress of Basic and Clinical Pharmacology at Experimental Biology 2013

“ I would like to express our sincere appreciation for the phenomenal fundraising project you have conducted to support African delegates attendance to the World Congress in Cape Town. It will be indeed be a life and career changing opportunity for these candidates to be able to engage personally with world leaders in pharmacology. Your amazing contribution will indeed assist Pharmacology for Africa to achieve its vision for Africa. ”

Douglas Oliver
President of 17th World Congress (WCP2014)
and International Union of Basic and Clinical
Pharmacology and Chair of Pharmacology for Africa



Membership experiences:
Laura Kilpatrick, BPS Postgraduate Member

When did you join BPS?

“ I originally joined BPS in November 2007 when I was working as a Research Associate at the University of Nottingham. ”

What was your involvement with BPS this year?

“ In April, I attended the joint ASPET/BPS meeting at Experimental Biology in Boston, where I presented a poster. I was awarded a travel award from BPS that contributed to funding my attendance at this conference. I also attended Pharmacology 2013 in London in December, where I was invited to give a short oral communication. ”

Has your relationship with BPS changed over the course of your membership? Please describe the changes.

“ I originally joined BPS as an associate member in 2007 whilst I was working as a Research Associate at the University of Nottingham. In 2010, I was awarded the AJ Clark studentship from BPS in order to undertake my doctorate research. This included postgraduate student membership of BPS. ”

Has your BPS membership helped with the development of your career? If so how?

“ My membership of BPS has helped my career development significantly. Not only by funding my PhD research, but by also providing an opportunity to present my work in the form of posters and oral communications at meetings to highly esteemed researchers who are experts within the field. This gave me invaluable experience at both defending and critiquing my work, in addition to useful suggestions for future research directions. ”

Steve Tucker,
BPS member, teaching
grant recipient, University of Aberdeen

“ The award of a teaching grant from the BPS last year has been invaluable for the development of my teaching practice relating to pharmacokinetics, and this has fed into improving and enhancing both our undergraduate and postgraduate curricula at the University of Aberdeen. The funding was used to purchase a micro-peristaltic pump unit, and peripheral equipment that has permitted a range of new laboratory practical classes to be developed that demonstrate pharmacokinetic principles using a model system. Currently, four practicals have been developed, which illustrate single IV, single oral, IV infusion and multiple oral dose administration, but there is a huge flexibility in terms of the possible designs that could be used. These exercises are being disseminated through the Society, as a means of developing teaching practice and enhancing practical skills amongst aspiring pharmacologists across the UK and beyond. ”

6. Teaching grants

Jess Strangward, BPS Head of Education

The first ever BPS teaching grants designed to promote clinical or basic pharmacological teaching were awarded in 2013. These awards seek to encourage and reward members who develop innovative ways of teaching pharmacological concepts that can then be shared to help the teaching community. BPS is committed to encourage excellence in pharmacology undergraduate teaching as well as improving the student experience.

7. Diploma in Advanced Pharmacology

Rebecca Tibbs, BPS Education and Outreach Manager

The Diploma in Advanced Pharmacology is central to BPS's commitment to support the training and education of pharmacologists. The Diploma provides an advanced pharmacological education alongside normal employee duties, offers networking opportunities and engages students in both the Society and the wider pharmacology community. Four Diploma students graduated in 2013 and were presented with their Diploma certificates at *Pharmacology 2013*: Lee Collier, Leonarda Di Candia, Nikki Carter and Poonam Shah.

“ I have enjoyed the opportunity to learn from the very best in the field, to attend meetings and mingle with my peers from all aspects of pharmacology, and most importantly to broaden my skills and knowledge. These are exciting times in the field of pharmacology as once distinct divisions between academia, clinical pharmacology and industry are blurring with collaboration and innovation. Both the Society and the Diploma embrace this change and provide a forum for pharmacology across all disciplines. ”

Nikki Carter, BPS member,
Diploma graduate, AstraZeneca

The Diploma programme involves attendance at a number of small, interactive educational workshops, however attendance at these meetings is open to all and attracts delegates from around the world, both from within and beyond the BPS membership. All BPS educational workshops are led by BPS member volunteers, who consistently and generously give up their time to teach on the course. In 2013 five BPS workshops covered General and Advanced Receptor Theory, Integrative Pharmacology, Writing a Scientific Paper, Medical Toxicology and Pharmacokinetics & Pharmacodynamics.

