



WORDS  
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# Removing boundaries

Enabling the movement of researchers across disciplines and the industry-academia interface

The downsizing of Big Pharma in the UK in recent years should not mean a loss in global competitiveness for a country that has led the world in drug discovery. Over the past two years the RSC has been working on a Healthcare Innovation Action Plan (*RSC News*, September 2011 and May 2012) to help ensure the UK's world class drug discovery expertise is brought to bear on translating fundamental scientific discoveries into safe and effective medicines that ultimately make a real difference to patients' lives. "Much of the early effort was about communicating the critical role chemists play at all stages of drug discovery, from selection of the target, through to invention of the medicine and helping to inform the design of clinical trials," says David Fox, science associate at the RSC and an ex-senior director at Pfizer, UK.

These plans were initiated by Simon Campbell CBE, a past president of the RSC and ex-senior vice president of Worldwide Discovery at Pfizer, and taken forward with help from Fox. Until the closures started happening in large Pharma, the link between the RSC and the medicinal chemistry community was not particularly strong. However, the recent site closures have highlighted that the RSC can play in promoting the importance of industry sectors as well as supporting individuals within those sectors.

## A common message

Campbell, a former medicinal chemist himself, was keen to champion the cause of these displaced chemists. "Drug discovery is one of the UK's global research strengths, and it is currently at risk," says Fox.





“The RSC is rightly at the forefront of the efforts to ensure this critical skillset is not irrevocably lost.”

“The roadmap for chemical sciences was launched in 2009 by the RSC and with healthcare emerging as a key theme, there was a clear opportunity to take forward this strategic imperative,” says Fox. Since then, the RSC has worked closely with other learned societies in the life sciences area (notably Society of Biology, British Pharmacological Society, Biochemical Society and the Academy of Medical Science) to formulate common messages and work streams in the area of life sciences and drug discovery. “The group, which we have called the Drug Discovery Pathways Group (DDPG) has been a very effective way of developing a single voice and reaching a much wider audience. Recently the DDPG met with Sir John Bell, the government’s life sciences champion, to discuss aspects of the Healthcare Innovation plan.”

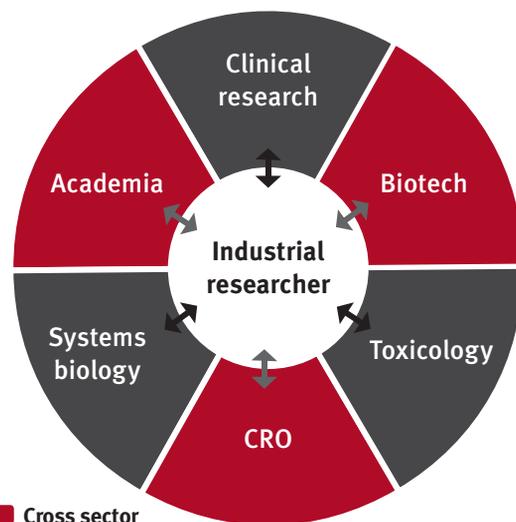
“We believe such centres will not only help contribute to the pipeline of new medicines in key areas of medical need but will also have the critical mass of expertise to train the next generation of drug discovery scientists.”

Collective consultations such as this have been important in helping to deliver on our promises to the community. For example, the RSC has been advocating the creation of a network of Therapeutic Centres of Excellence where drug discovery experts are embedded in academic groups that work alongside disease specialists and clinicians and partner with industry, to ensure there is a clear, coherent line of sight from idea through to the patient.

“We believe such centres will not only help contribute to the pipeline of new medicines in key areas of medical need, but will also have the critical mass of expertise to train the next generation of drug discovery scientists,” Fox adds. While such centres are unlikely to be funded through government schemes, there is a clear role for the RSC to work with the community to help identify potential opportunities as well as respond to calls for proposals that might arise from other sources. Notably there are currently calls for drug discovery centres in antibacterials and prostate cancer, funded by the EU Innovative Medicines Initiative (8th call) and Prostate Cancer UK in association with the Movember Foundation\* respectively. The RSC is actively engaged with groups who are looking to pull together proposals for these opportunities.

### Skills development and “permeability”

Reflecting on the meeting with Sir John Bell, Fox adds, “A key message that emerged was that we need to focus much of our effort on developing the networks, skills and cross-discipline understanding within the life sciences community to help groups identify partnership opportunities.” While a number of schemes exist to support such permeability – the movement of researchers across disciplines and sectors – there is a great deal that the RSC can do alongside the other learned societies to help find funding schemes and to build a research



■ Cross sector  
■ Cross discipline

environment where such mobility is encouraged and valued. Fox told *RSC News*, “This is a key piece of work that the RSC will be working on over the next year with a view to developing specific exchange programmes that address this issue.”

Another major area of focus for the DDPG will be Continuing Professional Development (CPD) for life sciences where the RSC can build upon the strong foundations provided by the Chartered Chemist (CChem) scheme (see p12). Fox is keen to highlight the range of knowledge and skills that chemists working in the field of drug discovery need to be able to draw upon. “Discipline excellence is as important as ever, but it is also important researchers have a working knowledge of adjacent disciplines (for example: toxicology, biochemistry) as well as the behaviours to be able to function effectively in teams that may span across geographical, cultural and organisational boundaries.”

Also a workshop on target validation will be hosted by the RSC in March, in partnership with the BPS – this will bring researchers together to learn about the latest advances in this key area of early drug discovery as well as to explore opportunities for precompetitive collaboration. Working together with the group of learned societies and drawing upon existing schemes such as EMTRAIN, the Europe-wide platform for CPD in medicines research, the RSC will play an active part in helping chemists working in drug discovery to make the most of the opportunities that will emerge over the coming years, to make a meaningful and lasting contribution to patients’ lives.

\* The Movember Foundation is a charity organisation that raises money to support prostate and testicular cancer initiatives.



David Fox  
Science Associate, RSC

### Get Involved

- January 2013: Spinks Symposium: Regenerative Medicine in London <http://rsc.li/spinks-2013>
- April 2013: Joint BPS-RSC Target Validation Workshop in London
- June 2013: Medicinal Chemistry Residential School at Loughborough University <http://rsc.li/med-chem-school-13>