



BRITISH
PHARMACOLOGICAL
SOCIETY

ANNUAL REVIEW 2019



TODAY'S
SCIENCE
TOMORROW'S
MEDICINES

CONTENTS

About the Society	02	6. Scientific priorities	18
Message from our President and Chief Executive	03	7. Sustainable and ethical income streams	19
Our year in numbers	04	8. Valuable networks at the heart of the community	21
Meeting our five-year strategic objectives: 2019 Achievements	05	9. Equality and diversity in participation and success	24
1. The dissemination of world-class research	06	10. Resource and infrastructure	26
2. Education and skills	11	Recognising achievements in pharmacology	29
3. Sustaining a skilled workforce	13	Sponsors and donors	33
4. Advocacy and strategic leadership in research	14	Financials	34
5. Advice to policy-makers	16	Looking ahead	36

ABOUT THE SOCIETY

OUR VISION AND MISSION

The British Pharmacological Society is a collaborative, global community with members at its heart. Our vision is a world where pharmacology and therapeutics drive and support progress in science, medicine and healthcare.

In 2019, we headed towards the mid-point of our five-year strategy, focused on our mission of working with integrity to create global scientific health and economic impact. We aim to reach this mission, between now and 2022, by:

- Supporting academic and industrial drug discovery research
- 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

Guided by our core principles and our blueprint for delivery, we are committed to achieving our long-term strategy by working closely with our membership and partners on a series of **strategic objectives**, designed to ensure maximum impact.

These strategic objectives are:

- To set the agenda in education and skills; to support access and 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
- To be the leader in the dissemination of world-class research related to pharmacology and therapeutics
- To engage patients and partners in the NHS in our advocacy for fundamental and clinical research, as well as contributing to strategic leadership
- To sustain a skilled workforce that supports the development of novel therapeutics
- To lead the formation of valuable networks that reflect our position at the heart of the global pharmacology community
- To remove barriers to participation and success, while welcoming equality and celebrating diversity, and being inclusive in all we do
- To deliver clear, relevant and accessible advice to policy makers
- To nurture strategic partnerships across disciplines and sectors
- To define, monitor and respond to strategic areas of scientific priority

In 2019, the Society achieved a set of ambitious **operational objectives**, aligned to these strategic objectives, which we have outlined in this Annual Review. This far-reaching progress last year not only moved us closer to achieving our long-term vision and mission for 2022, but crucially, laid foundations that will now allow us to deliver and accomplish even more for the advancement of pharmacology in 2020.

MESSAGE FROM OUR PRESIDENT AND CHIEF EXECUTIVE

The past year has been another year of considerable achievement and we remain grateful to our trustees, members and staff for their work on the many strands of our five-year strategy. As the second year of that strategy, 2019 was a time for consolidation of the first year, as well as vigorous activity for the future.

Before we expand further, we must extend our heartfelt thanks to Jono Bruun, our former Chief Executive, who departed the organisation at the end of 2019. He leaves, as his legacy, a Society in a strong and effective position for the future. Jono's inspirational leadership and clear vision were the drivers for 2019's many achievements. We are grateful to both Jono and the team, and we are delighted to share their achievements in this Annual Review.

In 2019, the Society's engagement team demonstrated in many ways our commitment to serving our members, who remain at the heart of our organisation. We worked hard to build valuable networks for the pharmacology community with initiatives such as the Ambassador Scheme, flourishing throughout the year. Two key highlights came at the end of 2019: the announcement of our partnership with the European Laboratory Research & Innovation Group (ELRIG), and the creation of a new [digital communities platform](#) where members and the Society can communicate, collaborate and support each other. We are confident that these initiatives will be of considerable benefit to both our membership and the wider pharmacology community.

Our policy team built on their work with partners in the Clinical Pharmacology Skills Alliance (CPSA), developing the knowledge, skills and behaviours for the clinical pharmacology apprenticeship, which was granted approval early in the year. This apprenticeship will be a key factor in addressing skills gap in the profession. We also submitted policy advice to the UK government on consultations that included healthy ageing and medicinal cannabis; our strategy of working with partners underpinned our work in these areas.

The annual conference, Pharmacology 2019, held in Edinburgh, was a huge success on a number of fronts. We welcomed more than 1,000 delegates, who experienced a packed programme with popular topics such as 'AI and new technologies in Pharmacology', and new initiatives such as the Careers Exhibition, led by our Education team. This was also an opportunity for our communications and marketing team to flex their social media muscles, by debuting live streaming on Facebook, thereby increasing the reach of the conference to members and colleagues unable to join in person.

The Society's commercial arm, BPS Assessment Ltd, continued to grow its international reach, despite challenging commercial circumstances, and consolidated its footing as a respected brand in its field. BPS Assessment (BPSA) now works with more than ten countries and

regions around the world. Further, in 2019, we launched new products to broaden our market appeal, such as the 'De-prescribing Simulator', which helps clinicians deal with the complexities of polypharmacy.

The BPSA is not the only area where we developed our digital offering. Our support for animal sciences research incorporated the exploration of digital learning modules, and we were proud to complete a pilot project, focusing on the topic of blinding. Across the board, we have been improving our digital content; for example, Pharmacology Matters became a fully digital publication in 2019, leading to an increase in readership. The editorial team further embraced both digital publishing and social media in 2019, while also continuing to explore the challenges brought by open access publishing, including creating and publishing the Society's principles on open access.

Of course, none of this would be possible without our committed, dynamic and enthusiastic team of staff. This year, we kept our focus on the wellbeing and professional development of our employees, by offering opportunities such as coaching delivered by professionals, alongside a review of our team values. We would like to thank them for such an incredible year of achievement.

And so, with the second year of our five-year strategy under our belts, we move to 2020 with excitement for reaching the halfway point, and ready for the challenges ahead. We are fully aware that the months and years ahead will be affected in many ways by COVID-19, but we look forward as a new leadership team to working towards our vision of a world where pharmacology and therapeutics drive and support progress in science, medicine and healthcare.



Professor Sir Munir Pirmohamed
President

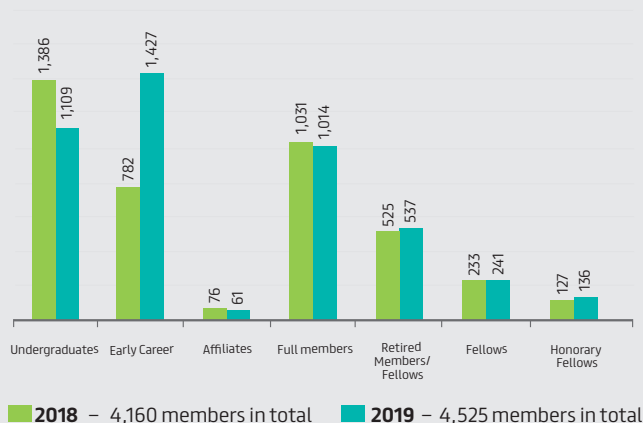


Rachel Lambert-Forsyth
Chief Executive

OUR YEAR IN NUMBERS

The total membership on 31 December 2019 was 4,525, representing an increase of 9% in the space of a year.

The Society was sad to report the deaths of 12 members.



Annual Conference – Pharmacology 19

1026
event registrations

62% from UK
16% from Europe
3% from USA
19% from rest of the world

397
welcome reception attendees

344
dinner attendees at the National Museum of Scotland

17
sponsors

443
abstracts submitted



Of our 4,525 members:

56%
were early career and undergraduate pharmacologists
(2018: 52%)

38%
identified as female
(2018: 38%)

22%
were international (non-uk)
(2018: 23%)

Digital engagement



7,354
Facebook followers
9% increase from 2018



8,333
Twitter followers
30% increase from 2018



6,748
LinkedIn company followers
46% increase from 2018



1,567
YouTube followers
35% increase from 2018

Awards

£318,024
was awarded through prizes, grants and awards
(2018: £293,279)

£23,978
was awarded in bursary funding
(2018: £40,679)

113
nominations
(2018: 96)

49%
of applications were for female candidates
(2018: 49%)

97
prizes were awarded
(2017: 81)

MEETING OUR FIVE-YEAR STRATEGIC OBJECTIVES:

2019 ACHIEVEMENTS

1. THE DISSEMINATION OF WORLD-CLASS RESEARCH
2. EDUCATION AND SKILLS
3. SUSTAINING A SKILLED WORKFORCE
4. ADVOCACY AND STRATEGIC LEADERSHIP IN RESEARCH
5. ADVICE TO POLICY-MAKERS
6. SCIENTIFIC PRIORITIES
7. SUSTAINABLE AND ETHICAL INCOME STREAMS
8. VALUABLE NETWORKS AT THE HEART OF THE COMMUNITY
9. EQUALITY AND DIVERSITY IN PARTICIPATION AND SUCCESS
10. RESOURCE AND INFRASTRUCTURE

1. THE DISSEMINATION OF WORLD-CLASS RESEARCH

2018-2022 STRATEGIC OBJECTIVE:

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

In 2019, our teams across meetings, journals and communications were focused on ensuring that world-class research, and the work of the Society, were expertly and innovatively shared with the scientific community and the wider public.

OUR EVENTS IN 2019:

- Three focused meetings
- President's Lecture
- Bill Bowman lecture
- Annual meeting

Total number of attendees – **1597**

Number of countries represented – **52**



Pharmacology 2019 at the Edinburgh International Conference Centre

Meetings – successful events and planning for the future

The Society held six exciting and well-attended meetings during 2019, culminating in the annual conference, Pharmacology 2019. The team also dedicated time and resources to planning for the Annual Meetings up until 2024.

Our flagship Annual Meeting - Pharmacology 2019

In December 2019, the Society's flagship meeting was held in Edinburgh, which proved to be a popular choice with the majority of delegates. We welcomed 1,026 attendees to the event at the Edinburgh International Conference Centre (EICC), which was also well-liked by our attendees.

The feedback from delegates was very positive - more than 100 people responded to our post-event survey - and more than ninety per cent of respondents were satisfied or very satisfied with the speakers and presenters.

We were delighted that overall income for the event increased 15 per cent on the previous year, despite a slight drop in delegate numbers.

A new feature for Pharmacology 2019 was the Sponsors and Exhibitors' Breakfast session which gave our supporters the opportunity to share feedback and offer suggestions for improvements for future meetings. The feedback gathered is already being implemented in our plans for future Pharmacology meetings.

