

ANNUAL REVIEW 2018



TODAY'S
SCIENCE
TOMORROW'S
MEDICINES

CONTENTS

About the Society & mission statement	02
Message from our President (2016–2017) and Chief Executive	03
Our year in numbers	04
Promoting & advancing pharmacology	05
Education	06
Public Engagement	08
Policy	09
Scientific Advisory Panel	10
Leading the way in the research & application of pharmacology	11
Journal highlights	12
Prescribing	17
Meetings and Events	19
Workshops	23
Nurturing our community	24
Improving members' experience	25
Commitment to equality and diversity	26
Member engagement	27
Recognising achievements in Pharmacology	29
Sponsors & donors	33
Financials	34
Looking ahead: our 2018 objectives	37

ABOUT THE SOCIETY

AND ITS FIVE-YEAR STRATEGY

The British Pharmacological Society is a collaborative, global community, with a vision for a world in which pharmacology and therapeutics drive and support progress in science, medicine and healthcare.

In 2018, we began to execute a new five-year strategy for 2018 to 2022. This is aimed at establishing the Society as an influential and proactive force for championing research, education, training and policy issues in pharmacology and clinical pharmacology.

OUR MISSION

Our mission is to work with integrity to create global scientific, health, and economic impact by:

- Supporting academic and industrial drug discovery
- Improving outcomes for patients in relation to the therapeutic use of medicines
- Widening participation in pharmacology and therapeutics to ensure a vibrant and diverse community and workforce
- Increasing the visibility and influence of pharmacology and therapeutics through excellence in education, publishing, scientific meetings, communications, membership and policy with public engagement

In 2018, we focused on a set of new objectives to help us meet this mission, while also trying to prepare for, and invest in long-term growth.

MESSAGE FROM OUR PRESIDENT AND CHIEF EXECUTIVE

2018 has been both rewarding and pivotal for the Society. It was the first year of our new, five-year strategic plan designed to both protect and advance our organisation, and build the foundation for growth. This year's annual review will outline a range of activities that played a part in delivering on our 27 key objectives. However, we would particularly like to highlight a few key achievements that demonstrate our commitment to the society's future.

In 2018, our work in advancing clinical pharmacology hit its stride, following last year's creation of the Clinical Pharmacology Skills Alliance (CPSA). We continued to work closely with the CPSA's partners from public and private organisations across the sector, and our collaboration culminated in formal approval for a clinical pharmacology scientist apprenticeship. We are delighted by this development, which will help address longstanding skills gaps and raise the profile of this crucial profession.

In June, we launched the new curriculum for the use of research animals, which builds on the broader pharmacology undergraduate curriculum. The consultation was extensive, and led to offers of support from 30 organisations across academia, industry and the wider sector. Later in 2018, we held a workshop for experienced in vivo educators, to support early-stage adoption of the new curriculum. We look forward to further implementation of the scheme in 2019.

The Society finished the year on a high note, with our best-attended annual conference to date. We saw record numbers of delegates and abstract submissions. In line with our ambition to continually improve the event, we commissioned symposia and keynote lectures, with commissioned content making up almost a third of programme this year. There was a positive reaction to the introduction of registration fees, and we are confident that a venue change for 2019 will further revitalise the event.

This year we have also focused keenly on ensuring the Society will remain financially stable in future; our new company, BPS Assessment Limited plays a major role in this strategy. Being a start-up business, with new products and new markets, our first full year of operation was challenging. Nevertheless, we signed an advantageous five-year agreement with the Royal College of Physicians and Surgeons of Canada, and strengthened our relationships in Australia and the Middle East, providing a strong foundation for 2019.

The investment in BPS Assessment, and the introduction of fees for our annual meeting, together demonstrate our drive to address the revenue challenges we face following changes in the scientific publishing landscape. Yet, while we continue to diversify our business for the future, we maintain that the incredible activities funded by publication revenue bring substantial benefits to patients, health and science. The accomplishments in this annual review are proof of that belief.

As always, our members, volunteers, Chairs, Editors, Trustees and Officers have all played a huge role in our success, and we remain grateful for their significant contributions. Of course, our work in 2018 could also not have been done without the commitment and talent of the staff here at the British Pharmacological Society. This year brought a reorganisation of the team, which has allowed us to collaborate better and to deliver more effectively on our objectives. We also undertook an independent review of our committees and governance to ensure the Society is fit for purpose to deliver its new 5-year strategy.

And so, having achieved a remarkable amount in 2018, we move to 2019 and the second year of our five-year strategy with a new team structure in place, a fresh, dynamic approach and plenty of excitement for the challenges ahead.



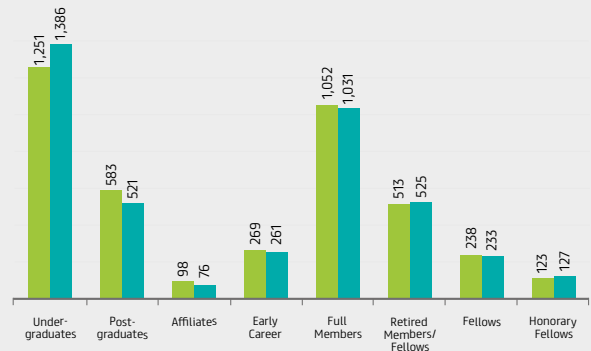
Prof. Steve Hill,
President 2017–2018



Jonathan Brünn,
Chief Executive

OUR YEAR IN NUMBERS

The total membership on 31 December 2018 was 4,160, representing an increase of 1% in the space of a year. The Society was sad to report the deaths of nine members.



■ 2017 – 4,127 members in total

■ 2018 – 4,160 members in total



Of those 4,160 members:

46%

were student members

38%

identified as female

23%

were international

Digital engagement



6,665

Facebook likes
16% increase from 2017



6,305

Twitter followers
35% increase from 2017



4,411

LinkedIn
company followers
30% increase from 2017



170,259

YouTube views
33% increase from 2017

Awards

£275,250

was awarded
through prizes,
grants and awards

£40,679

was awarded in
bursary funding
(2017: £30,993)

96

nominations
(2017: 134)

49%

of nominations
were for female
candidates
(2017: 59%)

81

prizes were
awarded
(2017: 84)

A photograph of two women in a professional setting, likely a conference. The woman on the right, with long dark hair, is looking towards the woman on the left, who has blonde hair and is partially visible in profile. They are both wearing green lanyards. A large teal hexagon is overlaid on the bottom right of the image, containing the text 'PROMOTING & ADVANCING PHARMACOLOGY'.

PROMOTING & ADVANCING PHARMACOLOGY

EDUCATION

MEETING OUR OBJECTIVES...

To set the agenda in education and skills, including supporting the next generation of learners undertaking education in pharmacology and clinical pharmacology

and

- Develop our careers resources and connectivity with employers
- Further develop the Society's leadership within in vivo education and training
- Work with the education community to explore how the Society can best support its needs

The Society's Education team worked on a range of projects in 2018, to meet our objective to set the agenda in education and skills. A highlight has been the new in vivo curriculum, while our overall body of work underpins our commitment to promoting and advancing the role of clinical pharmacology, and supports the careers of pharmacologists.

Setting the agenda: Supporting the education community and developing careers resources

Throughout 2018, working together with members of the Education and Training Committee and Early Career Pharmacologist Advisory Group, we published vital information on our website for educators and school and college students. In November, we also updated our website's 'Studentships and internships' content. These new sections provide information for those considering apprenticeships and non-graduate routes into pharmacology, and improve the diversity of experience and national range for placements in pharmacology.

We have also built on our popular 'case studies' pages, where members share their diverse career paths. Participating members took part in a popular and successful 'careers boot-camp' at our annual meeting in December. We attended many other careers fairs over the year to encourage access to pharmacology and offer relevant advice in person, beyond the website.

"It was great to contribute to the careers website project. Before I started at University, I knew that I enjoyed science, but I never realised that you could work in a field dedicated to discovering medicines. This website project was therefore a great opportunity to provide information to help school and college students consider their choices from an earlier stage. I'm pleased that the Society is trying to reach out and engage people of all ages."

Chloe Peach, Member of the Early Careers Advisory Group



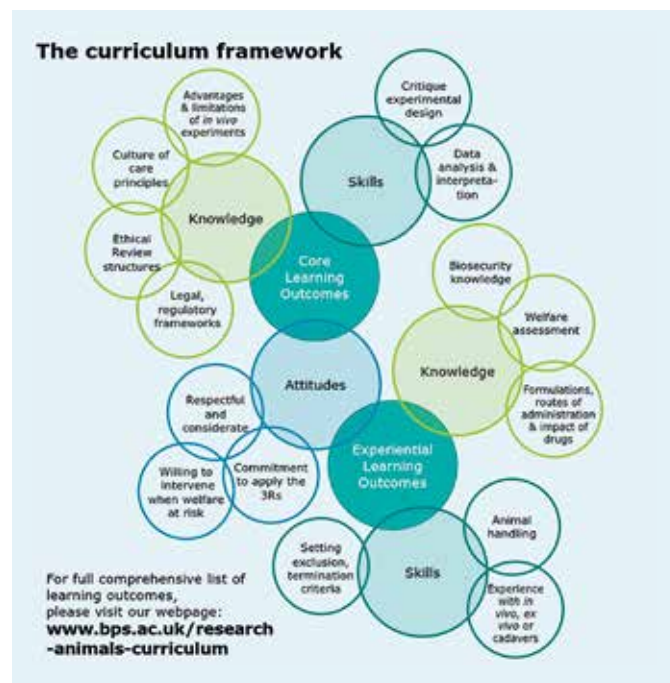
Careers Boot Camp at Pharmacology 2018

Developing leadership in the education of research animals – a new curriculum

The new curriculum for the use of research animals was launched in June 2018, following a year's collaboration with academics, scientists and animal welfare experts. It is the first curriculum to be supported and endorsed by a significant number of research, industry and education organisations across the sector, including the Royal Society of Biology, UK Universities, and the Association of the British Pharmaceutical Industry (ABPI).