“The Diploma is central to the Society’s mission to “promote and advance pharmacology” and since its inception in 2006, 20 students have graduated from the Diploma programme, not to mention the numerous other BPS members who have attended the constituent workshops. We are keen to encourage more BPS members to contribute to the Diploma programme, whether by teaching in one of the workshops or by providing dissertation titles and supervision for the students. These efforts will ensure that the Diploma retains its place as a cornerstone of the Society’s educational portfolio.”

Dr Ian McFadzean, BPS member,
Vice President – Academic Development
and chair of the Diploma Steering Group

8. Outreach

Dr Julie Keeble, Chair of the BPS Outreach Sub-committee

BPS outreach had a significant year in 2013. The Outreach Committee expanded to include several new, young members of the Society, BPS was represented at more events than ever before and pharmacology was explained to people of varied ages and backgrounds through talks, workshops and visits to interactive BPS stands. The outreach grant scheme attracted several strong applications, encouraging a stronger geographical spread of BPS activities. The administration by the BPS office is central to making outreach events possible, however the contribution of time and energy given by volunteer pharmacologists at all events has been imperative.

BPS ran public engagement talks and hands-on activities at a number of science festivals and other events, including Brighton Science Festival, The Big Bang Fair, Cheltenham Science Festival and London Science Festival. All of these events were possible due to the support, commitment and enthusiasm of members who gave up their time to speak or volunteer. Members are key to enabling the Society to deliver a programme of public engagement talks; in 2013 topics included Pharmacogenetics with Professor Munir Pirmohammed, Addiction with Professor David Nutt and Dr Emma Robinson, Shakespeare’s Medicine Cabinet with Professor Rod Flower and Who Killed Marilyn Monroe? with Professor Atholl Johnston.

Leonarda Di Candia, Lee Collier and Nikki Carter were awarded their Diplomas at Pharmacology 2013 (from left to right) collected from Professor Ian McFadzean





BPS ran public engagement talks and hands-on activities at a number of science festivals and other events, including Brighton Science Festival, The Big Bang Fair, Cheltenham Science Festival and London Science Festival



“ Volunteering at the Big Bang fair gave me hands-on experience in talking about pharmacology to a broader audience in a dynamic and unscripted manner. It has definitely stimulated my interest in public engagement, something which I hope to incorporate into my future career. It has also given me the chance to give something back after the support BPS has given me throughout my studies. Many teenagers that visit the stand are also interested in what pharmacology is, this provides a great chance to talk about what studying pharmacology involves and the career opportunities available. ”

Scarlett Gillespie, BPS member, outreach volunteer, Imperial College London



Outreach grants

2013 saw the launch of the BPS Outreach grant scheme, with grants of up to £500 available to help members create and develop innovative pharmacology outreach tools, activities and events. The grants offer support to members with ideas for outreach and public engagement who need some help to make these a reality. Applications were received from members across the UK.

“ To mark the 50th anniversary of Marilyn Monroe’s death, I found myself speaking to a room packed full of the general public about the pharmacology and toxicology of the drugs involved in the death. It was a very different audience to what I am used to and it was a challenge to adapt my style and lecture content appropriately. However, I enjoyed the experience and I must have done something right as I got asked by the Society to reprise the lecture at the Brighton Science Festival early in 2013 and then to take part in the London Science Festival in October 2013 where I was asked to talk on “Poisons and Sherlock Holmes”. I believe these activities are an important and fundamental part of advancing and promoting pharmacology to the public. ”

Professor Atholl Johnston,
BPS member, Barts and the London School
of Medicine and Dentistry

“ The Bristol Neuroscience Festival celebrated the pioneering brain research in the city, giving the public the chance to hear from world-leading academics in the field while taking part in hands-on activities and experiments for all ages. BPS Outreach grant funding enabled us to buy the equipment and resources needed to run a pharmacological experiment with the public. The funds were used to support a stand where visitors could perform an experiment to investigate the effects of alcohol on the behaviour and cardiovascular function of the water flea. This type of engagement activity is brilliant at initiating discussion with members of the public and visitors from schools and is a way of introducing the subject and value of pharmacology. ”

Dr Emma Robinson, BPS member,
outreach grant recipient, University of Bristol

Looking ahead

Jonathan Brüün, Chief Executive and Professor Humphrey Rang, BPS President (2014–2015)

We are looking forward to ensuring that BPS delivers even more of the commitments outlined in its five-year strategy during 2014 and beyond.

Our members

First and foremost, support for members, and for pharmacology as a whole, will continue to be top of the agenda.