A highlight this year was the dinner and prize-giving evening at the National Museum of Scotland. It was attended by a record 344 guests – more than double the number for 2018.

"The scientific programme was really good and there were lots of presentations from early career scientists which was great to see. Enjoyed the extra touches at the welcome reception e.g. the whisky tasting and the ceilidh band which brought a bit of fun to the evening."

Delegate feedback

"Excellent speakers and a wide range of topics."

Delegate feedback

PHARMACOLOGY 2019 - MOST POPULAR SESSIONS:

Sunday, 15th December 2019

- Plenary: AI and new technologies in Pharmacology
- ASCEPT Lecture

Monday, 16th December 2019

- Grahame-Smith Prize Lecture
- Beyond Opioids: novel targets for analgesia

Tuesday, 17th December 2019

- Gary Price Memorial Lecture
- Drug Discovery of the Year Lecture

Our meetings calendar in 2019 also included:

The Future of Safe Prescribing – Dublin, March 2019

This joint one-day conference between the British Pharmacological Society and the Royal College of Physicians of Ireland addressed topics directly relevant to safe prescribing, now and in the future.

Life Sciences 2019: Post-translational modifications and cell signalling – Nottingham, March 2019

This event was co-organised by the British Pharmacological Society, The Physiological Society and the Biochemical Society, with a specific remit to encourage networking and discussion between national and international researchers from across the broad disciplines.

Safety for Stem Cell-Derived Therapies: Exploring Trends and Future Technologies – Edinburgh, October 2019

The programme of this joint meeting with the UK Regenerative Medicine Platform was designed to bring together global experts in stem cell science and regenerative medicine.

Planning for Pharmacology 2020

Over the course of 2019, the Meetings and Events team made substantial progress in planning for Pharmacology 2020. While monitoring developments and advice from the UK Government and World Health Organization (WHO) about the COVID-19 pandemic, we researched and developed a number of different scenarios, with the wellbeing of attendees at our meetings and events being of the utmost importance.

As a result of these internal discussions, and feedback from our members, we have decided to develop our Annual Meeting for 2020 into an online virtual environment.

The Meetings and Events Team are working on an exciting multi-day, online meeting that offers a combination of scientific sessions and interactive workshops, alongside social content.

We look forward to inviting you to a very special version of the Society's Annual Meeting in December, and to seeing you all in person again to celebrate the Society's 90th Anniversary year at Pharmacology 2021.

World Congress of Basic and Clinical Pharmacology 2022 (WCP2022)

Alongside planning for 2020, the meetings team has also been preparing for WCP2022. In 2019, the WCP2022 International Scientific Committee was established to oversee the delivery of high-quality scientific content for the event. The meeting objectives for WCP2022 have been outlined and agreed as follows:

- promote and advance basic and clinical pharmacology in the future
- showcase the Society as major player in Pharmacology
- grow international membership
- grow support for young pharmacologists
- encourage cross disciplinary collaboration
- promote diversity within the congress
- create a sustainable event

Following a competitive tender process, the Society appointed a Professional Conference Organiser, the TFI Group, to work with us in delivering a successful meeting.

We are currently developing the programme in collaboration with the WCP2022 Executive Group, the WCP2022 International Scientific Committee, the Society's International Advisory Group, and the Society's Council and Meetings Committee.



Pharmacology 2019 at the Edinburgh International Conference Centre

The publication of research – journals' highlights

In 2019, the Society's journals continued to develop successfully, thanks to an editorial team who worked hard to develop a strategy that serves the community while adapting to the changes brought by open access publishing.

Serving the community - widening participation

The Society's suite of Journals has an international reach and our editorial teams spent 2019 continuing to build their presence and relevance around the world. Editor in Chief of BJP, Professor Amrita Ahluwalia toured China and India at the end of the year, giving talks on the British Journal of Pharmacology (BJP) and its guidelines. The British Journal of Clinical Pharmacology (BJCP) also has aspirations for encouraging submissions from China and in 2019 recruited Dr Connie Chen as its Senior Editor with a special focus on the country.

In addition to developing their global representation, in 2019 the journals team sought to reach further into the pharmacology community by focusing on increasing the participation of Early Career Researchers (ECR). Pharmacology Research and Perspectives (PR&P) published a special issue for the ECR cohort, while the BJCP created a new position - Associate Senior Editor - to allow a trainee clinical pharmacologist to participate in the Journal's Senior Editorial Board. In addition, the Society's magazine, Pharmacology Matters, ran a successful writing competition for ECRs.

Innovation

The Society's editorial team continued to embrace digital publishing in 2019, with Pharmacology Matters becoming a fully digital publication, moving from print-like PDFs to online articles. This led to a substantial increase in readership. The publication also took advantage of social media channels, by holding an image competition for ECRs that attracted more than 2,200 social votes.

Most downloaded journal articles in 2019

Journal Title	Article	Author	Full Text Downloads
British Journal of Clinical Pharmacology	Associations of statin use with glycaemic traits and incident type 2 diabetes http://dx.doi.org/10.1111/bcp.13898	AHMADIZAR ET AL.	5783
British Journal of Clinical Pharmacology	A systematic review of cannabidiol dosing in clinical populations http://dx.doi.org/10.1111/bcp.14038	MILLAR ET AL.	4239
British Journal of Clinical Pharmacology	A sequence symmetry analysis of the interrelationships between statins, diabetes and skin infections http://dx.doi.org/10.1111/bcp.14077	KO ET AL.	4170
British Journal of Pharmacology	Sex: A change in our guidelines to authors to ensure that this is no longer an ignored experimental variable http://dx.doi.org/10.1111/bph.14761	DOCHERTY ET AL.	2678
British Journal of Pharmacology	Mitochondrial dysfunction in Alzheimer's disease: Role in pathogenesis and novel therapeutic opportunities http://dx.doi.org/10.1111/bph.14585	PEREZ ORTIZ AND SWERLOW	2233
British Journal of Pharmacology	THE CONCISE GUIDE TO PHARMACOLOGY 2019/20: G protein-coupled receptors http://dx.doi.org/10.1111/bph.14748	ALEXANDER ET AL.	2229
Pharmacology Research & Perspectives	Pharmacokinetics and pharmacodynamics of a single dose Nilotinib in individuals with Parkinson's disease http://dx.doi.org/10.1002/prp2.470	PAGAN ET AL.	3789
Pharmacology Research & Perspectives	Brain histamine H1 receptor occupancy after oral administration of desloratadine and loratadine http://dx.doi.org/10.1002/prp2.499	NAKAMURA ET AL.	2130
Pharmacology Research & Perspectives	Depressive disorders: Treatment failures and poor prognosis over the last 50 years http://dx.doi.org/10.1002/prp2.472	BLACKBURN	1920

Other initiatives from the journals team include – new and revised data-sharing policies published for the BJP and BJCP, and the further rollout of the requirement for journal submissions to include authors' ORCID identifications, making it easier to identify writers and their publications.

Changing of the guard at BJCP

2019 was Professor Adam Cohen's final year as Editor-in-Chief of the BJCP. He leaves a legacy of a bold, innovative and fun journal and editorial team.

From 2020, the journal will be led by Dr Serge Cremers. The BJCP spent much of 2019 developing its short and long-term plans in line with Dr Cremers' vision.

Open access

Open access continued to be a major discussion topic in 2019. The year began with the Society's publisher, Wiley, signing a landmark agreement with institutions in Germany, meaning almost all German authors can publish in the BJP and BJCP open access at no extra direct cost to the author or their institution. Meanwhile, the Society has continued to engage with policy, with responses to the Royal Society of Biology and Coalition S consultations on open access. A list of the Society's principles on open access were approved by Council, and now appear on the website.

Total number
of downloads
349,858



BJP Twitter followers: **3,958**
(53% increase from 2018)



BJP Facebook likes: **5,115**
(5% increase)



BJCP Twitter followers: **1,644**
(50% increase)



BJCP Facebook likes: **731**
(21% increase)



PR&P Twitter followers: **797**
(267% increase)



PR&P Facebook likes: **265**
(92% increase)



Dr Serge Cremers and Professor Adam Cohen

"BJCP published many interesting, high-quality papers in 2019 that we expect will increase the journal's impact factor. Two successful themed issues were published as well as a new series of commentaries on official EMA guidelines. Around half of the editorial board was renewed, resulting in a diverse group of editorial enthusiasts ready to engage with clinical pharmacology communities around the world. Change is good. It generates excitement and it is fun. Let's see where it takes us."

Serge Cremers, BJCP

"In 2019, PR&P saw an almost 40% growth in submissions, mostly in direct submissions, which reflects the ongoing maturation and increasing visibility of the journal. We continued to run joint virtual issues with partner journals and support conference sessions. At Experimental Biology, we sponsored an ASPET-run ECR Data Blitz session, which was a great success and helped us launch a special issue on ECR pharmacologists."

Andrew J Lawrence, PR&P

"In 2019 the editorial board grew in number as we welcomed new members to the team. It was a year of change and engagement for Pharmacology Matters. Going digital is allowing us to track what articles our readers find most interesting and guide the direction of the magazine. In 2019 we launched a writing competition and pharmacology images competition, both of which were very successful events that we hope to run annually going forward."

Margaret Cunningham, PM

"BJP continued its outreach with profile-raising visits to China and India. We published interesting good-practice guidelines, including two new guidance editorials, regarding the important issues of sex as an experimental variable and data sharing. We launched webpages providing region-specific language advice and support for authors. We published 9 themed issues and our rigorous review process has resulted in major growth in the contribution of original research to our citations."

Amrita Ahluwalia, BJP



Professor Andrew Lawrence, Professor Amrita Ahluwalia and Professor Adam Cohen

Communicating our expertise and unique contribution

In 2019, the Society consolidated its reputation as a reliable and responsive source of pharmacology expertise for media outlets.

The Marketing and Communications team continued to nurture media contacts, particularly at the Science Media Centre, and has also seen a steady influx of inquiries due to solid rankings on search engines such as Google. This media relations strategy is underpinned by the standing and expertise of our members, and our own history and prestige.

In 2019 we secured a broad range of media coverage. The Society responded to national and international media requests - from industry press, to print and broadcast outlets, including the BBC and Channel 4 News.