The curriculum focuses on knowledge and understanding, experimental design and interpretation of the data. It highlights issues concerning ethics, animal welfare, regulation and the 3Rs (Replacement, Reduction and Refinement). It does not require all students to have hands-on contact with animals; observation or video simulations may be enough to convey the intended learning outcomes.

The British Pharmacological Society and The Physiological Society have also announced a joint funding commitment to support the learning outcomes from the curriculum. The Societies are working closely with educators to maximise the impact of this fund.



“Animal experiments play an important role in biomedical research. They are essential to support the development of innovative medicines which can ultimately improve our health and wellbeing.

But for these experiments to be scientifically valid, laboratory animals must be used appropriately by researchers to ensure the quality and reproducibility of the results.

Building this broad skillset requires extensive specialist training. I am proud of the work of the British Pharmacological Society's curriculum development team and partner organisations who contributed to the new curriculum.”

Dr Dave Lewis, Chair of the Society's Animal Welfare and In Vivo Pharmacology Sub-committee

Supporting and advancing Clinical Pharmacology

Clinical Pharmacology Month

Following on from the success of the Society's first ever Clinical Pharmacology Month in 2017, to raise awareness of the discipline, the Society was pleased to repeat the initiative in October 2018. During the month, trainees promoted and organised seven abstract competition events for medical students. Thirty medical students submitted abstracts, five of whom went on to present at Pharmacology 2018.



The winner of the competition was Raessa Patel.

“Presenting at Pharmacology 2018 was an unforgettable experience. It felt surreal to share my research with pioneers in clinical pharmacology! Participating in and winning this national competition is an opportunity I would never have thought possible. I am so grateful to the UCL Clinical Pharmacology department for providing medical students with a glimpse of what this spectacular specialty offers.”

Raessa Patel, Year 5 MBBS, University College London

Our Clinical Pharmacology Month was promoted extensively on social media, in order to not only raise awareness of the competition, but to also highlight associated events, and the stories of working clinical pharmacologists across the UK.

New Masters-Level Clinical Pharmacology Scientist Apprenticeship

In December, government approval was given to develop a new national apprenticeship standard for the role of clinical pharmacology scientists. This followed a cross-sector drive to address the skills gap led by the Clinical Pharmacology Skills Alliance (CPSA) in which the Society plays a leading role.

The approval for the apprenticeship is a major step forward, and will help to address issues such as the lack of a career pathway, the lack of formal training, and a lack of understanding of the role itself.

Work is underway in 2019 to develop the knowledge, skills and behaviours that will constitute the apprenticeship.

“This apprenticeship will provide a very specific training track, so it is a clear pathway into a clinical pharmacology scientist career with a recognised qualification. Employers have told us that clinical pharmacology training tends to be done ‘on the job’ and training needs are not clearly defined. This scheme responds to those concerns directly.”

Dr Anna Zecharia, Director of Policy and Public Affairs at the British Pharmacological Society

PUBLIC ENGAGEMENT

MEETING OUR OBJECTIVES...

To meet our mission of promoting the spectrum of pharmacology

- Communicate the role and importance of pharmacology to the public
- Increase interest, raise awareness of issues, and improve public knowledge of pharmacology in everyday life

The Society's varied engagement activities have been focused on our objective of educating and informing the public about the role and importance of our discipline in everyday life. We have been involved in a number of different public events, and have focused on supporting our members in developing activities to engage with a wider public audience.

In 2018 the Society worked with its members to share our energy, enthusiasm and dedication to pharmacology across a series of public engagement events. We would like to thank all members and researchers for their input and enthusiasm.

Big Bang Fair 2018, Birmingham NEC – Medicine Makers



Biology Big Top banner at Big Bang Fair

The Big Bang Fair attracts over 80,000 junior and secondary school children, with their teachers and families, every year. This year, the Society was part of a joint learned societies stand, 'Biology Big Top'. Volunteer members demonstrated our hands-on Medicine Makers activity, which creatively introduces festival goers to the basic concepts of how painkillers work in our bodies.

"I really enjoyed attending the Big Bang Fair and was pleased with how many families with children were keen to talk to us... It was great to see the excitement on everybody's faces when the concepts of the medicines were explained and demonstrated."

Credo Mpaku, Undergraduate student member and volunteer at the Big Bang Fair 2018

Edinburgh Science Festival – healthy lifestyle choices debate

In April 2018, the Society led a session at the Edinburgh International Science Festival, one of Europe's largest science festivals. The theme of 'life' gave us an opportunity to host a thought provoking debate about healthy lifestyle choices. It was attended by a 50-strong audience, who used a voting mechanism to steer the conversation and encourage the debate.

Supporting members' engagement work

The Society also helped members develop their own engagement activities, and funded £3,000 of engagement grants for members in 2018. The initiatives included:

- TReND in Africa – an awareness campaign against drug abuse in Nigeria
- Annual practical training in Pharmacology to A-level pupils at King's College London
- Inherited Blindness Summer School at University College Dublin
- A short interactive talk on big data in sepsis detection.

"It was great to be able to communicate our research to support the early detection of sepsis, a major global healthcare challenge. This project brought together mathematicians and pharmacologists to transform the physiological waveforms of blood pressure readings into a 'attractor', a colourful two-dimensional image... It was fun to be able to share and discuss this research at a series of public engagement events supported by the Society."

Dr Manasi Nandi, Society Member and Senior Lecturer in Integrative Pharmacology, King College London

POLICY

MEETING OUR OBJECTIVES...

To deliver clear, relevant and accessible advice to policy makers, including:

- Responding to pharmacology-relevant consultations on behalf of the Society
- Developing our role as a valuable contributor to life science and health policy through targeted campaigns

Throughout 2018 the Society engaged strategically with a range of policy makers in order to meet our key objectives, and we were pleased to see our advice taken into account. We responded to relevant consultations on education, the future of the NHS, and the value of pharmacology skills to the health and life sciences sector. In many instances, the policy team collaborated with other organisations to submit joint responses, to amplify our voice.

Brexit

Much of the Society's policy work in 2018 related to the UK's exit from the European Union. Our priorities related to the protection of patient care and safety, maintaining access to research collaborations and funding and protecting the UK's ability to attract and retain skilled people.

In February, we responded to the House of Commons Science and Technology Committee's 'Brexit science and innovation Summit' consultation. We voiced concerns regarding the availability, regulation, and safety of medicines and devices in the future. Regulation became a key part of the Committee's discussions at the Summit in February.

Later in the year we sent a briefing to targeted, cross-party MPs ahead of a debate in the House of Commons, highlighting our concerns over science funding and the free mobility of scientists following the UK's exit from the EU. We urged the government to secure the UK's participation in the research and innovation program, Horizon 2020, in the event of a 'no deal' scenario. We also advised that visa caps should not prevent the UK from hiring in critical scientific skills areas.

In November, along with the Faculty of Pharmaceutical Medicine, we provided feedback on the Medicines and Healthcare Products Regulatory Agency's proposals for medicines, clinical trials and medical devices. Our calls for greater clarification regarding legislation and regulatory processes in the event of a no-deal exit were addressed in the Agency's updated guidance.

Clinical policy

In health and clinical policy, the Society continued to work as part of the Clinical Pharmacology Skills Alliance (CPSA) to communicate the importance of clinical pharmacology skills to the NHS and the UK's life sciences sector.

The policy team submitted responses to consultations held by the General Medical Council, Health Education England, the London School of Economics, the Royal Pharmaceutical Society, and NHS England. We highlighted

the importance of the entire NHS workforce being skilled in the use of medicines, and the role of clinical pharmacologists upskilling healthcare professionals.

We also argued that clinical pharmacology skills will be crucial in helping the NHS tackle the challenges of an ageing population.

"Clinical pharmacology scientists play a leading role in clinical research and clinical trials, and we are working hard to attract more people to the discipline. At a global level, we're keen to make the UK even more attractive as a research base, and improve clinical trial capacity, to enable us to realise our ambitions in the life sciences"

Dr Anna Zecharia, Director of Policy and Public Affairs, The Society:

Education and skills

The Society used its policy work to support and speak on behalf of pharmacology educators. We responded to consultations on the Subject Level teaching excellence framework (TEF) and Research Excellence Framework (REF). The Society also wrote a letter with the Pharmacy Schools Council and the British Toxicology Society, calling for the separation of Pharmacology from Pharmacy and Toxicology in the subject groups for assessment.

Occupation shortages and overseas recruitment

In June 2018, the government commissioned the Migration Advisory Committee (MAC) to carry out a full review of the composition of the shortage occupation list (SOL), to report in spring 2019. The MAC was tasked with gaining a better understanding of current labour shortages in the UK and the issues that surround these shortages. In December we drafted a response on behalf of the Clinical Pharmacology Skills Alliance, calling for medical and scientist clinical pharmacology roles to be represented on the SOL, stressing that facilitating recruitment from overseas would help address this.