We will be delivering on the outcomes of the ‘Your BPS’ 2013 member engagement survey by:

- Identifying opportunities for growing local networks of BPS members
- Continued member engagement initiatives, including a reception for our Fellows and Honorary Fellows
- Conducting research into lapsing members as we seek to ensure the Society’s membership continues to grow
- Improving member communications, including an update to our magazine *Pharmacology Matters*
- Reviewing our flagship Women in Pharmacology mentoring scheme as we explore whether it could support a broader constituency of our membership

In response to calls from our members for continuing improvements in transparency and to the need for quick, accountable decision-making, we will be conducting a full review of the Society’s governance. A thorough review, which will take place over the course of 2014 and be presented to members at AGM, will include:

- The Society’s committee structure
- The management and governance of BPS through its Executive Committee and Council of Trustees
- Appropriate delegation of responsibility, both within the Society’s committees and among its Officers and professional staff
- New governing documents including a set of updated Articles and Rules

We will also build upon broader themes of equality and diversity and member input to scientific meetings in the following ways during 2014:

- BPS is committed to ensuring that 25% of members represented across all the Society's activities are women
- BPS Meetings Committee will seek to engage members through 'Theme' groups, which will input into a new programme of high-quality scientific meetings
- Similarly, by the tagging of the expertise of our members to our journal keywords – BPS will aim to foster clearer lines of interaction between the Society, its members and activities, and its journals

Meanwhile, the Society's Membership and Awards Committee will be assessing new ways in which tailored services can be provided to the various constituencies of membership in the BPS. We will continue to fund significant bursaries, prizes and travel grants to ensure our members are able to benefit from participating in the best scientific meetings and events around the world, including the Society's flagship meeting, *Pharmacology 2014*, and the International Union of Basic and Clinical Pharmacology (IUPHAR) meeting in Cape Town during July.

Making the most of online

2014 will also see the beginning of a digital revolution:

- A new member database – a huge and critical undertaking for any membership organization – will go live in early Summer, just as our Digital Strategy report is delivered
- The Digital Strategy will assess and make recommendations upon all BPS's online activity, with the aim of enhancing member communication, e-commerce and public engagement
- Allied to the Digital Strategy will be the commissioning of a new BPS website and the beginnings of some research into the BPS 'brand'; specifically reviewing improvements to the current branding as a means of modernizing and protecting the image of the Society in the 21st century

The contribution of clinical pharmacology

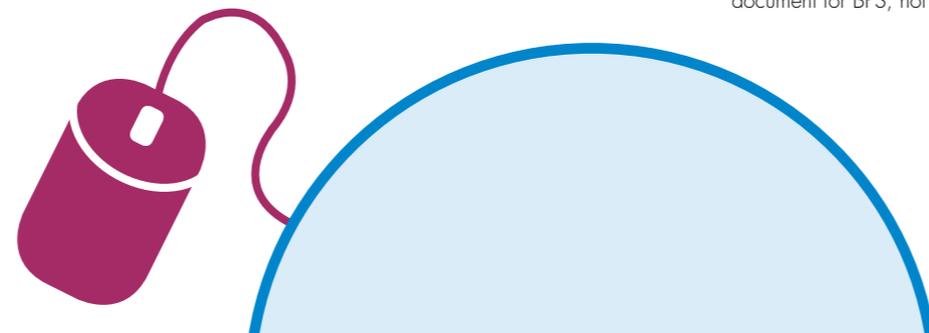
Clinical pharmacology will remain a great strength for the Society, and an enormously important aspect of our work.

- The Prescribing Safety Assessment (www.prescribe.ac.uk/psa) and related educational activities around safe and effective prescribing (www.prescribe.ac.uk) will continue its journey from piloting phase to implementation in medical schools across the UK and beyond.
- Our work with the Medical Schools Council in delivering this new and ground-breaking assessment could not be more important, given the potential to improve public health through safer prescribing, and to demonstrate the role pharmacology and clinical pharmacology have to play in the discovery, development and, ultimately, delivery of medicines to patients.
- Building on that theme, the Society's Clinical Pharmacology Section will publish a new report exploring the value of Clinical Pharmacology and Therapeutics (CPT) to the NHS. This looks set to become an important document for BPS, not only in 2014 but also in the years to come.

Partnerships

We will also continue to look outward towards other pharmacological societies and related disciplines. The next few years will see us engage in scientific meetings, educational and publishing activities with our International and European representative bodies, as well as societies from Austria to Australia by way of the USA, Hong Kong, South Africa and China.

Meanwhile we will continue to collaborate with Society of Biology, Royal Society of Chemistry, Biochemical Society and Academy of Medical Sciences, on the Drug Discovery Pathways Group. This collective of like-minded member organisations seeks to speak with one voice on policy and educational matters relating to drug discovery in the UK, and provides a great opportunity for BPS to fight for the continuing role of pharmacology, alongside other disciplines, in the pharmaceutical industry.