EXAMPLES OF MEDIA COVERAGE:

"Family fears one of UK's most commonly prescribed anti-depressant drugs stopped their 24-year-old son's heart beating amid concerns it could harm others"

<https://www.dailymail.co.uk/health/article-6817587/Common-anti-depressant-drug-linked-two-sudden-deaths.html>

Commentary by Professor Simon Maxwell

"Prescribing Simulator: new tool to develop prescribing skills"

<https://www.prescriber.co.uk/article/prescribing-simulator-new-tool-to-develop-prescribing-skills/>

Comments from Professor Simon Maxwell and Lee Page, Head of Education and Engagement at the BPS

Digital output and social media

The opportunities for social media and digital communications continue to support the Society's drive to engage with the pharmacology community across a range of channels, and therefore offers various opportunities for people to access relevant information.

In 2019, our social media channels grew across the board, including a 46 per cent increase in LinkedIn followers and a 30 per cent increase in twitter followers.

Social media was a central part of our communications strategy during Pharmacology 2019 in Edinburgh. The team launched our first-ever live-streaming on Facebook, and created videos that were cross-posted to our twitter channels. We saw strong participation from members, including those who presented their posters and delivered prize lectures via the platform.

2. EDUCATION AND SKILLS

2018-2022 STRATEGIC OBJECTIVE:

To set the agenda in education and skills

- to support access and career progression
- to support the next generation of learners undertaking education in pharmacology and clinical pharmacology
- to support pharmacology educators in their personal and professional development

The Society's Education team worked tirelessly in 2019 to meet its core objectives, with a range of operational projects designed to ensure that our resources improve connectivity with employers and that we meet the evolving needs of learners and educators.

Enhancing connectivity with employers - our first-ever pharmacology careers exhibition

The Society's inaugural employer-led careers exhibition was held this year, at Pharmacology 2019, demonstrating our commitment to working with employers.

The Society worked closely with Agenda Life Sciences, AstraZeneca, Charles River, Covance, GlaxoSmithKline, IQVIA, Mironid, Quotient, and Richmond Pharmacology to develop the event. We jointly created an exhibition package which enabled them to talk to our members and delegates, to present their unique range of opportunities, and to discuss tips and timelines for job applications. We also displayed a jobs board, sponsored by AstraZeneca, on which all employers posted live job vacancies; this initiative proved popular with delegates.

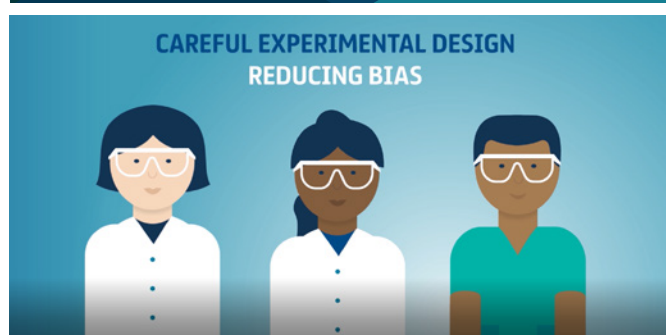
Based on feedback, we have begun developing our plans for an improved career exhibition at Pharmacology 2020. We hope to attract new employers and build on the networking aspect of the careers session, which was highly valued in 2019.

"It was great to be able to reach so many pharmacology undergraduates and early career researchers all interested in a future career in drug discovery. The meeting, Pharmacology 2019, offered a self-selecting audience which is ideal for us. We had a range of conversations about our job postings, recruitment programmes and application tips. It was a busy day for all the companies exhibiting."

Helen Tomkinson, Head of Oncology, AstraZeneca



Careers Exhibition at Pharmacology 19



Developing education and careers resources

Our new free-to-use experimental design resource

The Society has been a long-standing supporter of *in vivo* education and training and we recognise the need to ensure consistency and close skills gaps across the sector.

In recent years, the Society has supported *in vivo* education and training via two key projects – an evaluation of the Integrative Pharmacology Fund (IPF), and developing a curriculum for the use of research animals to support the next generation of researchers.

Our support for animal sciences research continued in 2019 as the Society undertook a new project, to explore digital education content. Working with expert educators we identified a series of core learning modules which have the potential for digital development. These modules could be integrated into many degree programmes in which students are expected to analyse literature and data that has been generated from studies involving animals.

We are proud to have completed the first pilot project in this programme, focusing on the topic of blinding.

The binding resource can be accessed for free here: <https://prescribingskillsassessment.com/Home/WebSignUp/>

The Society is seeking feedback on the content so we can adapt and expand the offering. If you would like to get in touch, please email us at education@bps.ac.uk

"The content is clear, well presented and I believe very relevant to undergraduates on many bioscience degree programmes. I think it is a quality education resource for *in vivo* science subjects. Learners with little prior knowledge will be able to use the resource and will benefit from the learning outcomes as part of their courses."

Dr Liam Bagley, Manchester Metropolitan University.

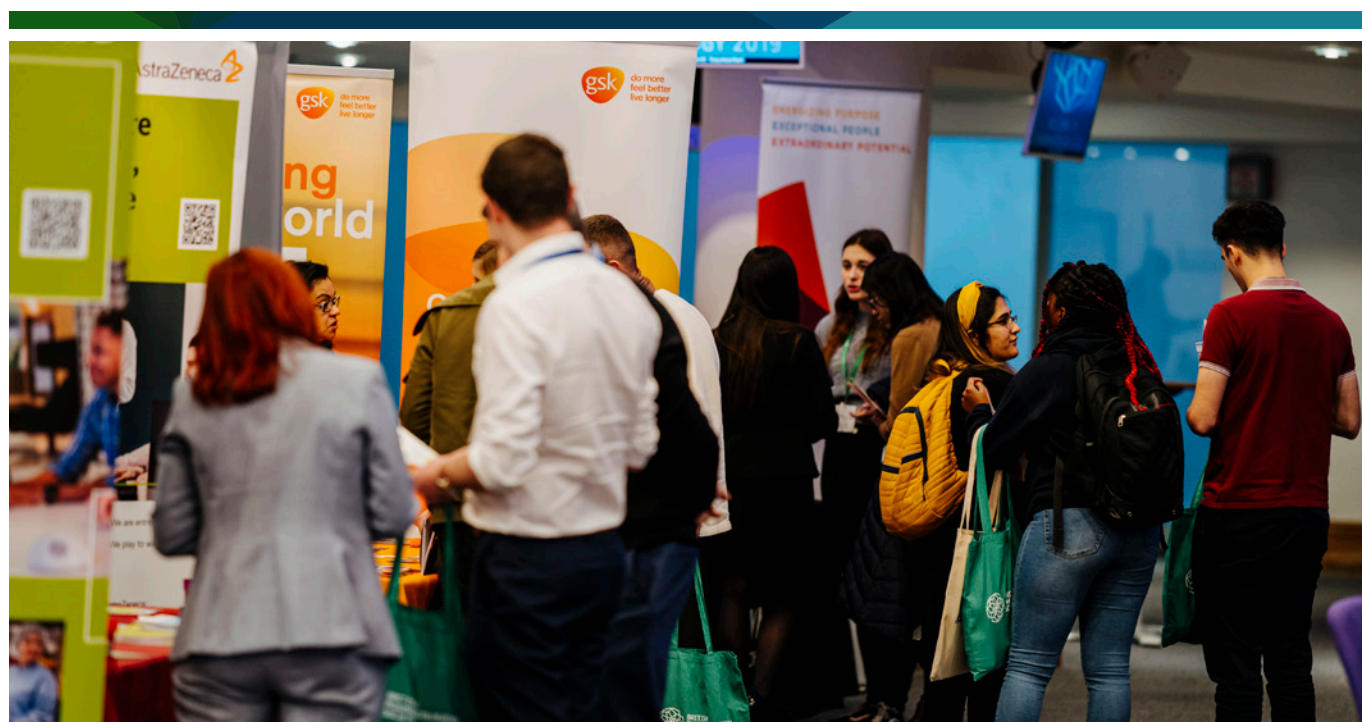
"Robust *in-vivo* experimental design underpins the success of the entire drug development and non-clinical safety testing process and is fundamental to ensuring animal welfare and achieving the 3Rs. We welcome this resource and the support it will give learners to develop a strong understanding of experimental design."

Dr Nathalie Percie du Sert, Head of Experimental Design and Reporting, NC3Rs.

Our careers resources

In 2019, the Education, Engagement and Policy team undertook a review of the Society's careers resources - both online and in print. Using member feedback, we have created a plan to refresh our online and printed materials in 2020. This is to ensure our content supports members' needs, and showcases the breadth of diverse and important opportunities available within pharmacology.

We are looking forward to sharing our new careers content in 2020, and to further supporting our members and partners to promote careers focused on pharmacology skills and knowledge.



Careers Exhibition at Pharmacology 19

3. SUSTAINING A SKILLED WORKFORCE

2018-2022 STRATEGIC OBJECTIVE:

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

The Society runs a comprehensive programme of UK-based training workshops each year, open to national and international delegates. These engaging and interactive events delivered high quality training and education in 2019, and therefore support the Society in delivering on its skilled workforce objective.

Our workshops in 2019

The Society's training workshops, held across the UK, were broadly aimed at postgraduate students, professional scientists, clinicians and educators.

In 2019, we ran the following training workshops:

- i. Experimental Medicine, London, 13th March
- ii. General and Advanced Receptor Theory (GART), Leeds, 4-5th July
- iii. Pharmacology and Drug Discovery, Manchester, 19-20th September

Attendees at the workshops were led through presentations and problems by experts in the field. Delegates got to stretch their level of understanding from fundamental to advanced pharmacological principles. The events, which last between one and two days, minimise the use of presentations in order to better tailor the training needs via a series of interactive tutorials, breakout sessions and social networking opportunities.

Experimental Medicine ran for the first time as a novel workshop, following a successful pilot in 2018. Delegates who attended this London meeting explored core principles of early phase drug development, from the first study in humans through to efficacy assessments in Phase 2 clinical trials. Attendees were also able to network during the day with expert leads from GlaxoSmithKline. The Society received very positive feedback and plans to rerun this workshop in 2020.

"This is the best workshop I have attended since I joined BPS about 9 years ago. It is focused, well thought out with great speakers."

Delegate feedback



Top: L - Delegate, Professor Martyn Mahaut-Smith; R - Workshop lead, Professor Alistair Gib

The Society was pleased that positive feedback ran throughout the events, with 80-90% of delegates on average saying they would recommend a British Pharmacological Society training workshop to a colleague.