SCIENTIFIC ADVISORY PANEL

MEETING OUR OBJECTIVES...

To contribute to strategic leadership, and engage with our community and decision makers to protect and advance clinical pharmacology

We believe that in order to contribute to strategic leadership in our field, the society should be identifying emerging trends in pharmacology, clinical pharmacology, and the technologies that support the discipline.

As a result, in October this year, we announced an initiative aimed at addressing our desire to engage with the sector on the latest advances in pharmacology. We created the Scientific Advisory Panel, whose eminent scientists will work with our Directors to surface and evaluate trends. This will enable us to develop content and activities that will ensure the BPS is the vanguard in our discipline.

The panel is made up of a range of experienced and distinguished scientists, from both inside the outside the society.

They include:

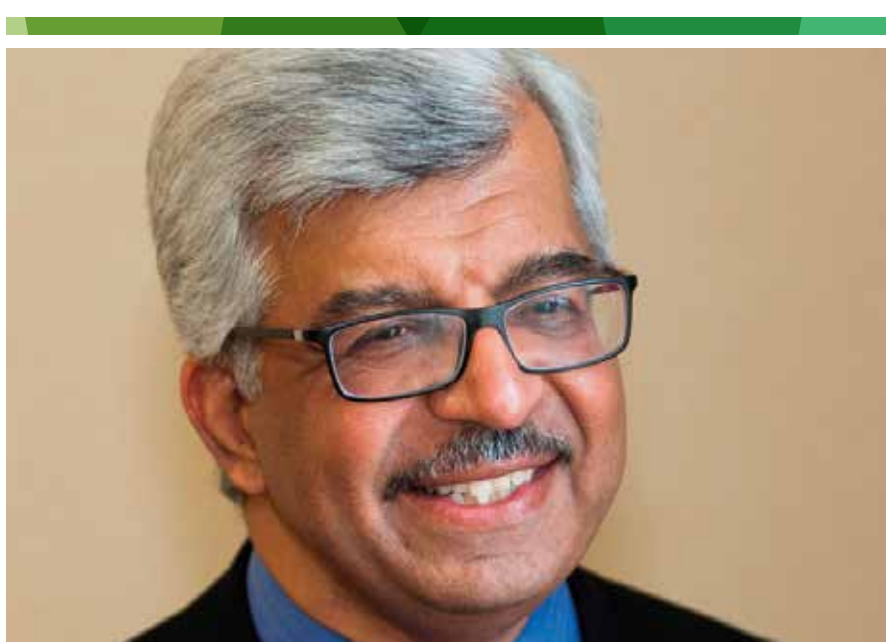
External Panel Members

Professor Jackie Hunter,
Chief Executive, Clinical
Programmes & Strategic
Relationships, Benevolent AI

Dr Fiona Marshall
VP Head of the UK Discovery Centre,
MSD Research Laboratories

Dr Menelas Pangalos
Executive Vice President, IMED
Biotech Unit & Global Business
Development, AstraZeneca

Dr Tony Wood
Senior Vice President of Medicinal
Science & Technology, GSK



Professor Sir Munir Pirmohamed

BPS Panel Members

Professor Steve Hill
President

Professor Sir Munir Pirmohamed
President-Elect

Professor Amrita Ahluwalia
Editor-in-Chief, BJP

Professor Adam Cohen
Editor-in-Chief, BJCP

LEADING THE WAY IN THE RESEARCH & APPLICATION OF PHARMACOLOGY

JOURNAL HIGHLIGHTS

MEETING OUR OBJECTIVES...

To be the leader in the dissemination of world-class research related to pharmacology and therapeutics, including:

- Deliver an integrated editorial strategy for British Journal of Clinical Pharmacology (BJCP) and British Journal of Pharmacology (BJP) and Pharmacology Research & Perspectives (PR&P), focusing on journal development and growth
- Explore new ways of disseminating and communicating the outputs of pharmacological research
- Increase impact and quality of the Society's existing publications

And

- To remove barriers to participation and success, being inclusive in all we do
- To lead the formation of valuable networks that reflect our position at the heart of the global pharmacology community

In 2018 the Society's journals focused on their goals of promoting and advancing all aspects of pharmacological research worldwide. Our publications continued to grow and develop, while also preparing for forthcoming changes in the publishing landscape.



British Journal of Pharmacology nitric oxide discoveries symposium

To meet our goal of being the leader in the dissemination of world-class research, our content and dissemination highlights for 2018 included:

- A BJP sponsored symposium at Pharmacology 2018, celebrating 20 years since the Nobel Prize for physiology or medicine was awarded for nitric oxide discoveries
- A joint virtual issue celebrating the same anniversary was published across BJP, BJCP and PR&P, picking out key research in each journal related to nitric oxide
- BJCP launched its EMA Guidelines series, incorporating expert commentaries, to help promote the dissemination of the guidelines, and to open up a forum for discussion
- Publishing selected abstracts from the Society's flagship Pharmacology meeting in BJP and BJCP, to increase the visibility and impact of these for authors.

Our initiatives that focused on openness and transparency in publishing included:

- Update of BJP's 2015 guidelines for authors submitting papers to the journal
- BJP support for the Resource Identification Initiative, which aims to promote research resource identification, discovery and reuse
- Update to BJP's Declaration of Transparency and Scientific Rigour, signed by authors who publish in the journal, which now exists as three checklists in both English and Chinese.

We also worked towards the goal of removing barriers to participation and success, being inclusive in all we do. We focused on engaging early career pharmacologists, and on developing accessibility and visibility:

Early Career activities included:

- BJCP and BJP awarded annual prizes for outstanding work from early career investigators
- BJP and PR&P organised a joint session with the Young Pharmacologist Advisory Group (now ECPAG) to open up discussion around the peer review process within journals
- The Society's membership magazine Pharmacology Matters recruited a number of early career researchers to the Editorial Board to help target at this demographic

Accessibility and visibility activities included:

- The decision to make Pharmacology Matters a digital-first magazine to improve accessibility and readability, and to better showcase the full breadth of work and activities undertaken by our members alongside the Society's blog
- The introduction of graphical abstracts in both BJP and BJCP, allowing authors to produce a visual summary of their work
- Trials of short bullet point summaries of articles in both BJP and BJCP



China webinar participants

The Society's publications also played a part in our vision to lead the formation of valuable networks. Our initiatives in 2018 included:

- Publications were promoted internationally at a number of conferences and meetings, through stand presence, Q&A workshops, and digital issues of relevant content.
- All three journals held joint 'Meet the Editor' sessions at both the World Congress of Pharmacology 2018 in Kyoto, Japan and at Pharmacology 2018
- BJP ran a third successive webinar in China in November, 2018 attended by 287 participants from across a range of organisations
- PR&P introduced three new Regional Editors to the Editorial Board, in the Americas, Europe and the Asia-Pacific region. These individuals are advocates in their region, aiming to help raise the journal's profile.

Appointment of Deputy Editor for Pharmacology Research & Perspectives

In 2018 Dr Michael F. Jarvis accepted the position of Deputy Editor. Dr Jarvis is a Senior Scientific Director and ACOS Senior Research Fellow for Global Medical Affairs at AbbVie, Inc. with an extensive track record of leading drug discovery/translational research teams for the identification and clinical advancement of novel chemical entities.



Meet the Editor session at Pharmacology 2018
From L to R Professor Adam Cohen, Professor Amrita Ahluwalia, Professor Andrew Lawrence

Progress in open access

2018 also proved to be a year of evolution of the principle of open access to academic publishing, with a greater emphasis on driving forward the principles of open science, and a strong focus on open access business models in particular.

The most high-profile example of this is the 'Plan S' initiative, led by a group of funders including the Bill & Melinda Gates Foundation and the Wellcome Trust. It states that: "After Jan 1 2020, scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant open access Journals or on compliant open access Platforms".

While reactions to Plan S have been vigorous and varied in the sector, the Society continued to take a constructive approach to engaging with open science, and to the opportunities this brings.

We have welcomed the values of open access (for example, PR&P articles are already published under a gold open access business model). In addition, we are engaged in discussions regarding open data, preprints, partnering with services such as Publons, and the themes of transparency and reproducibility.

Messages from our Editors:

"Every issue of our journal reflects the extraordinary richness of clinical pharmacology. We offer elegant experimental clinical science with new and existing medicines, but also our regulatory series describing European Medicines Agency guidance. Our authors produce all this fabulous work and we are proud to be able to offer them this medium to reach our readers."

Professor Adam Cohen, Editor-in-Chief of *British Journal of Clinical Pharmacology*

"During 2018 PR&P has continued to evolve and grow. We have published joint virtual issues with our BPS & ASPET (American Society for Pharmacology and Experimental Therapeutics) partner journals. In addition, we are engaging with more direct submissions. We are also engaging with early career researchers to contribute manuscripts and also serve the journal."

Professor Andrew Lawrence, Editor-in-Chief, *Pharmacology Research & Perspectives*

"In 2018 BJP continued its leadership position as the top international journal for pharmacology, with evidence of clear blue water in terms of all ranking metrics. We saw an amazing 89,000 downloads of articles published in the hot areas covered by our eight themed issues. We continued to provide excellent service to our authors through rapid peer review and editorial support. All in all, an excellent year for the journal."

