Science Question Time: the Future of Drugs

As the UK faces up to increasing challenges in the global pharmaceutical industry, the Biochemical Society co-hosted an event discussing the changing landscape with the public.

Conveniently doing its bit for the theme of this issue of The Biochemist, on October 25 the Science Policy arm of the Biochemical Society co-ran ‘Science Question Time: The Future of Drugs’ at the inaugural London Science Festival. ‘SciQT’, as it has become known colloquially, celebrated the biggest attendance of its short history (this was the fifth event since February 2011), attracting around 300 individuals. Members of the public, students, practising scientists and representatives of the industrial and not-for-profit sectors gathered at Guy’s Campus, King’s College London, and were treated to a fascinating 90-minute programme, with wide-ranging discussions about the future of pharmaceutical policy.

The event was chaired by King’s Professor Clive Page, who was joined by a distinguished panel of Professor David Fox (currently at the Royal Society of Chemistry, but representing the industry perspective), James Peach (who directs Cancer Research UK’s stratified medicine programme), Becky Purvis (Head of Policy at the Association for Medical Research Charities) and Dr Ilina Singh (bioethics researcher at the London School of Economics and Political Science). Professor Page – renowned pharmacologist and biotechnology consultant and regular speaker at the Cheltenham Science Festival – chaired the session expertly, drawing on the detailed and varied expertise held by the panel to answer all of the questions that came their way. Some of the key points covered are summarized in the box on the next page. Speaking to panellists and attendees after the event, it was clear that the key points which really resonated were that we need more openness and collaboration, disincentives for producing ‘me too’ drugs (which may offer only marginally better efficacy for much greater cost) and less failure, which might be achieved through the stratification of drugs (targeting compounds to subsets of patient cohorts, having rigorously tested them in people of varying ages and ethnicities, and not rejecting them if they fail to work across the entire patient spectrum). Unfortunately, there remains a hurdle of great significance: the lack of concrete short-term incentives needed in order for risk-averse commercial companies to embrace these principles. And, although the arguments and technologies may evolve, this stumbling block remains a constant.

International collaboration

The discussion in the shadow of the Shard tapped into the ongoing debate about how the UK can remain competitive in the face of pharmaceutical competition from abroad and how we can make the most of new partnerships, such as with the burgeoning Chinese industry. However, as Research Fortnight has reported, the UK is not currently an automatic choice for collaborators from outside Europe. Furthermore, despite recent reports on
the quality and output of UK science (notably from Thomson Reuters and Elsevier) having a positive overall message, these have also highlighted a relatively weak culture regarding academics collaborating with industry. By implication, this suggests an innovation gap in applied research, which is precisely where some commentators have identified the need for a strong reputation in order to attract collaborators in the developing world. As Kumar Bhattacharyya said at the ‘Globalisation: the Future of Research Institutions’ conference in November, the UK must better establish a reputation in this area, as this is where emerging markets are most likely to invest their resources.

In this changing environment for UK-based medicinal chemistry, the challenges have led the Royal Society of Chemistry (RSC) to develop a Healthcare Innovation Action Plan, on which the Biochemical Society was one of numerous bodies consulted. The Action Plan sets out a framework for retaining our competitiveness, based on the principle that there are still many opportunities in small molecule development and that we need research to capitalize on our strengths – including the wealth of talent in the UK – to be successful. Although at an early stage, the RSC proposes the development of a national strategy for medicines and establishment of a network of therapeutic centres of excellence. At a recent workshop, Dr Catherine Tralau-Stewart, Head of the Drug Discovery Programme at Imperial College's Drug Discovery Centre, echoed what the audience heard at SciQT: that patient cohort targeting is “the future of drugs”.

The Future of Science Question Time

SciQT will continue throughout 2012, debating the key questions in policy across the sciences. The Society works closely with collaborators to deliver SciQT events which have continued appeal for the science community and the public. Imran Khan, Director of the Campaign for Science and Engineering, one of the co-organizers said, “Science Question Time really came about because we wanted to make sure scientists and researchers had the opportunity to take part directly in discussions around science policy, and to directly quiz decision-makers and influencers. The Biochemical Society is a natural partner because it’s such an active and engaged learned society. Science Question Time has really taken off in the policy community and there is a significant demand for more events.”

Get involved

If you have any suggestions for future topics or locations, please contact me at James.Lush@Biochemistry.org. You can see an archive of SciQTs we have organized, with links to recordings of these events (as well as some of our other science policy events) on our website. Visit www.biochemistry.org/SciencePolicy/Events for full listings, details and related news, and please get in touch if you have ideas for other events you think would be of value. Are we missing anything?

A selection of Twitter messages from attendees as the event took place

Twitter is becoming a powerful tool in conferences and events, with people tagging their messages with ‘hashtags’ – in this case #SciQT, allowing others to follow this and conversation to flow online as well as among the panel. The ‘handles’ e.g. ‘@LouWoodley’ represent individual users’ usernames.

- The challenges we’re facing in drug development require us to collaborate – bring scientists in industry together - David Fox #SciQT – @LouWoodley
- #SciQT a new model for healthcare innovation needed that combines the right “carrots” with the need for financial reimbursement @RSC_Roadmap
- Did not know that--75 percent of drugs in phase 2 trials fail. Q on how to speed up the process for new drugs and make more efficient #SciQT @kjbbarnes
- #SciQT David Fox - get it to the market cheaply and quickly, and fail less often. One solution is stratification @RSC_Roadmap
- Excellent point about compounds failing Phase 2. Do they ever reappear? Is there any value in buying the IP at nominal value #SciQT @RoyMSci
- People less worried than expected when asked about race/ethnicity stratification issues of personalised medicine -Singh #SciQT @LouWoodley
- Personalised medicine requires clinical trials to be conducted outside of US and EU - atm trials cater mainly for certain popns only #SciQT @anabanana_1000
- #SciQT intriguing pt from James Peach. Stop pharma from making me2 drugs, only approve ‘dramatic difference’ ones - change incentives? @ImranKhan
- David Fox making the great point that no-one discovers drugs on their own - lots of disciplines need to work together #SciQT @louismarston
- Important Q from Chair: How can/can industry move towards prevention when it can’t make money from it? #SciQT @KatGoat
- “Will taking cognitive enhancers for work become the norm or compulsory in the future” - Prof Clive Page #SciQT #LSF11 <-- we hope not! :-O @LondonSciFest
- Did not know that either: Ilina Singh -- age of cognitive enhancing drugs already with us: students, surgeons, military, mountaineers #SciQT @kjbbarnes
- Clive ends with a good point on serendipity and drug discovery - future of drugs finding new applications for old and existing drugs? #SciQT @josephclift

References

1. Research Fortnight, Issue 379, 16 November 2011