"This was a very informative and interesting workshop, this should be mandatory training for anyone new to early phase research, from nurses, CRC's and physicians."

Delegate feedback

4. ADVOCACY AND STRATEGIC LEADERSHIP IN RESEARCH

2018-2022 STRATEGIC OBJECTIVE:

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

The Society collaborated with NHS partners and patients during last year, as well as our members, in order to make substantial progress in advocacy for fundamental and clinical research. A highlight in 2019 was our input to the working group dedicated to developing a new apprenticeship for clinical pharmacology.

Supporting the Clinical Pharmacology Skills Alliance - developing a new apprenticeship

The Society was delighted that approval for the clinical pharmacologist apprenticeship was announced early in 2019, following a drive led by the Clinical Pharmacology Skills Alliance (CPSA) and associated Trailblazer Group. During the remainder of 2019, we worked closely with our CPSA partners to develop the detailed knowledge, skills and behaviours that will underpin the apprenticeship. This strategic work is due to reach completion in 2020.

The apprenticeship is aimed at addressing issues such as the lack of a career pathway, and formal training, and misunderstanding of the role itself, and therefore reflects the government's ambitions of providing, and highlighting, access to new career opportunities.

"Companies are increasingly turning to apprenticeships as a way of securing the skills they need to develop the medicines of the future. I was delighted by the approval for the development of the apprenticeship standard for the role of Clinical Pharmacology Scientist, and I look forward to seeing progress in development of the scheme, which will be a tangible step towards addressing the skills gap."

Dr Sheuli Porkess, Deputy Chief Scientific Officer at the ABPI

Clinical Pharmacology Week 2019

The Society's Speciality Registrar Sub-Committee used this year's Clinical Pharmacology Week to focus on engaging with patients and partners in the NHS via social media. The sub-committee was keen to improve the visibility of clinical pharmacology on social media channels, and took over the NHS twitter account with its 50,000 followers during the week; the account was curated by Professor Jamie Coleman, Professor of Clinical Pharmacology and Medical Education at the University of Birmingham.

The Society attracted 42 new followers to its own twitter account during this initiative and received 590 interactions from other users. The NHS twitter feed also benefited, gaining 45 new followers and receiving 6,841 engagements.



Professor Jamie Coleman

The annual Clinical Pharmacology Week competition for medical students was also a key focus in 2019, with entrants asked to submit abstracts on prescribing; the prize was the opportunity to attend and present at Pharmacology 2019. Following the competition, five students were invited to present at conference, and the winner was invited to attend the welcome dinner and won £250

Prescribing Safety Assessment

The two-hour, 60-item Prescribing Safety Assessment (PSA) celebrated its fifth year in 2019. The exam, which is taken by medical students and foundation doctors, gives participants the opportunity to demonstrate their abilities in real life prescribing, and aims to improve confidence and competence.

In 2019, 7,820 final year UK medical students and 376 first year foundation doctors sat the PSA. In addition six medical schools from the Republic of Ireland (671 students), the University of Malta Medical School (234 students) and a number of overseas campuses of UK medical schools completed the assessment.

We have continued to expand our roster of question authors by training a further 10 authors in 2019, taking the total number to 113. Almost half of those authors (54) attended our two-day Peer Review meeting, where they worked together in seven peer groups based on experience and expertise. A total of 479 items were reviewed, and of these, 426 were accepted as new items for use in future assessments.

In 2019, the board of the Prescribing Safety Assessment commissioned an independent review of the assessment and its processes. The executive noted that the assessment was considered a “high quality process that will undoubtedly contribute to patient safety in the future” and concluded that:

- the examinations were reliable according to multiple measures
- equating suggested the papers were of equivalent difficulty
- most items performed well
- differential attainment between schools needs to be considered going forward
- no notable psychometric issues have been identified

“The Prescribing Safety Assessment is now an established part of the UK undergraduate medical education calendar. The PSA is the first reliable national summative assessment of basic competency in prescribing and supervising the use of medicines, and is a model that is now being replicated elsewhere. Both UK medical education and clinical pharmacology can take pride in having delivered a process that strengthens training in medicines safety and makes an important contribution to delivering better care for NHS patients.”

Professor Simon Maxwell, PSA Medical Director



PSA Assessment Board

5. ADVICE TO POLICY-MAKERS

2018-2022 STRATEGIC OBJECTIVE:

To deliver clear, relevant and accessible advice to policy makers

The Society has a strong reputation as a trusted advisor to policy makers, and demonstrated this in 2019 by responding to a wide range of consultations, participating in policy events, and promoting the expertise of our membership.

As part of our strategy in this area, we also continued our approach of working in collaboration with our partners in the sector. This resulted in the Society contributing to the call for increased research capacity and capability in the NHS, and to helping to break down barriers to legitimate research on controlled drugs.

In total, we responded to sixteen consultations; two of these were developed in collaboration with our partners on the Clinical Pharmacology Skills Alliance.

Consultation and policy advice in 2019: Controlled drugs

The Society responded to the Health and Social Care Select Committee's inquiry on medicinal cannabis, calling for the following:

- greater clarity on which products are now considered to be Schedule 2
- assurances that only products of defined composition and standard are prescribed and/or used in a research setting
- clear prescribing frameworks, safeguards and patient communication regarding cannabis-derived medicinal products

We also noted concerns that Schedule 1 causes barriers to legitimate research, calling for an evidence-based approach to scheduling.

In parallel, the Society continued its collaboration with the Advisory Council on the Misuse of Drugs and others in the research community, aiming to mitigate the negative impact of the 2016 generic definition of synthetic cannabinoids. Part of our approach has been to recommend a change to the generic definition to reduce its scope; this was enforced on 15 November 2019.


Healthy ageing

The UK Government's Industrial Strategy includes increasing health span as a policy objective in its Ageing Society" Grand Challenge – this challenge aims to ensure that by 2035, people are enjoying at least five extra healthy, independent years of life.

The Society submitted evidence to the House of Lords Science and Technology Committee's inquiry on "Ageing: Science, Technology and Healthy Living". Our President, Professor Sir Munir Pirmohamed, gave evidence to the Committee, drawing attention to the role of clinical pharmacologists when it comes to research into the issues facing the increasing elderly population such as appropriate dosing:

"To treat the elderly for the future, we need to think about how to dose them better. Paracelsus, 500 years ago, said that the dose is either the remedy or a poison. That is still true; we need to think about how we dose our elderly. They may require multiple drugs, which is important for treating their diseases, but we need to treat them with appropriate doses as well, which we do not."

Professor Sir Munir Pirmohamed, President, British Pharmacological Society



Value of pharmacology skills

In 2019, the Society also contributed to communications from the The Clinical Pharmacology Skills Alliance (CPSA) on the role of clinical pharmacology skills in addressing challenges of multimorbidity and polypharmacy, which are more common in older patients. In a response to the Health and Social Care Committee inquiry on 'Budget and NHS long-term plan', we noted that the whole workforce must be skilled in the use of medicines, ready to implement pharmacogenomics, and be supported to engage in research; we emphasised the investing in clinical pharmacology could help achieve this.

In addition, in their final report reviewing the Shortage Occupation List (SoL), the Migration Advisory Committee noted evidence of critical clinical pharmacology skills gaps submitted by the CPSA, and subsequently recommended that medical and scientific clinical pharmacology skills should be added to the SoL.

In a joint Academy of Medical Sciences FORUM event with the Association of the British Pharmaceutical Industry, the Society also further explored the challenges faced by the UK as it seeks to grow the clinical research workforce.

This collaboration will lead to a joint report in 2020.

6. SCIENTIFIC PRIORITIES

2018-2022 STRATEGIC OBJECTIVE:

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

To meet this objective, the Society has been taking a macro-view of the pharmacology community, considering the role played by pharmacology in responding to global health challenges and technology developments. In 2018, the BPS decided to create a small horizon-scanning and scientific advisory panel, to hold information discussions on future topics, trends and areas to explore. Our first meeting took place in January of 2019.

The panel

The panel consists of the Society's President, the President-Elect, senior staff members, and a small group of independent advisors. The Society has been delighted to welcome the support of such an impressive and experienced group of industry experts to input into our scientific content strategy. The independent advisors include:



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

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

Sir Menelas Pangalos,
Executive Vice-President,
Research & Development
BioPharmaceuticals,
AstraZenica

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

Focus and outcomes 2019

The panel focuses on identifying emerging trends in the life sciences, which in turn enables the Society to better understand how it can integrate those advances into its activities. The group also acts as a core scientific advisory group for the Society's annual meeting – Pharmacology – and for the 19th World Congress of Basic & Clinical Pharmacology, WCP2022. In addition, the outputs from the panel are used to generate ideas for content for the Society's journals and educational services.

As a result, a number of outcomes were actioned across the Society from the 2019 meeting, including:

- commissioning of content on both AI and pharmacogenomics for Pharmacology 2019, building on similar sessions at Pharmacology 2018
- flagging emerging trends identified by the panel with the WCP2022 International Scientific Committee for consideration and inclusion in the programme
- engaging with data analytics organisations and consultants to consider how the Society might develop analytical tools

7. SUSTAINABLE AND ETHICAL INCOME STREAMS

2018-2022 STRATEGIC OBJECTIVE:

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

The Society is keenly aware that developing income streams will ensure and enhance its ability to meet its strategy to 2022 and beyond. This involves working towards ambitious revenue targets for its commercial arm, BPS Assessment Ltd (BPSA). In turn, this requires continued progression of its digital services and products, ensuring they meet standards of quality expected by the pharmacology community and its membership.

BPS Assessment Ltd.

The Society's commercial venture experienced an exciting and productive second full year of trading in 2019, having commenced trading on 31 March 2017. While commercial challenges were experienced in the year, the pipeline of potential partners grew substantially. We are confident that the brand of BPS Assessment is now established as a recognised provider of high quality education, with a focus on improved patient safety.

Growth and international collaboration:

The platform and the BPSA continued to support delivery of prescribing skills assessments to final year medical and pharmacy students around the world.

Following agreements signed in 2018, the business worked closely with partners in Canada, the USA, Italy,

Denmark, Turkey, Australia, New Zealand, the Netherlands and The UAE. This meant that more than 3,000 students in these countries participated in the assessment in 2019.