Professor Amrita Ahluwalia, Editor-in-Chief, *British Journal of Pharmacology*

Articles with high impact in 2018

The following articles across the journals have had high media and social media impact, as indicated by their altmetric scores.

Altmetric Attention Score	Title	Authors
British Journal of Clinical Pharmacology		
631	Prevalence of exceeding maximum daily dose of paracetamol, and seasonal variations in cold-flu season https://bpspubs.onlinelibrary.wiley.com/doi/abs/10.1111/bcp.13551	Saul Shiffman, Deena R. Battista, Judith P. Kelly, Mary K. Malone, Rachel B. Weinstein, David W. Kaufman
414	Threats to global antimicrobial resistance control: Centrally approved and unapproved antibiotic formulations sold in India https://bpspubs.onlinelibrary.wiley.com/doi/full/10.1111/bcp.13503	Patricia McGettigan, Peter Roderick, Abhay Kadam, Allyson Pollock
377	The pharmacokinetics, pharmacodynamics and tolerability of PUR0200, a novel tiotropium formulation, in chronic obstructive pulmonary disease https://bpspubs.onlinelibrary.wiley.com/doi/abs/10.1111/bcp.13645	Dave Singh, Arjun Ravi, Katie Kane, Tess Schmalbach, David L. Hava
British Journal of Pharmacology		
388	Anti-tumour actions of cannabinoids https://bpspubs.onlinelibrary.wiley.com/doi/abs/10.1111/bph.14426	Burkhard Hinz, Robert Ramer
128	Therapeutic effects of bee venom and its major component, melittin, on atopic dermatitis in vivo and in vitro https://bpspubs.onlinelibrary.wiley.com/doi/full/10.1111/bph.14487	Hyun-Jin An, Jung-Yeon Kim, Woon-Hae Kim, Mi-Gyeong Gwon, Hye Min Gu1, Min Ji Jeon, SangMi Han, Sok Cheon Pak, Chong-Kee Lee, In Sook Park, Kwan-Kyu Park
85	Phages of life - the path to pharma https://bpspubs.onlinelibrary.wiley.com/doi/full/10.1111/bph.14106	Amanda Forde, Colin Hill
Pharmacology Research & Perspectives		
84	Onset timing of statin-induced musculoskeletal adverse events and concomitant drug-associated shift in onset timing of MAEs https://bpspubs.onlinelibrary.wiley.com/doi/full/10.1002/prp2.439	Hayato Akimoto, Akio Negishi, Shinji Oshima, Mitsuyoshi Okita, Sachihiko Numajiri, Naoko Inoue, Shigeru Ohshima, Daisuke Kobayashi
61	Fosfomycin as a potential therapy for the treatment of systemic infections: a population pharmacokinetic model to simulate multiple dosing regimens https://bpspubs.onlinelibrary.wiley.com/doi/full/10.1002/prp2.378	Natalia V. Ortiz Zacarias, Anneke C. Dijkmans, Jacobus Burggraaf, Johan W. Mouton, Erik B. Wilms, Cees van Nieuwkoop, Daan J. Touw, Ingrid M. C. Kamerling, Jasper Stevens
19	Vancomycin therapeutic drug monitoring and population pharmacokinetic models in special patient subpopulations https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6113434/	Joaquim F. Monteiro, Siomara R. Hahn, Jorge Gonçalves, Paula Fresco

Pharmacology Matters 10-year Anniversary

In 2018 *Pharmacology Matters* published three issues, including a special anniversary issue celebrating 10 years of the magazine, 50 years of the medicines act, 400 years of the London pharmacopoeia, and 20 years of the Nobel Prize for Nitric Oxide.

In keeping with the Society's inclusion strategy, the magazine's Editorial Board recruited 2 new ECR members, kicked off regular contributions from international members, and published well-received articles on mental health in research and the representation of women in pharmacology.



Social Media :



BJP Twitter followers: **2,585**
(65% increase from 2017)



BJCP Twitter followers: **1,094**
(66% increase)



PR&P Twitter followers: **217**
(486% increase)



BJP Facebook likes: **4,864**
(10% increase)



BJCP Facebook likes: **603**
(13% increase)



PR&P Facebook likes: **138**
(229% increase)

**2,500 SUBMISSIONS FROM 64 COUNTRIES,
ALL HANDLED BY AN INTERNATIONAL TEAM
OF EXPERT EDITORIAL BOARDS**

Increasing impact of our publications:

We have continued to grow the impact and reach of our publications, across traditional and social media platforms:

Impact scores:

	Journal year impact factor 2017	2017 Eigenfactor
BJP	6.810	0.039
BJCP	3.838	0.019

THE BPS PORTFOLIO
RECEIVED OVER

8.5 MILLION

DOWNLOADS ACROSS WILEY ONLINE
LIBRARY AND PUBMED CENTRAL

PRESCRIBING

MEETING OUR OBJECTIVES...

To continue to deliver the Prescribing Safety Assessment to a high standard across all UK medical schools and

To continue development of sustainable and ethical income streams, moving towards self-financing of existing activities, as well as new revenues through our trading subsidiary, BPS Assessment Ltd.



The Prescribing Safety Assessment

The Society partnered with the Medical School Council Assessment (MSCA) in 2014 to improve prescribing competency amongst final year medical students and Foundation Doctors in the UK. The collaboration led to The Prescribing Safety Assessment - a two-hour 60-item online examination which is now mandatory for all Foundation Doctors. In 2018, the Society continued to maintain the PSA's high standard, and in exceeding our objectives, the exam has expanded - academically, administratively and technically - with participation from 8,500 students around the world, answering questions from 103 authors.

In 2018, the PSA Executive commissioned an independent review of the assessment and of its processes, which will be published in 2019.

"I believe that the public, however defined, would identify prescribing skills as separate from general medical knowledge. I also believe it would be assigned a high value as a necessary set of skills for a newly qualifying doctor.

Therefore, the Prescribing Safety Assessment with its considerable skills element, in, for instance, writing a prescription, carrying out calculations, and reviewing prescriptions is very relevant."

Prof John C McLachlan, Professor of Medical Education UCLan, currently conducting an Independent Review of the Prescribing Safety Assessment



Students sitting the exam:

- 6,923 final year medical students from 33 UK medical schools (an overall pass rate of 95.8%)
- 326 UK Foundation Year 1 doctors
- 6 medical schools from the Republic of Ireland (902 students)
- The Maltese medical school (215 students)
- 4 overseas campuses of UK medical schools (381 students).

17,000 candidate hours of assessment

More than half a million, patient safety-related questions posed and rapidly marked

15 new question authors – now 103

Peer review of 337 new assessment items

Updates to 123 older items



PRESCRIBING SKILLS ASSESSMENT

BPS Assessment Ltd

The Society's new commercial venture, designed to deliver an adapted prescribing assessment tool internationally and allow partners to create bespoke assessments, experienced a rewarding first year in 2018. We were particularly delighted to receive encouragement from the UK government's outgoing Chief Medical Officer, Dame Sally Davies.

UK government's Chief Medical Officer Dame Sally Davies:

"We are encouraged by the development of this comprehensive learning technology from the British Pharmacological Society. Effective and robust prescribing education, and further professional development in this area, is a vital step in ensuring the continued safety of patients. We are pleased to see a UK-based charity leading the way."

Though we experienced commercial challenges in 2018, as expected for a start-up, BPS Assessment saw strong international growth, with pilots in North America, the Middle East, Europe, India, China, Australasia and Southeast Asia. The platform was welcomed by doctors worldwide, thanks to its significant repository of content-rich prescribing questions, the rich and instantaneous feedback, and its capacity for customisation.

In November, BPS Assessment signed a milestone, five-year collaboration agreement with the Royal College of Physicians and Surgeons of Canada, giving practising Canadian physicians access to online prescribing modules, tailored to their local healthcare context.

This agreement was another major step in the BPSA's drive to improve medication safety worldwide, through cloud-based knowledge assessment and learning.

The Royal College CEO, Andrew Padmos:

"This work with BPS Assessment is part of Royal College's commitment to support the life-long learning and continued enhancement of skills and competencies of Fellows. For patients, it is reassuring to know that, on a national scale, Fellows are taking part in an activity where they can assess their prescribing practices, reflect on the challenges, and address the complexity of prescribing and de-prescribing medications to provide the highest quality patient care."



From L to R

David James, Executive Director, Strategic Innovation

Dr Andrew Padmos, CEO, Royal College of Physicians and Surgeons of Canada

Dr Susan Brien, Director Practice and Systems Innovation, at the Royal College of Physicians and Surgeons of Canada

Jono Bruun, CEO, British Pharmacological Society and MD, BPS Assessment



MEETINGS & EVENTS

In demonstrating our goal to be at the heart of the global pharmacology community, the meetings team, working with the Meetings Committee and the Vice President, produced six scientific meetings and three educational workshops across the UK in 2018. We are proud to share the following achievements:

MEETING OUR OBJECTIVES...

To lead the formation of valuable networks that reflect our position at the heart of the global pharmacology community

- Demonstrate the excellence of UK pharmacology and therapeutics, through attendance and support of WCP2018
- Launch the Society's hosting of IUPHAR's flagship 19th World Congress of Basic and Clinical Pharmacology – WCP2022

While also meeting our dissemination goals to:

- Begin implementing the five-year strategy of improving and growing the annual meeting
- Review activities that will improve the quality of the Society's meetings, and our support for non-Society meetings

9

Number of events

1,880

Registration numbers
(total attendees including exhibitors and staff)

62

Number of countries represented in the attendance

SPONSORSHIP OF EXTERNAL MEETINGS

3

Funded by Affinity Groups

6

Funded by Meetings Committee in Ireland, the UK, Italy and Germany

Growing the annual meeting: Pharmacology 2018

At the Society's flagship annual meeting in December, we welcomed 1,200 people to London for three days of cutting-edge science and fantastic networking. We were pleased to receive highly positive feedback from all involved.