Our journals

BPS will continue to expect great things of its journals, and is confident in the ability of its editorial teams and the Society's publishers, to keep delivering.

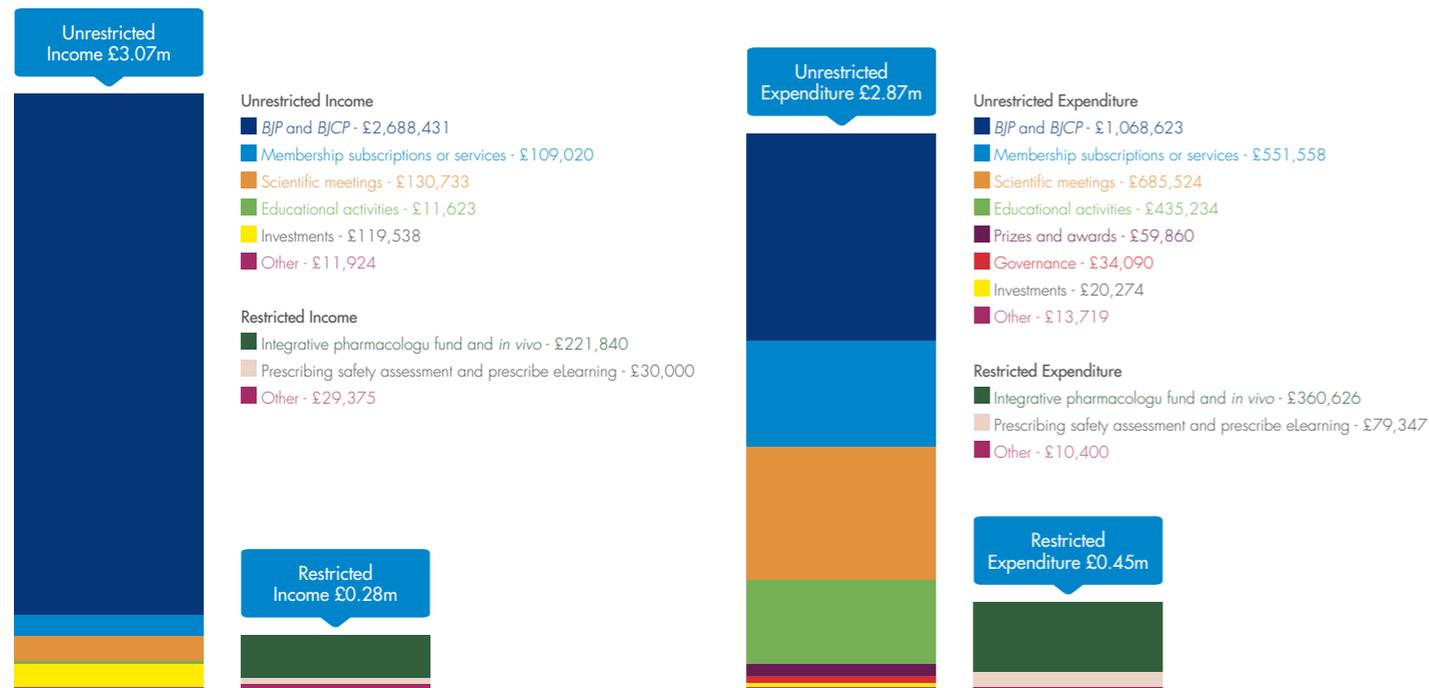
- The move to online-only publication of *BJP* and *BJCP*, which was made in 2013, will start to deliver an enriched experience for readers, with helpful hyperlinking, e-learning and detailed background information, building on the new iPhone and iPad apps and improved HTML.
- We also look forward to engaging more with our authors and readers through the introduction of Altmetrics across our journals.
- BPS will continue to commit to open access publishing, especially through the Society's fully open access journal *Pharmacology Research & Perspectives* – published in tandem with the American Society of Pharmacology and Experimental Therapeutics (ASPET) and Wiley.
- Additionally, the Guide to PHARMACOLOGY [www.guidetopharmacology.org] will continue to provide valuable data on a huge range of pharmacological targets and the substances that act on them. BPS funding of this project, alongside support from IUPHAR and the Wellcome Trust, will ensure this important database continues to be an essential resource for those working in drug discovery.

So, an exciting period ahead – we are sure our members and others will watch with interest and are warmly encouraged to contribute wherever they can!