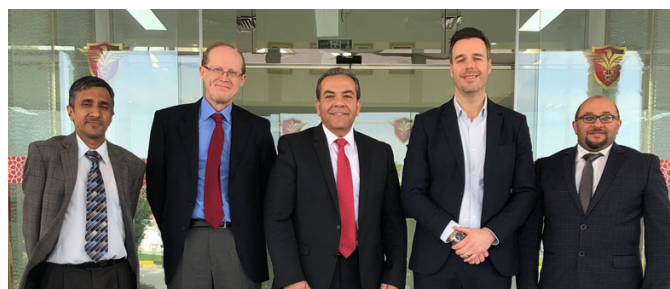
In addition to providing assessments for students, trials of the formative assessment in Odense Hospital in Denmark, and the continued use of the assessment as CPD in the Royal College of Physicians and Surgeons of Canada, proved the value of the tool in keeping practising clinicians' skills up to date.

The Middle East region proved to be an early adopter of the Prescribing Skills Assessment (PSA) and we were delighted that students of Gulf Medical University became the first in the region to sit a paper in early 2020.

Platform development

During 2019, the platform and content on the digital platform evolved to broaden market appeal of the BPSA offering, and now delivers a variety of prescribing and clinical pharmacology education and training across 52 e-learning sessions. A further 147 questions were added to the question bank.

This year also saw the development of the 'De-prescribing Simulator', providing specialist formative assessment to help clinicians deal with the complexities of polypharmacy.



Delegation from Gulf Medical University, UAE



Delegation from King Abdullah Aziz University, Saudi Arabia

In addition, the BPSA team launched an eLearning clinical pharmacology and therapeutics (CPT) course with Geisinger Commonwealth Medical School (USA) which includes 20 eLearning sessions and 2 assessments. They have been running this as an elective since October 2019 and students continue to sign up to support their medical studies.

Other new developments aimed at meeting our customers' needs include:

- providing detailed feedback after every question
- enabling formative learning on a question by question basis
- new question styles
- assessment sections which enable non-PSA-based exams

Prescribing Skills Assessments around the world

Country	School Type	School	Candidates
Australia	Med School	Newcastle	198
Australia	Med School	Sydney	326
Australia	Med School	Deakin	141
Australia	Med School	Tasmania	105
Australia	Med School	Monash	183
Australia	Med School	Western Australia	229
Australia	Med School	New South Wales	276
Australia	Med School	Western Sydney	117
Australia	Med School	Flinders	160
Australia	Med School	Queensland	343
New Zealand	Med School	Otago	291
New Zealand	Med School	Auckland	531
UK	Pharmacy	HEIW	60
Canada	Med School	McMaster	191
Canada	Med School	Schulich	171
Canada	CPD	Royal College	120
Italy	Med School	Bologna	66
USA	Med School	Geisinger	7
Total			3515



Dr Atef Shibl, Al Faisal University and Alex Fox

"We are happy to be leading this initiative especially among colleges of pharmacy in the Middle East region. It is obvious that this will have an impact on the quality of pharmacists in the years to come. Another important outcome of this exercise is that the feedback from such exams will help identify areas of weakness in the curriculum and will be used for continuous quality improvement."

The Dean of The College of Pharmacy, Prof. Sherief Ibrahim Khalifa

8. VALUABLE NETWORKS AT THE HEART OF THE COMMUNITY

2018-2022 STRATEGIC OBJECTIVE:

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

Our commitment to creating a strong global pharmacology community was evident across a number of initiatives in 2019. These initiatives range from implementing a technology solution to support members, to updating our membership strategy to better increase our relevance to the community.

The BPS Community – our new digital platform

In 2019 the Society set out to create an online pharmacology community to bring together our members across the globe in a digital environment. The project has the following vision:

“The BPS Community, and its integrated Networks, is where our members come together online to explore ideas, build supportive relationships, develop collaborations and share research.”

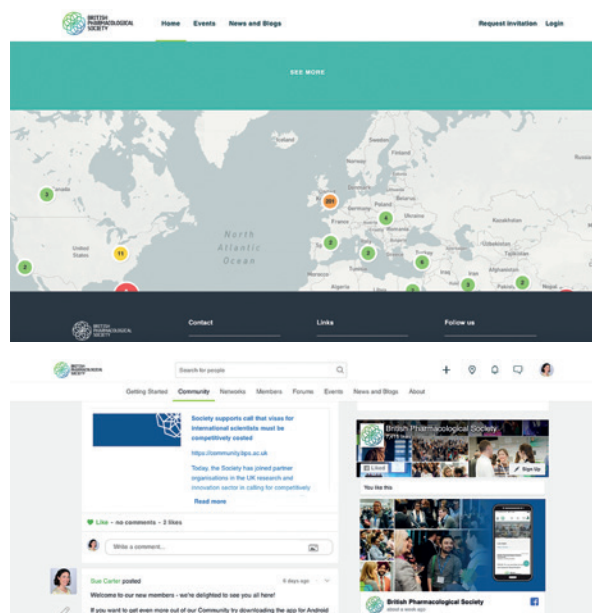
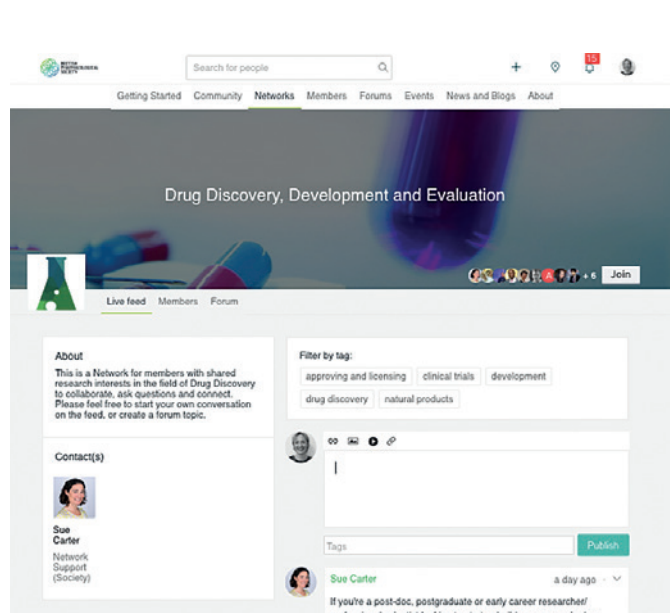
The aims of the project include:

- to enable members to easily identify and collaborate with each other

- to promote the sharing of ideas and best practice across the pharmacology community
- to encourage the growth of the Society by promoting peer-to-peer support, meetings and networking opportunities in the real world and online
- to facilitate communication between all members at all stages of their career

Throughout 2019, the staff team worked with committees and member groups to build and configure a new digital platform for the Community, with software provider Hivebrite selected as the digital platform. The ‘**BPS Community**’ website was successfully launched to a small pilot group of users in December 2019, and this keen group of Society members has been trialling the many features that it provides.

The digital platform, which is now available on desktop and mobile devices, provides many different ways for the global pharmacology community to come together. The features include a live news feed and message board, direct messaging, forums for community-wide discussions, and a number of networks for dedicated areas of interest and expertise.



Enhancing the Ambassador Scheme

The successful and continued growth of the Society's Ambassadors programme in 2019 is another example of our commitment to creating valuable pharmacology networks. The Policy and Public Engagement Committee appointed eight new Ambassadors this year, taking the committee to 17 Ambassadors and three Ambassador Coordinators based around the world. The new Ambassadors, based in the UK, India, Malaysia, Nigeria, Turkey and Uganda, are joining a thriving team that is working hard to bring the pharmacology community together worldwide.

The Ambassadors' busy year included many outreach activities, including:

- demonstrating drug trials in Aberdeen
- promoting pharmacology with undergraduates in Hertfordshire
- introducing younger children in Glasgow to medicines and pharmacology
- taking part in a Summer School in Dublin focused on research into inherited blindness and the communication of science

"My inspiration to become a BPS Ambassador originates from participating in various meetings and public engagement events. I have worked in multiple countries and different environments... this has made me realise how diverse the perspectives within pharmacology can be and how we can benefit from collaborating with each other."

Cristina Perez-Ternero (Queen Mary University of London)

"I observed with keen interest the activities of BPS Ambassadors at pharmacological conferences and I was impressed and captivated. Through them, I also learnt about the activities of the Ambassadorial programme, which involves spreading the frontiers of the knowledge of pharmacology and this also impressed me."

Emmanuel Etuk (Usmanu Danfodiyo University, Nigeria)



AMBASSADORS SCHEME

Early Career Pharmacologists Advisory Group (ECPAG)

Throughout 2019, members of ECPAG worked collaboratively on a vision for early career support and activity at the Society through to 2021. This vision was launched at Pharmacology 2019.

ECPAG Vision: "To work towards having early career pharmacologists' voices represented in all aspects of the pharmacology community – within the Society, academia, industry, related disciplines and the broader community – and to help demonstrate the valuable contributions of early career members to the field."

ECPAG also delivered a successful bootcamp at the annual meeting - focusing on wellbeing and on creating networks to support a productive career. As part of this event, feedback was gathered from the audience which will provide insights for the future into how early career members can be best supported.

Partnering with the European Laboratory Research & Innovation Group

In December, the Society and the European Laboratory Research & Innovation Group (ELRIG) UK and the Society announced the formation of a two-year strategic alliance. The alliance was built on several months of negotiation, research and relationship-building, to ensure the groundwork for a successful partnership.

ELRIG is a not-for-profit scientific organisation, with the mission of providing outstanding scientific content to the life science community through meetings, networking events and support for early career professionals.

The agreement between the Society and ELRIG offers both organisations the opportunity to benefit from each other's scientific communities - to help accelerate scientific exchange and collaboration between industry, academia and clinical, and to help drive the successful discovery and development of new medicines.



Glasgow Science Festival



Inherited Blindness summer school

Since the announcement, Society and ELRIG teams have come together to identify key milestones for the alliance over the next two years. This collaboration has led to the creation of groups to help both communities exchange ideas and information. These focus areas include meetings and events, support and activity for early career members, publications, communications and marketing, and training activity.

“Joining forces will help us improve education, networking and other services available to our communities, allowing us to become more impactful advocates for the life sciences industry.”

Steve Rees, Chairman of ELRIG UK, and VP of Discovery Biology at AstraZeneca

Reflecting the pharmacology community – improving the membership journey

In 2019, the Society decided to make the membership journey for our early career pharmacologists as straightforward as possible, reflecting our objective to increase the relevance of the Society to the broader pharmacological community.