This year's meeting attracted our highest-ever number of abstract submissions, with over 450 vying for coveted places in the programme. It was a great pleasure to see so many members presenting their research, in particular the younger members and those presenting for the first time.

We also received a high number of symposium submissions. We have partnered with a number of organisations in the past to generate symposia relating to the special interests of our members, and while we will continue to develop those relationships, it is the Society's membership that leads the way in producing key sessions.

In 2018, we also brought change to the usual programme format, adding commissioned sessions. We were delighted that the closing session on artificial intelligence, featuring a cross-disciplinary panel, was so popular with our attendees. Sessions from Dr Mene Pangalos from AstraZeneca and Professor John Mattick were also very well received, and we have already started working with the Society's Scientific Advisory panel on commissions for 2019.

Another change was our focus on sustainability, moving away from printed materials where possible, and

encouraging attendees to use our meeting app for the event. We were thrilled to see a 60% increase in usage of the app, and we are planning to make it even more user-friendly and accessible for 2019.

Finally, our big news was the decision to move the annual meeting out of London from 2019, starting a rotation around the UK. Holding the meeting in London has been popular and successful over the years, but we are keen to better serve our geographically diverse membership and to work towards providing equality of access to the meeting. Our chosen 2019 location is the beautiful city of Edinburgh. We hope that this grand, historic and welcoming city will reflect the high quality programme and sense of community that are becoming the Pharmacology meeting's identity.

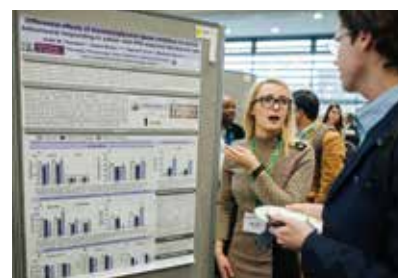
Education at Pharmacology 2018

Following its success at Pharmacology 2017, Education was once again a stream for the final day of Pharmacology 2018. It brought together a very engaged and passionate community, with many opportunities for networking and important discussions.

Topics covered on the day included e-learning resources, 3D printed receptors, peer-led exercises and animal research engagement activities. Attendees rotated through the different stands, engaging with demonstrators, presenting feedback, and networking.

One of the most popular sessions was the "Innovations in Pharmacology Education" workshop. Sixteen educators showcased a variety of new and innovative teaching approaches, in a relaxed but highly interactive and lively session.

The Society is keen to continue this type of initiative. Looking ahead to 2019, the society has organised an "Educators Networking Meeting", to identify and discuss key challenges, and how they can be overcome.



Improving the quality of the Society's meetings and events:

Focused Meetings

7th Focused Meeting on Cell Signalling

16 – 17 April 2018

This event took place in Nottingham for the first time and was a huge success, welcoming 221 attendees – more than ever before. Delegates were delighted by the consistently high quality of the speakers. A key takeaway message was the need for pharmacology as a discipline to embrace the potential of new technologies.



Pharmacology Futures 2018: Exploring Future Drug Development

17 May 2018

This meeting of 200 delegates celebrated 250 years of pharmacology in Edinburgh, and the city's leading role in developing the discipline. It focused on the future opportunities for pharmacology and its central role in drug development.

"The speakers at this meeting, from industry, academia and government, underlined the tremendous opportunities for pharmacology to play a pivotal future role in drug discovery and development."

Professor David Webb, Past President, 2016-2017 and meeting organiser



Current trends in drug discovery: Young scientists and tomorrow's medicines

07 June 2018

This joint meeting with the Society of Medicines Research (SMR) brought together both internationally recognised speakers and young scientists, giving them an opportunity to discuss their research through either oral or poster presentations.

"It was tremendous to see the young scientist delegates from a wide range of drug discovery relevant disciplines taking full advantage of the opportunity to talk to each other during this meeting."

Dr Rod Porter, Rod Porter Consultancy





Professor David Webb, President 2016-2017 and Dr Aisah Aubdool

The Society ran three successful focused meetings in 2018, allowing attendees to explore a specific topic within pharmacology and therapeutics.

The Bill Bowman Lecture

Dr Aisah Aubdool, postdoctoral researcher at the William Harvey Research Institute and British Pharmacological Society Ambassador, was awarded The Bill Bowman Travelling Lectureship in 2017, and delivered her prize lectures in 2018. Her work within the lab of Professor Adrian Hobbs focuses on the role of endothelial C-type natriuretic peptide in angiogenesis and vascular remodelling.

Dr Aubdool gave lectures in Glasgow and London, covering her work as a PhD researcher on the role of sensory nerves in the cardiovascular system within Professor Susan Brain's lab at King's College London, and on the neuronal ion channel TRPA1 as a primary vascular cold sensor.

"Winning the BPS Bill Bowman Travelling Lectureship award prize was a magnificent honour! I see this prize as an encouragement for me to work harder, with a step closer to those academic dreams."

Dr Aisah Aubdool

President's Lecture 2018

This was delivered at the Royal College of Physicians by Dr Fiona Marshall, founder and Chief Scientific Officer of the drug discovery and development

biotechnology company Heptares Therapeutics. Dr Marshall spoke about her personal perspective from 20 years of GPCR Drug Discovery, and feedback on the lecture was excellent.

Dr Marshall has also been awarded the Society's Vane Medal and the AstraZeneca Prize for Women in Pharmacology.

Demonstrate the excellence of UK pharmacology and therapeutics, with attendance at World Congress of Basic & Clinical Pharmacology

A five-strong team from the Society and 60 members attended this event in Kyoto in July. The Society was pleased to be able to fund bursaries to the total value of £15,970 to 38 members who travelled to Japan.

We were delighted to meet delegates and members at our impressive and well-positioned stand. The stand became a great drop-in centre for everyone passing between symposia, and a social focus at the end of each day with whiskey tasting! Our symposium on the Focus on Pharmacology project was well received by leaders in the field.

We also spent time at Congress researching, planning for, and promoting the 2022 event which we will be hosting in Glasgow. The official handover took place on the last day in Kyoto, with launch of the new website, www.wcp2022.org



The British Pharmacological Society's Team at WPC2018

WORKSHOPS

MEETING OUR OBJECTIVES...

To sustain a skilled workforce that supports the development of novel therapeutics

Deliver high quality training and education activities with a focus on skills



Each year, the Society runs popular workshops to support the educational and training needs of early career industry scientists, PhD students and the wider pharmacology community.

These workshops are vital to meeting our goal of delivering high quality education activities. Attendees are invited to explore exciting and specialist topics, as well as fundamental basics. The events are held around the UK, and include expert talks, interactive tutorials, breakouts and networking opportunities.

In 2018, three workshops took place:

- General and Advanced Receptor Theory (GART), 12-13 February
- Drug Discovery, 8-9 March
- Pharmacokinetics and Pharmacodynamics (PKPD), 21-22 June

Spaces are limited to 30 people per workshop, to ensure that all attendees' needs are met.

A total of 89 attendees joined the three workshops in 2018.

"It has given me a better understanding of the fundamental principles of receptor theory and the mixture of taught lectures and exercises was helpful for fully understanding the concepts."

GART 2018 attendee

"I think listening and learning from those who have an extensive amount of knowledge and experience within the industry was excellent."

Drug Discovery 2018 attendee

"I found the tutorials very pertinent to the concepts discussed in the presentations. Loved it."

PKPD 2018 attendee

In 2018, the Society carried out a survey to investigate how we can improve on the workshop experience. A number of exciting ideas have been identified, and plans are in place to explore these further.

NURTURING OUR COMMUNITY

IMPROVING MEMBERS' EXPERIENCE

In 2018, The Society focused on delivering a relevant, useful and engaging experience for our members, enabling us to nurture networks, and to better understand what membership of the Society could be. We completed a broad review of membership in 2018, and considered the market potential, our current and prospective members' needs, and gaps in our current membership strategy. A set of recommendations was approved by Council in 2018, and has given us an exciting springboard for building a revised strategy in 2019.

MEETING OUR OBJECTIVES...

To lead the formation of valuable networks that reflect our position at the heart of the global pharmacology community

Ascertain a present-day understanding of what membership of the Society could be, as a precursor to developing an updated membership strategy.



Affinity Groups:

The Society's Affinity Groups primarily support the Meetings Committee, ensuring that all specialty areas of our members are represented within the Society's annual programme of events. They also represent the Society in other meetings

The Society has recognised the need to improve the structure and output of Affinity Groups, for the benefit of members. In 2018, we embarked on a project to address this challenge. An overhaul of Affinity Groups and the related member experience is planned for 2019.

Code of Conduct:

In 2018, as part of our ongoing focus on good governance and appropriate support for members and staff, we developed a Code of Conduct for all members. In essence, this codified the behaviours we already expect and see from members, providing a clear statement of the procedure to be followed in the rare instances when a disciplinary process is needed.

