Science policy and our database of expertise

Science policy can often seem like a rather obscure part of the scientific landscape. However, widespread understanding and engagement within the science community are vital as it relies on a steady supply of scientific evidence and advice.

Catherine Ball
(Science Policy Officer)

So, what exactly is science policy? It involves the combination of scientific expertise with knowledge and understanding of government and policy-making, decision making and scrutiny processes to ensure that legislation and policy have a sound evidence base. Those who work in science policy act between research scientists and policy-makers and aim to identify and shuttle important and relevant information between the two communities. To this end, an element of translation is involved; it is vital that the information is received using language and in a format that is understandable by the target audience.

Science policy work can take both reactive and proactive approaches. Reactive work often involves responding to consultations issued from the Government and other organizations and serves to ensure that vital scientific information and the opinions of the scientific community are heard. The evidence provided is then used to inform policy decisions. Proactive policy work involves highlighting key issues and striving to ensure that these are placed on and/or promoted up policy-makers' agendas.

At the Biochemical Society, the ethos behind our science policy work is most certainly collaboration. We work closely with the Society of Biology and also support a number of other organizations, including the Campaign for Science and Engineering (CaSE), Sense About Science, the Athena SWAN charter, the Science Media Centre and the British Science Association, to further our policy work and promote our policy aims.

Also crucial to our efforts is our Database of Expertise. As mentioned previously, science policy work relies on the input of those with expert knowledge and 'on the job' perspectives. This ensures that the information we present to policy-makers is as relevant and accurate as possible. To this end, the Biochemical Society utilizes the Database of Expertise, a compendium of members who are willing to be approached when advice is required by our policy team. The information received is invaluable and informs the majority of our consultation responses as well as our media work.

The option to sign-up for the Society's Database of Expertise is now available via the membership forms and the list of members involved and their areas of expertise is now held on our membership database. Therefore, if you are interested in being involved in our science policy work, you can sign up right now by logging into the Members' Area of the website www.biochemistry.org/MembersArea.aspx and reviewing your details under 'Manage Membership'. You will be asked to confirm that you would like to be part of the database and to provide up to three areas of expertise. Alternatively, you can contact our Science Policy Officer Dr Catherine Ball (catherine.ball@biochemistry.org) for further information.

The database is used for no other purpose than to seek policy advice and contact will always be by email. When an issue on which we require information or opinion arises you will be contacted with the latest developments, some background information and key questions where relevant.

The Database of Expertise is an invaluable resource to us and allows us to be truly representative of the opinions of our membership. We always endeavour to take the opinions and feedback offered by the Database of Expertise on board. Hence I would strongly urge you to become involved and sign up to this initiative.

We look forward to working with many more of our membership via our Database of Expertise in the future! ■

The Drug Discovery Pathways Group and the Exchange Fellowship Workshop

Catherine Ball (Science Policy Officer)

Drug discovery is a complicated business. Often depicted as a sequence of linear steps including target identification, target validation, lead identification and optimization as well as pre-clinical and clinical studies, it's a lengthy process and an expensive and labour-intensive one too; it has been estimated that it costs more than £1 billion to bring a drug to the market.

However, drug discovery in the UK is changing. Traditionally, each step, and indeed each contributing discipline, was quite separate. Biologists worked in the early stages on target identification and validation, medicinal chemists worked on lead discovery and optimization, and toxicologists and pharmacologists worked on safety and drug metabolism. This is before the involvement of clinicians in the clinical trials stages. Each team of scientists worked quite independently on their individual section of the chain.

But the pharmaceutical landscape has undergone considerable change in the UK in the last 5 years or so. Once dominated by big multinational pharma companies, an ecosystem of collaborative research partners is now emerging. This encompasses small and large pharma, SMEs, academia, health charities and the NHS, with each contributing complementary skills and expertise. As such, interdisciplinarity and researcher mobility across the academic–industry divide are becoming increasingly important.

The Biochemical Society is a member of the Drug Discovery Pathways Group (DDPG), a consortium of learned societies who have come together to address the changing drug discovery landscape in the UK. Together with the Society of Biology, the Royal Society of Chemistry (RSC), the Academy of Medical Sciences and the British Pharmacological Society, the Society is working to ensure that current and future generations of drug discovery scientists are appropriately equipped to thrive in the UK's rapidly moving pharmaceutical R&D sector. We wish to establish a single representative voice on key issues and to develop solutions to meet the needs of the wider medicines research community.

As part of this, the group acknowledges that it has become increasingly important for researchers to be able to move freely between disciplines and sectors in order to build networks and drive forward medicines research as well as to enable personal career development. The group believes that it is vital that key skills are not lost and the DDPG recognizes that there is a window of opportunity to retain and develop world class talent.

Recently, the DDPG supported an Exchange Fellowship workshop organized by the RSC. The aim of the 2-day event was to bring together researchers working in a range of disciplines across the drug discovery spectrum to share their scientific expertise, knowledge of drug discovery and networks and skills. The participants were biologists, chemists and clinicians currently engaged in exchange fellowship schemes. Also attending the workshop were senior drug discovery experts drawn from major pharmaceutical companies who were on hand to provide mentorship as well outline opportunities for workshop participants to benefit from training programmes delivered within industry.

The event, held in the esteemed surroundings of the Royal Society's Chicheley Hall near Milton Keynes, involved talks by senior drug discovery experts, a speed networking session and seminars on emerging areas of drug discovery. The challenges faced by drug discovery researchers today were highlighted and discussed throughout the sessions. Some such challenges identified were: attrition, duplication and redundancy, the fragmented drug discovery model and skills. It was widely acknowledged that mobile careers are 'the norm' in drug discovery R&D in the UK now and that it is vital to 'take risks and take opportunities'.

The major focus of the workshop was a drug discovery challenge. The participants were split into groups of four or five which contained a mix of expertise and were given a cross-disciplinary drug discovery problem. Along with the support of industry mentors, the teams were charged with coming up with a solution to the problem and presenting this to a panel of experienced drug discovery scientists at the end of the workshop. The winning team was awarded a prize of £3000 and there were two runners-up prizes of £1000, one of which was sponsored by the *Biochemical Journal*.

Overall, the event was certainly a success. Many of the participants came away feeling they had gained a new perspective and made new contacts and networks. One commented, "being teamed up with people from diverse backgrounds means we're all approaching the problem from a different perspective, it's opened up solutions I wouldn't have thought of before". Another stated, "the workshop has highlighted the gaps in my knowledge and the diversity that modern science encompasses".

The DDPG will continue to promote cross-discipline collaboration between industry and academia to enable the translation of biomedical opportunities into safe and effective medicines. Watch this space for the next sponsored event! ■