The aim was to simplify the structure that had existed since 2003, which consisted of three membership categories for this early-career group: Undergraduate Membership, Postgraduate Membership and Early Career Membership (formally Associate Membership). We met this need by moving current Postgraduates and Early Career members into a single new ‘Early Career Membership’ category.

In addition, for the first time, we published a table summarising and clarifying membership categories, fees and benefits, and made changes to tailor benefits to different career levels.

9. EQUALITY AND DIVERSITY IN PARTICIPATION AND SUCCESS

2018-2022 STRATEGIC OBJECTIVE:

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

A key pillar to our strategic objective in this area for 2019 was developing recommendations for Equality, Diversity and Inclusion (EDI), following a review in 2018. We have also focused on the wellbeing and professional development of one the Society's most important assets, the team.

Focus on Equality, Diversity and Inclusion

The Society believes that everyone has the right to be treated with dignity and respect and to an environment that helps them thrive and achieve their potential.

A diversity of backgrounds, views, experience and perspectives sets the stage for creativity and innovation - and ultimately, it is the mix of people and exchange of ideas that will help us address the challenges of the future.

In 2019, we received and responded to an external consultancy report, developed for us by *for business sake consulting*. The project was designed to:

- review the Society's current activities, processes, decision making and culture in the context of widening participation and EDI
- assess the Society's performance on EDI, benchmarked against the Science Council and Royal Academy of Engineering's diversity framework¹ and compare our performance to other similar organisations
- develop recommendations and guidance on next steps to improve best practice, and help the Society deliver on its strategic commitments to EDI

The final report, delivered in March 2019, made recommendations for improving and consolidating our approach across our activities. We have integrated these into our 2020 business objectives, and are committed to the following:

- improving our engagement and communication with members
- assessing where we need to improve with regard to our data collection and reporting
- continuing to develop our role in setting standards for inclusive culture at our events and meetings, and in the broader research environment

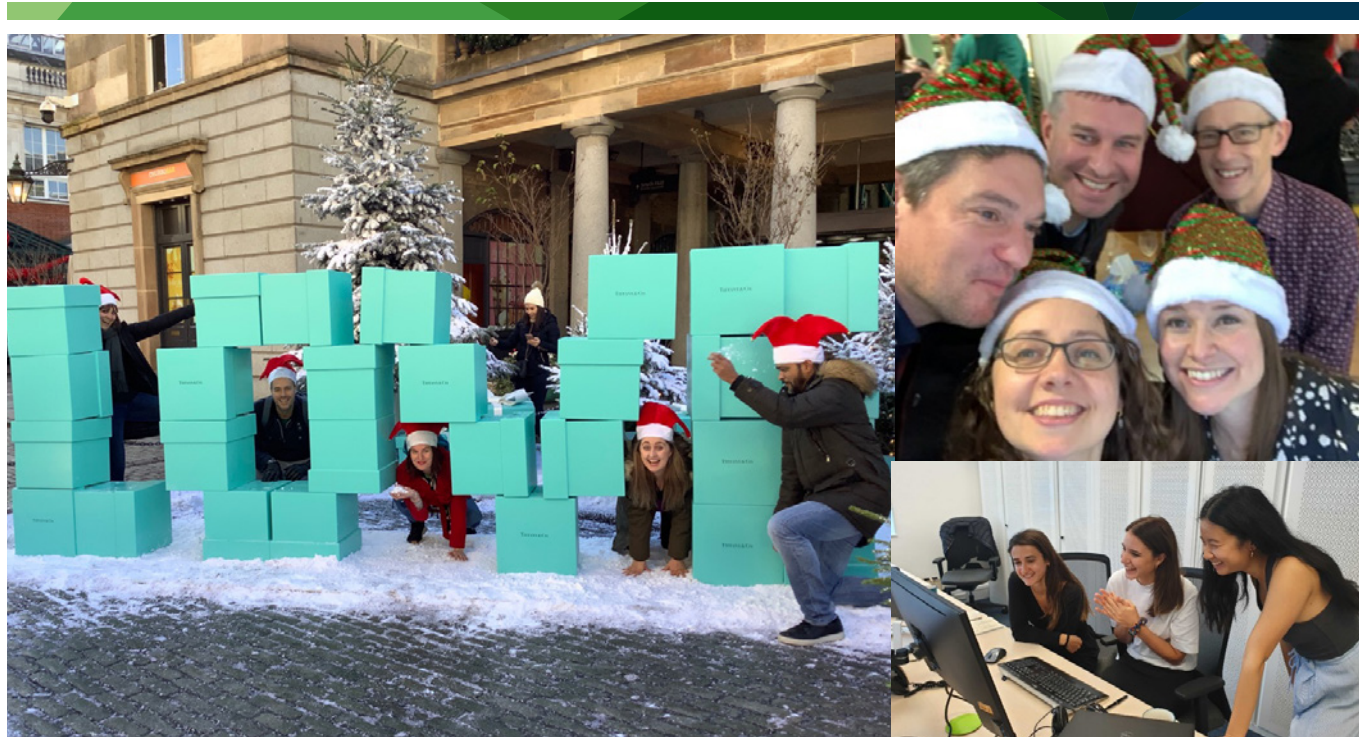
Further, over the course of 2019, the Society analysed the report's recommendations, and consequently created the following initiatives:

- the approval for the appointment of an EDI Trustee, with the term starting in 2020
- the introduction of participant values at Pharmacology 2019 to actively set an inclusive tone; we are now exploring how to embed these across all our activities
- the introduction of a prize that recognises contributions to improving EDI in pharmacology and science
- the delivery of EDI training to all staff, with plans to expand this to Committees and Trustees.

This year, the Society also became a member of the Equality, Diversity and Inclusion in Science and Healthcare (EDIS) Group (<https://edisgroup.org/>), supporting its vision that "everyone should have equal opportunities and access to a successful career within Science or Health, its research and its outcomes."

As part of this commitment, we sponsored a symposium on Inclusive Research & Design on 9 September 2019 (<https://edisgroup.org/edis-symposium-2019/>).

1. Science Council and Royal Academy of Engineering (2016). Diversity Framework. Available online at: <https://sciencecouncil.org/professional-bodies/diversity-equality-and-inclusion/diversity-framework/> (Last accessed August 2019)



Society staff at Christmas celebrations and in the London offices

Our employees

Simply put, we aim to have fun as we work to achieve the Society's strategy, aims and objectives. During 2019, the Society's Human Resource team has worked collaboratively with employees to develop a number of initiatives.

Team values:

Early in the year, we worked together to review and refine the team values which now encompass wellbeing, feedback and professional development.

Staff engagement survey:

We conducted our annual, anonymous staff survey to identify areas of the Society and management that could be improved, and an action plan has been implemented where improvements could be made.

Equality, diversity and inclusion:

We have promoted various national and international awareness days; and an EDI employee group is in place to ensure the Society effectively promotes and demonstrates EDI values.

Professional development:

We have committed to our employees' continuous professional development by providing financial support to employees to obtain qualifications relevant to their

roles. We have also offered professional coaching to all of our employees and we are pleased to report that 65.5% of employees (17 out of 26) undertook one or more training courses during 2019 (almost double that of the previous year) .

Furthermore, we have developed our managers' skills, by ensuring they receive appropriate training. They are supported by a monthly Line Manager Group meeting, which ensures a consistent approach to implementing and applying policies and procedures, identifies training needs, discusses team workloads and reviews the annual objectives.

Wellbeing:

The Society has continued to support and promote flexible working, which is open to everyone on the team.

We provide fruit for employees to promote a healthy diet.

We have also actively promoted the Society's Employee Assistance Program and its associated webinars, which include topics such as resilience in the workplace and managing stress.

Fun!

And finally, the Society, its staff, directors and President, were all committed to making our workplace fun in 2019. Several social activities took place over the year, including planned events, casual meet-ups and the creation of staff clubs, such as the book club.

10.

RESOURCE AND INFRASTRUCTURE

2018-2022 STRATEGIC OBJECTIVE:

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

It is vital that the Society activities are supported by appropriate resources and efficient infrastructure, and so in 2019, we sought to reinforce our technology and our data protection. We also dedicated resources to implementing recommendations from a review of our committee and groups structure.

Enhancing our technology

A number of key advances were made in 2019, to support our staff and our technology:

- in order to support staff in their interaction with members, we updated the look and feel of our customer relations management (CRM) technology; we also trained a number of staff to be 'champions' of the CRM to support others
- work began on a tendering process for our CRM, to ensure our technology remains fit for the future
- substantial work was carried out on implementing a new phone system, which also integrates with our CRM
- a new system was introduced to combine both meeting registration and abstract submission; this technology was selected and implemented in time for Pharmacology 2019
- a sales tracking functionality was established to help staff at BPS Assessment Ltd manage opportunities; this seamlessly processes and records potential sales from initial contact, to eventual sales invoicing and then receipt, and can now be applied to all other relevant Society activities

Protecting the Society's data

Our priority is to ensure the safety of the personal data given to us by our members and by others involved in the Society's activities. To reinforce this commitment in 2019, staff members were supported by data protection policy guidance, which helped them to work within the framework of the General Data Protection Regulation (GDPR). We also introduced the following initiatives:

- the creation of Frequently Asked Questions document to help staff with routine data protection queries
- data protection information posters in the office
- data protection information to be used on staff screensavers
- reference to data protection policies in our employment contracts and job descriptions
- induction on data protection for all new staff members
- the addition of a data protection section on committee agendas, highlighting when personal data is included in papers and the responsibility of committee members to keep it safe

Improving our committee and groups structure

In 2019, as part of our focus on infrastructure and support, the Society also began implementing the recommendations of an external review of committees and groups.