The General Data Protection Regulation (GDPR)

A substantial change to the UK's data privacy laws came into effect in May of 2018. We were fully supportive of this legislation, as we have always worked hard to protect members' personal data, and to use it appropriately, securely and respectfully. We are committed to developing our processes to ensure ongoing compliance to the regulation.

COMMITMENT TO EQUALITY AND DIVERSITY

MEETING OUR OBJECTIVES...

To remove barriers to participation and success, while welcoming equality and celebrating diversity, and being inclusive in all we do

- Finalise the Society's inclusion strategy, and begin its implementation with the ultimate aim that projects are developed with active consideration of equality, diversity and inclusion

The Society's commitment to equality, diversity and inclusion is a long-term undertaking, reflected in our organisation's new five-year strategy, with a focus on participation, equality and diversity.

In order to fulfil this objective in 2018, we recognised the need to gain a deeper understanding of the Society's membership. Therefore, in September, we asked a business consultancy to investigate the following:

- The Society's current activities, processes, decision-making and culture in the context of equality, diversity and inclusion (EDI)
- The Society's performance on EDI, benchmarked against other similar organisations.
- Recommendations and guidance on next steps to improve best practice and help the Society deliver on its strategic commitments

In addition to using previously collected survey data, the consultants interviewed members and internal staff. This work surfaced detailed information that was used to create a list of recommendations, to ensure the Society was well placed to move forward. In parallel to this work, members of staff created question boards at Pharmacology 2018, encouraging members to answer questions such as "What does Equality mean to you?" The final report is to be launched in 2019.



MEMBER ENGAGEMENT

MEETING OUR OBJECTIVES...

To sustain a skilled workforce that supports the development of novel therapeutics

- Plan and begin implementing the expansion of the Ambassadors scheme

And

To set the agenda in education and skills

- To support the next generation of learners undertaking education in pharmacology and clinical pharmacology



AMBASSADORS SCHEME

Through its member engagement activities, the Society aims to nurture its community. In 2018, we have had a keen focus on supporting student and early career pharmacologists.

Plan and implement expansion of Ambassadors scheme



Ambassador outreach activity

In 2018, following two years of pilots, the Society launched the full the Ambassador scheme aimed at our objective of leading valuable, inclusive networks that advance the discipline. Its vision is to support members around the world in running their own engagement events, and to help them provide careers advice, by supplying resources, networks and funding. The scheme also gives the Society a presence in the day-to-day life of pharmacology communities.

At the end of the 2018, we had worked with nine Ambassadors and three Ambassador Coordinators who champion pharmacology in their local area.

"Ambassadors use their funds in many creative ways to engage with a variety of audiences. I visited a local secondary school to run a science demonstration activity and talk about my career. I really enjoyed talking to the pupils about my life as a pharmacologist and my current research in cardiovascular pharmacology."

Aisah Abdool, Ambassador Coordinator, Queen Mary University of London

Supporting the next generation: Sponsoring student-led Society lectures and events

The Early Career Pharmacologists' Advisory Group awards sponsorship to student-led undergraduate pharmacology networks, to help them organise guest lectures and educational events at their University."



Prof Gareth Sanger at University of Hertfordshire

"The University of Hertfordshire was honoured to have Professor Gareth Sanger, an eminent pharmacologist with an international reputation deliver a seminar on his ground-breaking research. The event was organised by our Student Pharmacology Society, and demonstrates how a small pocket of funding provided by the Society can really help create an engaging student event."

Heather Gunn, Society Member and Chair of The University of Hertfordshire Pharmacology Society



YLS 2018 organising committee

Young Life Scientists' Symposium

Each year the Society, the Physiological Society and the Biochemical Society come together to fund and support Early Career Researchers (ECRs) in organising a Young Life Scientists' (YLS) symposium. In 2018, the winning organising committee from the Universities of Glasgow and Strathclyde held a one-day symposium in November, entitled Molecular Neuropharmacology in Health and Wellbeing.

"Overall the YLS 2018 organising committee and I, found running the conference to be a highly enjoyable, if at times stressful, experience. We all felt it improved our team working, organisational and networking skills among other things. We would highly recommend other early career researchers get involved."

Mark Barbour, YLS 2018 organising committee member, University of Strathclyde.



Society student members at Voice of the Future 2018

Voice of the Future

This year, the Society asked its membership in undergraduate, postgraduate and early career research to take part in 'Voice of the Future' in the Houses of Parliament in March. This event, which gives attendees the chance to quiz key political figures on science policy issues, is one of the most engaging functions of the year for young scientists and engineers.

"I thoroughly enjoyed the Voice of the Future 2018 event, held at Portcullis House. It was exciting to be able to sit in Parliament and hear from various MPs and scientific advisers, and to witness the engagement from a wide range of scientific societies. It was such a privilege to attend and be a part of."

Harriette Brennan, Society Undergraduate member, St George's University of London



Member Roland Jones delivering Pint of Science event in Oxford

Pint of Science

The Society has been supporting members in sharing their research at the informal Pint of Science events since the project's inception in 2013. This year we sponsored Malcolm Begg (GSK) and Roland Jones (University of Bath) in presenting their research in London and Oxford respectively.

"I was very grateful that the Society sponsored my 'Pint of Science' talk in Oxford, the turnout was very good. It never ceases to amaze me how 'Pint of Science' attracts such lively crowds with excellent knowledge, debating and questioning."

Roland Jones, Society member, Professor of Neuropharmacology, University of Bath

RECOGNISING ACHIEVEMENTS IN PHARMACOLOGY

Award winners

Our 2018 prize and award winners are detailed below – many congratulations to all of them:

Prizes

AstraZeneca Prize for Women in Pharmacology
Dr Fiona Marshall, MSD

BJP Early Career Researcher Prize for Design & Analysis Excellence
Dr Catherine Wilder, University College London

BJP Early Career Researcher Prize for Scientific Novelty
Dr Nils Rorsman, OxSyBio

The BJCP Prize
Dr Flory Muanda, London Health Sciences Centre

Drug Discovery of the Year
Roche Products Ltd. and Chugai Pharma Ltd. responsible for the development of Hemlibra®

Grahame-Smith Prize
Isla Mackenzie, University of Dundee

Novartis Prize
Dr Chris Bailey, University of Bath

Rang Prize
Dr Andrew Holt, University of Alberta

Sir James Black Award for Contribution to Drug Discovery
Dr Pancras Wong, Dr Robert Knabb, Dr Donglu Zhang, Dr Mimi Quan and Dr Donald Pinto for the discovery of/ original research on Eliquis® (Apixaban) at Bristol-Myers Squibb

Vane Medal
Dr Fiona Marshall, MSD

Pharmacology 2018 prizes

Clinical Oral Communication Prize
Dr David Pinato, Imperial College London

Clinical Poster Prize
Mohamed Chughlay, Medicines for Malaria Venture

Clinical Undergraduate Poster Prize
Patrick Gallagher, Queen's University Belfast
Basil James, Newcastle University
Stefanie Reis, University of Southampton

Dom Spina Prize for Experimental Design and Analysis
Louise Hesketh, King's College London

Education Oral Prize
Khadija Owusu, St George's, University of London

Education Poster Prize
Dr Selma Audi, North Middlesex University Hospital

Flash Poster Prize
Rachael Grime, University of Birmingham
Elizabeth Zhuikova, St George's, University of London
Simon Harding, University of Edinburgh

Late Breaking Abstract Prize
Justin Jacobse, Center for Human Drug Research
Daniel Ranson, University of East London

Medical Student National Abstract Prize
Raeesa Patel, University College London

Oral Communication Prize
Rob Hill, University of Bristol
Chloe Peach, University of Nottingham
Jennifer Van Der Horst, University of Copenhagen

Poster Prize
Daniel Lucy, University of Oxford
Abdul Hassan, University of Hertfordshire
Ermira Kurti, King's College London

Young Pharmacologist Poster Prize
Kamila Behnam, University of Bath
Ellie Connor, St George's, University of London
Dilen Patel, Queen Mary, University of London



Dr Fiona Marshall, delivers the AstraZeneca Prize for Women in Pharmacology lecture at Pharmacology 2018

Study awards

AJ Clark Studentship

Matilda Kennard, King's College London

"I never expected to receive the Studentship and went into my interview thinking that it would simply be good practice for the future. But my guess is that being able to talk calmly but passionately about my project did a lot to help my chances of success."

Matilda Kennard

BPS & ASCEPT Outstanding Young Investigator Award

Dr Jennifer Deuis, University of Queensland

Dr Robert Laprairie, University of Saskatchewan

Pickford Award

Dr Nura Mohamed, Imperial College London

Schachter Award

Andrew Mead, Royal Veterinary College

Vacation Studentship

Scott Adams, University of Aberdeen

Hannah Comfort, University of Nottingham

Ellen Gardner, University of Glasgow

Fiona Healy, University of Liverpool

Christopher Hillyar, Queen Mary University of London

Ermira Kurti, King's College London

Danil Lopukhov, University College London

"Thank you for giving me this amazing opportunity to conduct a research project over the summer. I have gained an invaluable experience and have honed a number of skills including leadership and project-planning."

Danil Lopukhov, University College London

Andra Stefan, University College London

David Tippet, University of Nottingham

Lectureships

Australasian Visitor

Dr Steven Charlton, University of Nottingham

Bill Bowman Prize Lectureship

Dr Caroline Copeland, St George's, University of London

"I was delighted to receive the Bill Bowman Lectureship. Such an award is vital in the support of early-career pharmacologists, to ensure the future of the profession."