Financials

Total income and expenditure for 2013



Income

The total funds of the Society have increased by £379,654 (2012 - £179,247). The resulting balance of total funds at 31 December 2013 amounted to £6,373,310 (2012 - £5,993,656) of which £5,918,570 (2012 - £5,404,944) is the unrestricted funds of the Society.

- Income for the year totalled £3,352,484 (2012 - £3,467,566) which is a decrease of 3.3%.
- Importantly, charitable activity income from Journal publishing, which is the Society's main income source, has remained stable at £2,688,431 (2012 - £2,718,451).
- Member numbers increased by 7.8% to 3,460 (2012 - 3,210). The growth is predominantly in Associate Undergraduate and Postgraduate student numbers, reflecting the Society's longer-term approach to strengthening and growing the discipline of pharmacology. Consistent with this approach, such members pay a subscription of £Nil per year or £20 which is why there has been a lower rate of increase in membership subscription income of 4.5% to £109,020 (2012 - £104,317).
- Scientific Meeting income increased by £36,725 to £130,733 (2012 - £94,008) reflecting the success of *Pharmacology 2013* as well as income from two other meetings.
- The income reductions are mainly attributable to voluntary income and investment income. Voluntary income is mostly for educational activities and is entirely restricted funding; it reduced by £45,265 to £281,215 (2012 - £326,480).
- Investment income was £52,457 lower at £119,538 (2012 - £171,995) reflecting lower income returns received from investments largely as a result of rebalancing the portfolio, and lower levels of interest from bank deposits.

**MEMBER NUMBERS
INCREASED BY 7.8%**



Expenditure

- Expenditure on charitable activities totalled £3,251,172 (2012 - £3,534,642) which is a 8.0% decrease of £283,470.
- Journal publishing costs reduced by £194,117 to £1,068,623 (2012 - £1,262,740) after both BJP and BJCP moved to online-only publication from January 2013, removing the production and distribution costs associated with publishing in print.
- Expenditure on educational activities reduced by £196,269 to £853,897 (2012 - £1,050,166) predominantly due to lower levels of restricted fund activities for both the Integrative Pharmacology Fund and the Short Courses Fund.
- In addition there were gains on investments totalling £346,425 (2012 - £296,443), entirely attributable to unrestricted funds.
- Capital expenditure totalled £67,920 (2012 - £7,158) of which £53,458 is the initial cost towards a new database that is being developed to support the Society's services, effectiveness and efficiency and is due to go live in 2014.

You can download a PDF of the Society's financial statements for the year ended 31 December 2013 from the website, available in the members' area: www.bps.ac.uk/members

From there select "Member information", then "Information, policies and forms".

The financial statements include the Financial Review, Statement of Financial Activities (SOFA) and Balance Sheet, together with the Notes to the Accounts. They show the overall financial performance of the Society and provide an analysis of the incoming resources and how they were applied in the performance of the Society's objectives.

Donors

We are most grateful to the following organisations for donations to support our various activities including prizes and training courses

AstraZeneca
BBSRC
Department of Health
Eizai Limited
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Royal Society of Chemistry
Taylor & Francis Group
Tocris
University of Edinburgh
University of Liverpool
Venomtech
Wiley
World Precision Instruments
17th World Congress of Basic and Clinical Pharmacology (WCP2014)

Trustees 2013

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Professor Humphrey Rang, President-elect*
Dr Robin Hiley, Honorary Treasurer*
Professor Helen Cox, Elected Trustee
Professor Ann Daly, Co-opted Trustee
Mr David O Douglas, Co-opted Trustee
Professor Ian Kitchen, Co-Chair of CHOPT
Dr Smita Price, Elected Trustee
Dr Michael Seed, Elected Trustee
Professor Donald Singer, Co-Chair of CHOPT
Dr Christine Williams, Co-opted Trustee
Dr David Wood, Elected Trustee

*Executive Committee member

Executive Committee 2013

Professor Chris Garland,
Vice President – External Affairs
Dr Gillian Gray, Chair of the Women in Pharmacology Committee
Dr Ann Hayes, Chair of the Industry Committee
Professor Graeme Henderson,
Vice President – Publications
Dr Ian McFadzean,
Vice President – Academic Development
Professor Ian McGrath, BJP Editor-in-Chief
Professor Munir Pirmohamed,
Chair of the Clinical Section
Professor Jim Ritter, BJCP Editor-in-Chief
Dr John Thompson, Vice President – Clinical
Professor Tim Warner, Chair of the Young Pharmacologists Committee
Professor David Webb, Vice President – Meetings

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