This review was undertaken in 2018, and the development work in 2019 meant that many recommendations were implemented during the year and would be fully operational by the beginning of 2020. Highlights from these changes include:

- bringing decision-making for the Society's publications strategy to Council, with the President Elect as the lead, thus closing down Publications Committee
- moving the work of the Remuneration and Benefits Group into Management Group
- moving policy into Management Group, and renaming the Policy and Public Engagement Committee as 'Engagement Committee'
- moving membership activity from Membership and Awards Committee to Engagement Committee to ensure that engagement with Members is better aligned with public engagement, and the Ambassador Scheme
- the remaining functions of Membership and Awards Committee transferred to a new 'Awards Panel' and renaming the Nominations Group as 'Honours and Fellows Panel'
- establishing the Deputy Vice-President roles, elected by members to serve alongside the current Vice-President in their final year, before taking on the Vice-President role

RECOGNISING ACHIEVEMENTS IN PHARMACOLOGY

Oral Communication Prize: Winner Fulye Argunhan with
Society President Professor Sir Munir Pirmohamed

RECOGNISING ACHIEVEMENTS IN PHARMACOLOGY

Award winners

Our 2019 prize and award winners are detailed below – many congratulations to all of them:

Prizes

BJP Early Career Researcher Prize for Scientific Novelty

Dr Soojin Park, Pusan National University

The BJCP Prize

Warit Ruanglertboon, Flinders University
Tamara van Donge, The University Children's Hospital Basel

Drug Discovery of the Year

The team at Ablynx responsible for the development of Caplacizumab

Lilly Prize

Prof Michael Eddleston, University of Edinburgh

Novartis Prize

Dr Rob Lane, University of Nottingham

Rang Prize

Dr Steve Tucker, University of Aberdeen

Sir James Black Award for Contribution to Drug Discovery

Gary Stephens, Clare Williams and Benjamin Whalley (all University of Reading, Benjamin Whalley also of GW Pharmaceuticals) - Cannabidiol for treatment of epilepsies

Vane Medal

Prof Brian Kobilka, Stanford University

Vogt Prize

Dr Rob Hill, University of Bristol
Dr Krishnaraj Rathod, Queen Mary University of London

Wellcome Gold Medal

Professor Graeme Henderson, University of Bristol

Pharmacology 2019 prizes

Clinical Oral Communication Prize

Miriam Dixon-Zegeye, University College London

Clinical Poster Prize

Savannah Haworth, Newcastle University

Clinical Undergraduate Poster Prize

Tabea Stock, University of Southampton

Dom Spina Prize for Experimental Design and Analysis

Rob Hill, University of Nottingham

Early Career Pharmacologist Poster Prize

Maitiu o Murchu, University College Dublin
Jane Creech, University College Cork

Education Poster Prize

Yeulanda Okunoren-Oyekenu, California Intercontinental University

Flash Poster Prize

Rachael Grime, University of Birmingham
Emily Eccles, Cardiff University
Derek Scott, University of Aberdeen

Late Breaking Abstract Prize

Liam Butler, University of Strathclyde
Grace Flower, King's College London
Rohini Rana, GW Research Ltd.

Medical Student National Abstract Prize

Rish Jain, Brighton and Sussex Medical School

Oral Communication Prize

Evelyn Garlick, University of Birmingham
Fulye Argunhan, King's College London
Olivia Matthews, University of Edinburgh

Poster Prize

Mungo Harvey, University of Liverpool
Jordan Marckel, University of Cincinnati
Andrew Thorne, University of Calgary

Study awards

AJ Clark Studentship

Michael Keith, University of Bristol

BPS & ASCEPT Outstanding Young Investigator Award

Dr Gareth Purvis, University of Oxford

Dr Janet Sluggett, Monash University

Bülbring Award

Dr Blerina Ahmetaj-Shala, Imperial College London

Pickford Award

Dr Aisah Aubdool, Queen Mary University of London

Schachter Award

Yin-Ying Mak, University of Nottingham

Kayleigh Slater, University College Dublin

Vacation Studentship

Hannah Lockington, University of Nottingham

Maitiú ó Murchú, University College Dublin

James Line, University of Liverpool

Hannah Coghlan, University of Liverpool

Pappitha Raja, Queen's University Belfast

Damian Soja, Monash University

Jack Henderson, Robert Gordon University

Franceska Kishta, University of Aberdeen

Lectureships

ASCEPT Lecturer

Professor Rebecca Ritchie, Monash University

Australasian Visitor

Prof Amin Rostami-Hodjegan, University of Manchester

Gary Price Memorial Lecture

Prof Jeff Dalley, University of Cambridge

Grants

Engagement grants

Professor Mandy MacLean, Dr Margaret Cunningham and Dr Zahra Rattray

Strathclyde Institute of Pharmacy and Biomedical Sciences

'Potions and Pharmacology: The science behind Harry Potters potions!'

Teaching grants

Dr Aidan Seeley and Dr Lisa Wallace

Swansea University

'Development of a Novel *in Vivo* Model for Undergraduate Pharmacology Teaching'

Dr James Brown

University of Portsmouth

'The effectiveness of simulations versus laboratory classes in a pharmacology setting for distance learning students'

Dr Leanne Stokes

University of East Anglia

'Releasing a new undergraduate resource for pharmacology teaching: ReceptorCards'

Dr Mintu Nath and Dr Steven Tucker

University of Aberdeen

'A simple, interactive and user-friendly application to conduct dose-response analysis'



Pickford Award: Professor Steve Hill and winner Dr Aisah Aubdool



Medical Student National Abstract Prize: Winner Rish Jain and Professor Sir Munir Pirmohamed



Oral Communication Prize: Winner Fulye Argunhan and Professor Steve Hill

Student prizes

Clinical Undergraduate Prizes

Students nominated by UK universities

Christopher Bick, University of Plymouth
Benedict Blake, University College Cork
Bellamy Brodie, Queen Mary, University of London
Ellen Brunet, University of Birmingham
Oisin Conaty, Royal College of Surgeons in Ireland
James Dugan, University of Oxford
Holly Fleming, University of Brighton
Matthew Gallacher, King's College London
Guy Hardwick, University of East Anglia
Rachel Heyes, University of Nottingham
Kate Johnston, Trinity College Dublin
John Kennedy, Queen's University Belfast
Colin Irving, University of Edinburgh
Lilly Liu, King's College London
Hannah Mallard, University of Exeter
Ellen Mitchell, University of Manchester
Lee Mitchell, University of Edinburgh
Ahmed Mostafa, University of Cambridge
Oscar Newman, Imperial College London
Daniel Phillips, University of Plymouth
Nicola Richards, Newcastle University
Tabea Stock, University of Southampton
Rebecca Symons, Cardiff University
Patrick Williams, Royal College of Surgeons in Ireland

Undergraduate Pharmacology Prizes

Students nominated by UK universities

Chloe Atherton, University of Manchester
Sulaimina Bharwani, University of Edinburgh
Laurine Brouck, University of Strathclyde
Aimee Frazer, University College Dublin
Jose Gonzalez-Prada, University of Cambridge
Ilana Khadhour, Queen Mary University of London
Michael Lanigan, University of Hertfordshire
Georgia Lytra, King's College London
Danial Saraee, Cardiff University
Donald MacIntyre, Glasgow Caledonian University
Jessica O'Brien, University of Bristol
Tyla Ogden, Kingston University
Kourosh Parvizi, Newcastle University
James Roberts, University of Leeds
Arundeeep Singh Sohal, St George's University of London
Hamish Streeter, University of Oxford
Kristen Waight, University of Westminster
Harriet Watt, University of Aberdeen

Student Contribution to Pharmacology

Isobel Burd, University of Portsmouth
Emanuele Carlini, King's College London
Tania Kapoor, Newcastle University
Neringa Karpaviciute, Queen Mary University of London
Naeemah Patel, University of Leeds

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 2019:

- **Professor Maria Belvisi**, AstraZeneca
- **Professor Malcolm Boyce**, Hammersmith Medicines Research
- **Professor Sir Mark Caulfield**, Queen Mary University of London
- **Professor Susanna Hourani**, University of Surrey
- **Professor Peter Jenner**, King's College London
- **Professor Ian Kitchen**, University of Surrey
- **Professor Shuh Narumiya**, Kyoto University
- **Dr Smita Price**, Smita Price Associates
- **Professor Graham Russell**, Universities of Oxford & Sheffield
- **Professor Fiona Watt**, King's College London
- **Dr Roger Whiting**, VM Pharma



Late Breaking Abstract Prize - Dr Niall Hyland and winner Liam Butler



Professor Steve Hill and Professor Malcolm Boyce

Fellowships

Our Fellows have made, and 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 2019:

- **Professor Ian Adcock**, Imperial College London
- **Dr Sharon Cheetham**, RenaSci Consultancy Ltd
- **Dr Soraia Costa**, Universidade de São Paulo
- **Dr David Criddle**, The University of Liverpool
- **Dr James Dear**, University of Edinburgh
- **Dr Nuala Helsby**, University of Auckland
- **Professor Felicity Gavins**, Brunel University
- **Dr Nicholas Holliday**, University of Nottingham
- **Dr Michael Jarvis**, Abbvie, Inc.
- **Dr Janet Maguire**, University of Cambridge
- **Professor Kay Marshall**, University of Manchester
- **Dr Rupert Payne**, University of Bristol
- **Dr Vera Ralevic**, University of Nottingham
- **Dr Sarah Rose**, King's College London
- **Dr David Sciberras**, UCB
- **Dr Patricia Silva**, Fundacao Oswaldo Cruz
- **Professor Dave Singh**, University of Manchester
- **Professor David Thwaites**, Newcastle University
- **Dr Gary Willars**, University of Leicester
- **Professor Ian Wong**, University of Hong Kong

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.