Gaddum International Prize Lecture

Dr Charles Serhan, Harvard Medical School

Gary Price Memorial Lecture

Professor Andrew Plested, FMP Berlin

Grants

Engagement grants

Professor Breandan Kennedy, University College Dublin
"UCD Inherited Blindness Summer School"

Dr Aileen King, King's College London
"Practical Training in Pharmacology GCSE and Alevel"

Dr Mahmoud Bukar Maina, TReND in Africa & Science Communications Hub Nigeria
"TReND in Africa"

Dr Manasi Nandi, King's College London
"Big data in sepsis detection"

Martyna Petrulyte, British Brain Bee
"Neuropharmacology-Effect of Nicotine and MSG on Neurons"

Teaching grants

Dr Caroline Copeland, St George's University of London
"Set the scene on psychoactives: A directed self-learning video resource for students"

Dr Dave Lewis, University of Leeds
"Discovering, evaluating and disseminating non-animal (alternative) educational resources for education and experiential learning in research animal sciences and in-vitro pharmacology"

Dr Claudia Pisanu, University of Cagliari
"PharmacoloGenius: development of a mobile game to spread pharmacology knowledge"



Dr Niall Hyland presents the Dom Spina Prize for Experimental Design and Analysis to Louise Hesketh

Student prizes

BSc Pharmacology Prizes

Students nominated by UK universities

Sheik Mahmood Bakeerally, University of Hertfordshire

Sam Baldwin, St George's, University of London

Jessica Buttress, University of Leeds

Mark Campbell, Glasgow Caledonian University

Katie Flight, University of Strathclyde

Matilda Kennard, King's College London

Zara Kirkwood, Queen's University Belfast

Kaoana Oleinik, University of Dundee

Abhishek Patel, University of Cambridge

Charles Snodin, Cardiff University

Holly Stewart, Newcastle University

George Thompson, University of Manchester

Kyle Thompson, University of Aberdeen

Daniel Turner-Szmekiewicz, University of Westminster

Clinical Undergraduate Prizes

Students nominated by UK Medical Schools

Peter Bye, University of East Anglia

Daniel Cave, Hull York Medical School

Wen Wei Chionh, University College Cork

Dominic Cryans, University of Edinburgh

James Duff, University of Birmingham

Patrick Gallagher, Queen's University Belfast

Babak Hakimian, Imperial College London

Isobel Hatrick, Cardiff University

Adam Haynes, University of Plymouth

John Henry, University of Oxford

Basil James, Newcastle University

Danyal Khan, Royal College of Surgeons in Ireland

Skukura Murray, King's College London

Axel Emil Nissen-Lie, Royal College of Surgeons in Ireland

Gani Nuredini, Queen Mary, University of London

Gillian O'Keeffe, University College Cork

Stefanie Reis, University of Southampton

Munazza Shah, Queen Mary, University of London

Jessica Simpson, University of East Anglia

Harriet Sinclair, King's College London

Catarina Alves Soares, University of Nottingham

Tanna Tan, Trinity College Dublin

Lin Shan Tang, University of Edinburgh

Lewis Timimi, University of Cambridge

Stephen Yekini, University of Southampton

Charles Yong, University College London

Student Contribution to Pharmacology

Antonio Gonzalez, University of Bath

Aidan Kirk, University of Leeds

Harsimran Kaur, Queen Mary University of London

Sebastian Negahban, Newcastle University

Honorary Fellowships

Honorary Fellows are elected for life by the British Pharmacological Society in recognition of sustained excellence and leadership in science, healthcare, and public service. Ten Honorary Fellows were elected in 2018:

- **Professor Susan Brain** for her contributions to the Society, and for leadership in academic development and in the pharmacology of the microcirculation
- **Fiona Fox** for her contributions to the public understanding of science, and for her advice to the Society on its engagement with the media
- **Professor Daniel Hoyer** for his contribution to the British Journal of Pharmacology, and for leadership in the pharmacology of serotonin (5HT)
- **Professor Margaret MacLean** for her contributions to the Society, and for leadership in the public understanding of pharmacology, and in pulmonary pharmacology
- **Dr Fiona Marshall** for her contributions to British pharmacology and support for the Society
- **Professor Barbara McDermott** for her contributions to the Society, and for leadership in academic development and in cardiovascular pharmacology
- **Professor Clive Page** for his contributions to the Society, and for leadership in the public understanding of pharmacology and in the pharmacology of platelets, inflammation and asthma
- **Professor David Webb** for his contributions to the Society as President and in other key roles, and for leadership in clinical pharmacology and regulatory affairs
- **Professor Roger Summers** for his sustained leadership on the molecular pharmacology of G protein-coupled receptors (GPCRs)
- **Professor Brendan Whittle** for his sustained leadership in applied pharmacology and in the pharmaceutical industry



Professor Steve Hill presenting the Sir James Black Award for Contribution to Drug Discovery, to Dr Donglu Zhang, Dr Donald Pinto, Dr Miami Quan and Dr Pancras Wong

Fellowships

Members may apply to become Fellows of the Society, and must demonstrate distinction and peer recognition in pharmacology. They will have made, and may continue to make, substantial contributions to the disciplines of pharmacology, clinical pharmacology and therapeutics, through their work, publication and presentation of research, leadership, and contribution to Society life.

Fellows elected in 2018:

- **Professor Clare Bryant**, University of Cambridge
- **Professor Arthur Christopoulos**, Monash University
- **Professor Debbie Hay**, University of Auckland
- **Dr Stephen Kelley**, Medway School of Pharmacy
- **Professor Jonathan Kentish**, King's College London
- **Professor David Lambert**, University of Leicester
- **Professor Richard Martin**, Iowa State University
- **Dr Melisa 'Lisa' Wallace**, Swansea University
- **Professor Carlos Villalon**, Cinvestav

SPONSORS & DONORS

The British Pharmacological Society is most grateful to the following organisations for their donations to support our various activities, including prizes and training courses.

Donors

Medical Research Council
The Physiological Society
Novartis
The Royal Society

Sponsors & Exhibitors

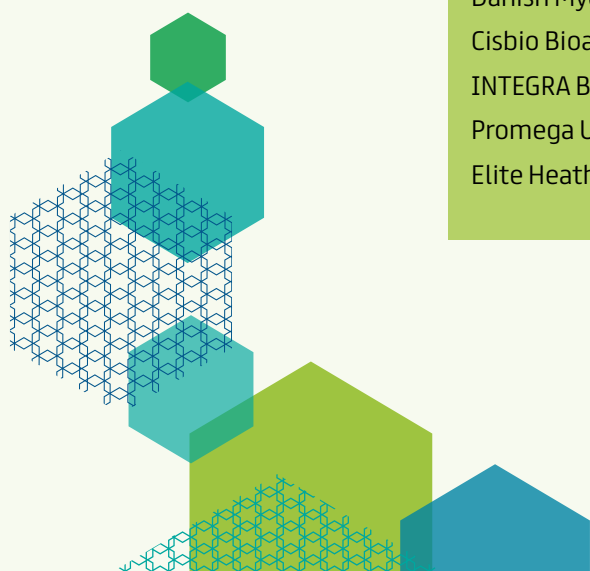
Tocris Cookson Bioscience
Campden Instruments
Elsevier Limited
Frontiers Media
Emka Technologies
BMG Labtech Ltd
LifeArc
Carbosynth Ltd
J Wiley & Sons Limited
Worldwide Clinical Trials
The American Society for Pharmacology and Experimental Therapeutics (ASPET)
Society for Medicines Research
Moor Instruments Limited
Royal Society of Edinburgh
Danish Myo Technology
Cisbio Bioassays
INTEGRA Biosciences Ltd
Promega UK Ltd
Elite Healthcare

Trustees 2018

Stephen Hill
President
Munir Pirmohamed
President-Elect
Robin Plevin
Honorary Treasurer
Charles Gloor
Business
Rachel Quinn
Policy Impact
Aidan Seeley
Young Pharmacologist
Emma Morrison
Clinical
Clare Stanford
General
Malcolm Skingle
Industry
Ian McFadzean
Senior Academic Leadership
Jane Mitchell
Research Dissemination

Vice Presidents 2018

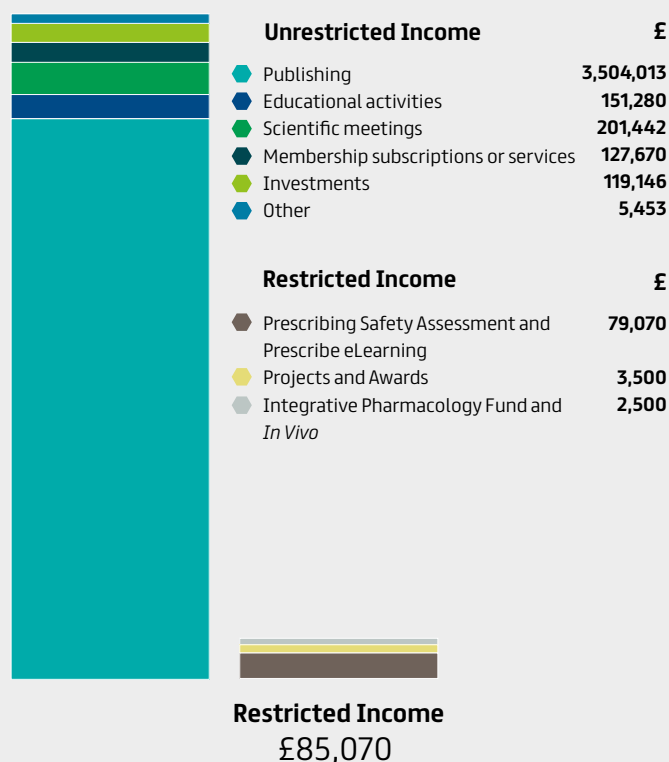
Melisa Wallace
Academic Development
Niall Hyland
Meetings
Alister McNeish
Policy & Public Engagement
Jeffrey Aronson
Publications
Emma Baker
Clinical