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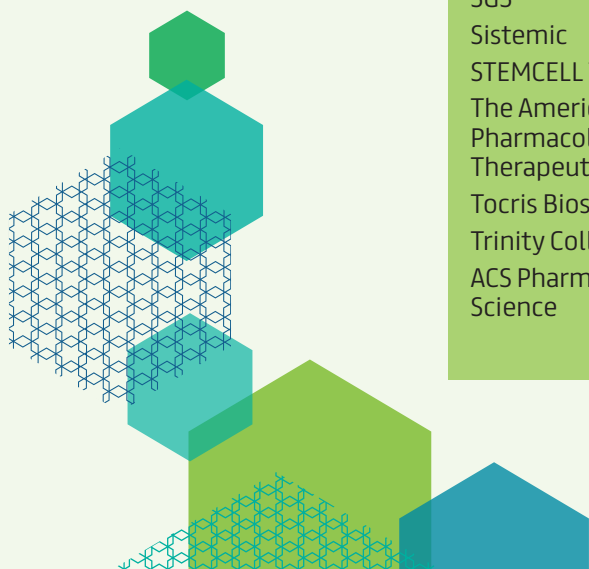
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STEMCELL Technologies
The American Society for Pharmacology and Experimental Therapeutics (ASPET)
Tocris Bioscience
Trinity College Dublin
ACS Pharmacology & Translational Science

Council Members 2019

Stephen Hill
President
Munir Pirmohamed
President-Elect
Robin Plevin
Honorary Treasurer
Rachel Quinn
Appointed Trustee (Policy Impact)
Laura Ajram
Elected Trustee (Early Career Pharmacologist)
Emma Morrison
Elected Trustee (Clinical)
Clare Stanford
Elected Trustee (General)
Malcolm Skingle
Elected Trustee (Industry)
Ian McFadzean
Elected Trustee (Senior Academic Leadership)
Jane Mitchell
Elected Trustee (Research Dissemination)
Charles Gloor
(Resigned 23/09/2019)
Appointed Trustee (Business)

Vice Presidents 2019 (Non Trustees)

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

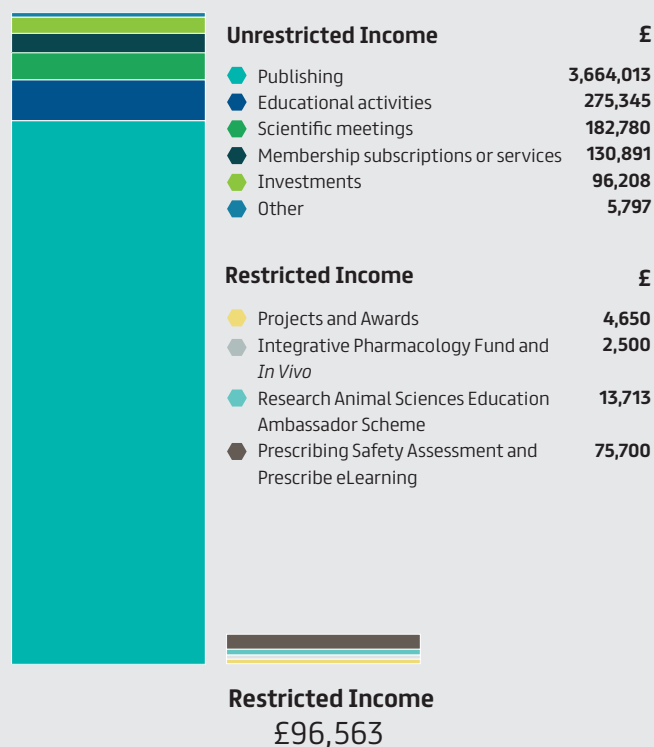


FINANCIALS

Income and expenditure for 2019

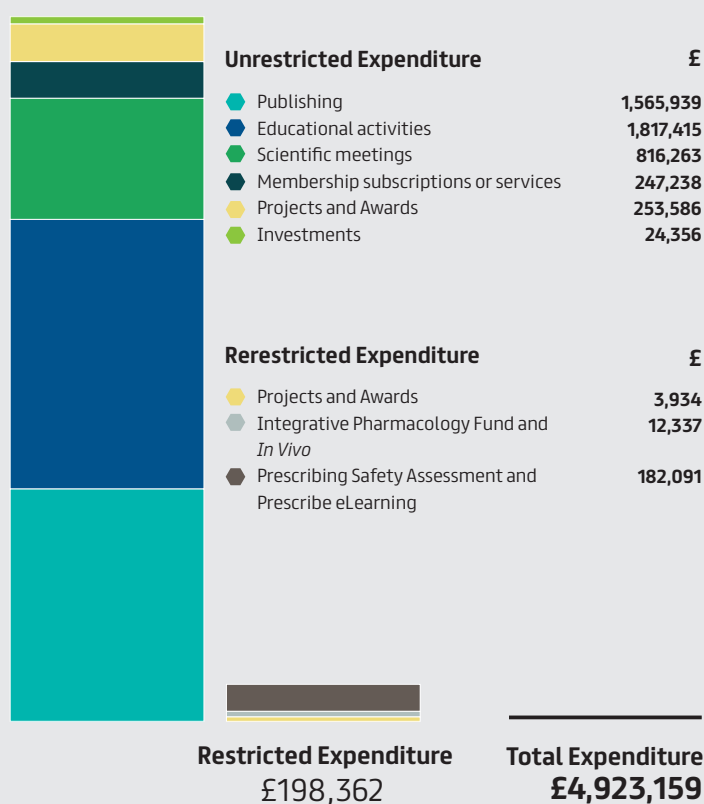
Unrestricted Income

£4,335,034



Unrestricted Expenditure

£4,724,797



Total Expenditure
£4,923,159

You can download a PDF of the Society's financial statements for the year ended 31 December 2019 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

The financial performance reported here is of the “Group”, which means the Society together with its trading subsidiary, BPS Assessment Limited.

The total funds have increased by £32,090 (2018: £1,193,586 decrease). The resulting balance of total funds at 31 December 2019 amounted to £5,650,059 (2018: £5,617,969) of which £5,279,698 (2018: £5,181,986) is unrestricted funds.

Income

- Income for the year totalled £4,451,597 (2018: £4,194,074) which is an increase of 6.1%.
- Importantly, charitable activity income from journal publishing, which is the Society's main income source, has increased by 4.6% to £3,664,013 (2018: £3,504,013) mainly because of the change in the value of UK Sterling compared with the US Dollar during the 2019.
- Member numbers increased by 8.8% to 4,525 (2018: 4,160) and membership subscription income increased by 2.5% to £130,891 (2018: £127,670). The enactment of a membership strategy recommendation to expand Early Career membership to encompass Postgraduate Students whilst reducing the annual subscription from £70 to £30 underpin this. The overall maintenance of membership reflects the Society's longer-term approach to strengthening and growing the discipline of pharmacology.
- Scientific meetings income decreased by £18,662 to £182,780 (2018: £201,442) mainly due to a different programme of focussed meetings.
- Voluntary income totalled £32,150 (2018: £31,000) and is mostly for educational activities.
- Investment income was £22,938 lower at £96,208 (2018: £119,146) after 2018 had seen a greater emphasis by the investment manager to seek dividends and interest.
- In addition, there were significant net gains on investments totalling £503,652 (2018: significant net losses £472,483).

Expenditure

- Expenditure on charitable activities totalled £4,898,803 (2018: £4,885,778) which is a 0.3% increase of £13,025.
- Journal publishing costs decreased by £1,034 to £1,565,938 (2018: £1,566,972); the direct costs have been carefully controlled.
- Expenditure on educational activities at £2,011,844 a 17.4% increase of £297,733 over the previous year (2018: £1,714,111).
- Projects and awards expenditure at £257,520 was a 13.5% increase of £30,573 over the previous year (2018: £226,947).
- Scientific meetings expenditure at £816,263 was a 23.3% decrease of £248,001 over the previous year (2018: £1,064,264).
- Capital expenditure totalled £56,493 (2018: £128,992) of which £52,265 (2018: £62,140) is the development cost of the new online platform that began supporting online assessment services in 2017.

Financial effect of Covid-19 in 2020

The Society has given due consideration to the financial effects of the Covid-19 outbreak, which occurred before the 2019 financial statements were signed. The charity is largely sheltered from the expected effects of this due to its major income streams, however many events that were expected to take place throughout the following financial year have been significantly affected, potentially including the annual conference. It is anticipated that these income streams will fall but will be offset by a fall in associated expenditure.



2020
Looking ahead

LOOKING AHEAD: OUR 2020 OBJECTIVES

We have set out a series objectives for 2020, aligned to our five-year strategy, that will enable the Society to continue progress on reaching its mission and vision by 2022.

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

- To continue to implement recommendations arising from our 2018 review of the Society's performance on, and ambitions for, equality, diversity and inclusion
- To continue to develop our approach to building an inclusive work environment, ensure all employees are treated equally and fairly, and further demonstrate our commitment to the wellbeing of staff and job applicants

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

- To deliver a Society-wide content strategic plan that maximises opportunities for new products and services and increased income
- To develop and enhance engagement with the Society and the discipline
- To create a roadmap for the Society's publishing portfolio for the next 2-3 years

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

- Facilitate adoption of BPS Community and Network technology solutions across the Society membership
- To develop and enhance engagement with the Society and the discipline
- Progress the ELRIG-BPS 2 year strategic partnership 2020 and 2021
- Complete negotiations with external groups who may find a home at the Society

Continue development of sustainable and ethical new income streams

- To build Society-wide online capabilities through platform and content (including metadata) development
- Build an understanding of the role of artificial intelligence and machine learning in supporting innovative content delivery
- To produce enhanced opportunities for responsible commercial partnerships
- To deliver a Society-wide content strategic plan that maximises opportunities for new products and services and increased income
- To ensure sustainability in new and existing BPS trading subsidiaries
- Ensure the BPSA platform has the functionality to support delivery of new and/or repackaged products and services
- Work with existing and new partners to identify options for self-sustaining and/or co-funded business models for the Guide to Pharmacology Database and UK PSA

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

- To develop and enhance engagement with the Society and the discipline
- To build Society-wide online capabilities through platform and content (including metadata) development

To deliver clear, relevant and accessible advice to policy makers

- To develop and enhance engagement with the Society and the discipline

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

- To continue to address UK clinical pharmacology skills gaps through the Clinical Pharmacology Skills Alliance (CPSA)
- To develop and enhance engagement with the Society and the discipline

To set the agenda in education and skills

- To develop and enhance engagement with the Society and the discipline
- To support and deliver high quality education and training, including development of a coordinated learning pathways approach and exploring market potential as appropriate

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

- To underpin our 'knowledge hub' goals by tendering key IT partnerships
- To demonstrate increased value, and greater efficiency within the finances at the BPS

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

- To continue to address UK clinical pharmacology skills gaps through the Clinical Pharmacology Skills Alliance (CPSA)
- To support and deliver high quality education and training, including development of a coordinated learning pathways approach and exploring market potential as appropriate

Our additional strategic objective for 2020 and beyond, following the COVID-19 outbreak:

To Implement and monitor a comprehensive and clear business continuity plan, ensuring continuation of core services during COVID-19 pandemic and recovery

- Develop and communicate a people plan
- Develop events and meetings that adhere to social distancing policies
- Provide relevant and timely advice and comment on medicines use and development in relation to COVID-19



Prize giving during the Annual Conference dinner.





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.

British Pharmacological Society

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