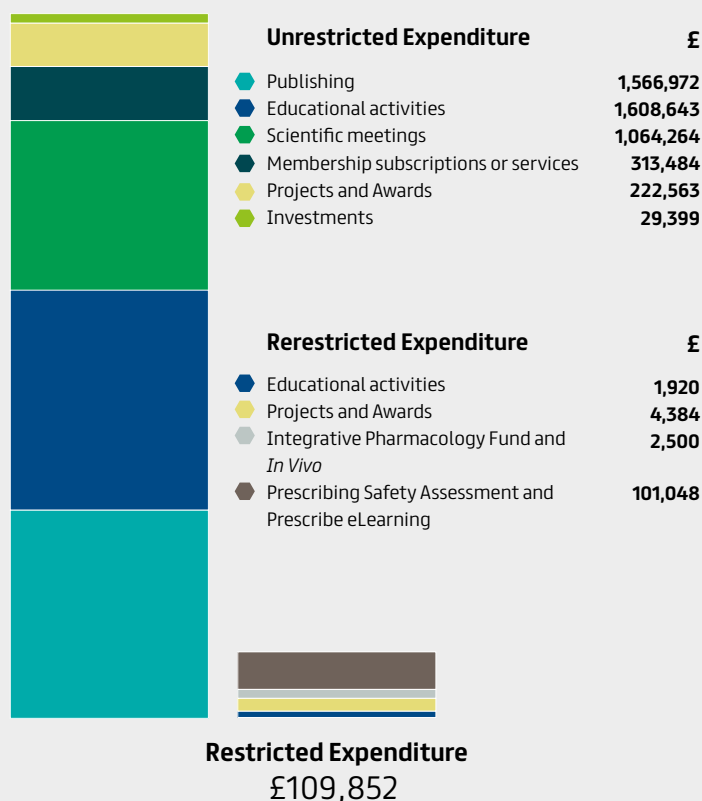
FINANCIALS

Income and expenditure for 2018

Unrestricted Income £4,109,004



Unrestricted Expenditure £4,805,325



You can download a PDF of the Society's financial statements for the year ended 31 December 2018 from the website, available under the "What we do" section of www.bps.ac.uk/about. The financial statements include the Financial Review, Statement of Financial Activities 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.

Total funds of the Society

The financial performance reported here is of the "Group", which means the Society together with its trading subsidiary, BPS Assessment Limited (which commenced trading on 31 March 2017).

The total funds have decreased by £1,193,586 (2017: £295,830 increase). The resulting balance of total funds at 31 December 2018 amounted to £5,617,969 (2017: £6,811,555) of which £5,181,986 (2017: £6,375,790) is unrestricted funds.

The 2018 deficit is significant, but the operational element of that deficit was planned and approved by the Society's Council. Council supported continuing with a higher level of charitable activity in pursuit of our strategic commitments, while also approving investment in business development activities with a reasonable expectation of contributing significant amounts of income over time.

Income

- Income for the year totalled £4,194,074 (2017: £4,370,461) which is an decrease of 4.0%.
- Importantly, charitable activity income from journal publishing, which is the Society's main income source, has remained stable and only decreased by 4.8% to £3,504,013 (2017: £3,679,876) mainly because of the partial recovery in the value of UK Sterling compared with the US Dollar during the first half of 2018 relative to the same period in 2017.
- Member numbers increased by 0.8% to 4,160 (2017: 4,127) however membership subscription income decreased by 9.8% to £127,670 (2017: £141,555) due to greater recognition of the amount of income deferred to the following year. The overall maintenance of membership reflects the Society's longer term approach to strengthening and growing the discipline of pharmacology.
- Scientific meetings income increased by £101,816 to £201,442 (2017: £99,626) mainly due to the introduction of registration fees to members for the Society's annual 3-day meeting *Pharmacology 2018*.
- Voluntary income is mostly for educational activities; it decreased by £8,239 to £31,000 (2017: £39,239) predominantly because of non-recurring income in respect of a scientific meeting.
- Investment income was £34,445 lower at £119,146 (2017: £153,591) after 2017 had seen a greater emphasis by the investment manager to seek dividends and interest.
- In addition there were net losses on investments totalling £472,483 (2017: net gains £440,051).

Expenditure

- Expenditure on charitable activities totalled £4,885,778 (2017: £4,480,985) which is a 9.0% increase of £404,793.
- Journal publishing costs decreased by £2,547 to £1,566,972 (2017: £1,569,519); the direct costs have been carefully controlled.
- Expenditure on educational activities at £1,714,111 was a 11.4% increase of £175,467 over the previous year (2017: £1,538,644).
- Projects and awards expenditure at £226,947 was similar to the previous year (2017: £243,023).
- Scientific meetings expenditure at £1,064,264 was a 32.5% increase of £260,785 over the previous year (2017: £803,479).
- Capital expenditure totalled £128,992 (2017: £108,900) of which £62,140 (2017: £51,071) is the development cost of the new online platform that began supporting online assessment services in 2017.

2019
Looking ahead

LOOKING AHEAD: OUR 2019 OBJECTIVES

To remove barriers to participation and success, while welcoming equality and celebrating diversity, and being inclusive in all we do

- Demonstrate our commitment to the wellbeing of our employees through the further development of a supportive, open and fun work environment
- Development of specific and tangible EDI (Equality, Diversity and Inclusion) recommendations arising from our 2018 review, and a plan for implementation

To set the agenda in education and skills, to support access to career progression, to support the next generation of learners undertaking education in pharmacology and clinical pharmacology, and to support pharmacology educators in their personal and professional development

- Ensure our careers resources and activities improve connectivity with employers
- Develop approaches to meet learning / educator needs and use these to explore market potential where appropriate

To be the leader in the dissemination of world-class research related to pharmacology and therapeutics

- Help the Society to communicate its expertise and unique contribution to members, the public and key stakeholder groups more clearly, accessibly and engagingly
- Develop a clear and effective meetings marketing process
- Build a network of scientific committees and sponsors for WCP2022

- Decide and implement Annual Meeting plan for 2020-2024
- Deliver a robust and integrated editorial strategy for the BPS journals that serves the pharmacology community and can withstand changes in open science
- Explore options for new and innovative ways to communicate the outputs of pharmacological research

To engage patients and partners in the NHS in our advocacy for fundamental and clinical research, as well as contributing to strategic leadership

- Continue to deliver the Prescribing Safety Assessment to a high standard across all UK Medical Schools
- Continue to iterate the Clinical Pharmacology Skills Alliance's (CPSA) action plan with key partners, and implement on an agile basis

To sustain a skilled workforce that supports the development of novel therapeutics

- Deliver high quality training and education activities with a focus on skills

To lead the formation of valuable networks that reflect our position at the heart of the global pharmacology community

- As part of the next phase of the BPS Ambassador Scheme roll-out, establish Ambassador Coordinators as a working group to support delivery and development of the Society's engagement activities
- Update our membership strategy, with a view to increasing the relevance of the BPS to its members and to the broader pharmacological community

To deliver clear, relevant and accessible advice to policy makers

- Continue to build the Society's reputation as a trusted advisor by contributing to consultations, participating in policy events and promoting the expertise of our membership

To define, monitor and respond to strategic areas of scientific priority

- Consider and advise upon the role played by pharmacology clinical pharmacology and therapeutics in responding to global health challenges and scientific or technological developments, working with key stakeholders, including through the Society's Scientific Advisory Panel

Continued development of sustainable and ethical new income streams, primarily through our trading subsidiary, BPS Assessment Ltd

- To establish and consolidate BPSA as a sustainable trading entity by achieving revenue targets and developing new income streams, adjusting the team structure to achieve this as required
- To ensure the development and maintenance of a robust and reliable online platform for the dissemination of both BPSA and BPS digital products and services
- To ensure all products and services delivered from the platform meet the standards of quality required by a learned and professional society and its trading subsidiary
- Implement the findings from the 2018 systematic review of activity to generate increased value, increased income and greater efficiency

We will underpin our activities by focusing on sustainability, resource and infrastructure

- Enhance the Customer Relations Management system to continue to establish it as the Society's knowledge-management hub, by training and development of staff, improving the usability of the CRM.
- Underpin this with a review of the key supplier working relationship, a review of the appropriateness of the CRM solution itself, and preparation for tendering the CRM and key supplier in 2020
- Continue to ensure that our data protection practices are driven by compliance, and develop ways in which our staff and members can use data effectively to further the aims of the Society
- Implement the findings of the 2018 external review of committees and groups





ABOUT THE BRITISH PHARMACOLOGICAL SOCIETY

The Society is a charity with a mission to promote and advance the whole spectrum of pharmacology, and leads the way in the research and application of pharmacology around the world. Connecting over 4,000 members from more than 60 countries, it is a global community at the heart of pharmacology.

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