

## DINNER/DISCUSSION SUMMARY

### The future prospects for the biotechnology industry in the UK

Held at The Royal Society on Wednesday 8<sup>th</sup> June, 2005

We are grateful to the following for support for this meeting:  
**Association of British Pharmaceutical Industries (ABPI)**  
**South East England Development Agency (SEEDA)**

**Chair:**           **The Rt Hon the Lord Jenkin of Roding**  
Chairman, The Foundation for Science and Technology

**Speakers:**   **Dr Doug Yarrow**  
Director, Corporate Science Group, Biotechnology and Biological Sciences Research Council  
**Dr Martin Wales**  
Senior Analyst, European Biotechnology/Medical Technology, Equity Research, UBS  
**Dr David Chiswell**  
Chair, BioIndustry Association (BIA)  
**Dr Andy Richards**  
Serial Biotechnology Entrepreneur and Business Angel

The invited speakers identified factors which stood in the way of turning innovations in biotechnology into commercial applications in the UK, but on the whole took a positive view of the prospects for the future.

In discussion it was observed that they had focussed on the pharmaceutical applications of biotechnology and the processes by which good science could be translated into a licensed medicinal product. In fact there were other uses for biotechnology, notably for agrochemical and food products. The biotechnology sector tended to be defined in financial terms, and it was difficult to finance biotechnology outside the field of health care.

Given the strength of stem cell research in the UK there was surprise that Dr Richards had said in his talk that he would not invest in commercial applications in this area. The obstacle was regulatory uncertainty. It was hard to see what package could get approval. If the UK was leading in an area of science it needed also to be in the lead in regulation. Companies were succeeding in getting research money from the BBSRC and other funders, but bringing products to market was another matter. Similarly, Syngenta had moved to the US because the regulatory environment for GM crops was not helpful in the UK.

It was asked how far the current difficulties in financing biotechnology developments could be attributed to the collapse of the British Biotechnology Group. This had certainly cast a shadow, but lessons had been learned about the need for disclosure of financially relevant information and many of those who got their fingers burned were probably no longer in the industry now. The soaring prosperity of Internet-based companies in spite of the pricking of the dot.com bubble was further evidence that the markets could recover following a collapse.

Dr Chiswell's talk drew attention to the advantages enjoyed by biotechnology firms in the US, with substantial Government funding for research, a single regulatory system and a large domestic market. In discussion a speaker observed that it had been accepted for many years that US pharmaceutical companies spent a significant part of their research budgets in the UK. It was hard to see why the same should not happen in biotechnology. The answer might be to collaborate more with American companies. Some might be drawn to invest in research in the UK for the sake of tax breaks, but for others the attraction was the quality of the science. One view was that US investors did invest in the UK, in the public markets, but that local investors and local venture capitalists were needed to take the lead. Another speaker maintained that the UK had had a sophisticated venture capital

system which froze out US investors, but that that system was now broken. It was time for those engaged in technology transfer to seek out investors in the US and continental Europe.

There was criticism of the received model of a biotechnology industry that had to survive on its own, relying on venture capital followed by an initial public offering. It was argued that it would be more useful to pursue links between new and established companies. There was innovation in both big and small companies, and the latter needed to do deals with the former (though they would do better deals if they were well-financed). There was a continuum between biotechnology and pharmaceuticals, and it would be better to think in terms of a single biopharmaceutical sector. One speaker took the view that there was an outdated model in the UK of biotechnology companies producing tools for the pharmaceutical industry. In the US biotechnology companies had built real businesses by selling their own products.

One speaker was puzzled that all agreed that UK research was good (in spite of the dual funding system!), yet it seemed very difficult to get investment into spinout companies trying to turn the science into products. One answer offered was that funders invested not in quality of science but in managers who could turn it into something. In the speaker's view the Cambridge cluster was not driven by the science but by the entrepreneurial teams who knew how to attract investment and pick up good science. Good managers were recycled. Another speaker observed that when two or three people had a good idea they tended to produce a business plan which spent 19 pages talking about the technology and one page discussing how to make money out of it, instead of the other way round.

One participant focussed on the problem of raising money to take a patented idea beyond the initial stage. He had been lucky in attracting the interest of a multinational which took over, but otherwise his invention would have foundered. In response, however, it was said that there had been a revolution in recent years in the availability of funding in universities to lubricate the transition from the research laboratory to a commercial application.

Animal rights extremism was identified as an obstacle both to investment and to recruiting young people into the biological sciences. One

speaker took the view that it had been a major disincentive to companies considering getting involved in the biotechnology sector, even as suppliers or customers, because individuals had been personally at risk. Now there had been good progress, with new legislation and more positive attitudes on the part of the police (though more money from the Home Office was said to be needed). In order to reach young people it was necessary to go into the schools and engage in the debate at an early stage. Animal extremism played well to young people, so it was necessary to get into the argument. The debate over GM crops was described as an object lesson in how not to do it. One speaker had had the experience of talking to the pupils in a big community school about medical research and the use of animals and turning round their views on animal experimentation.

Twenty five years after the publication of the Spinks Report, which offered a glowing picture of how new technology would bring prosperity to the UK and make the rest of the world depend on it, a speaker wondered whether the confidence which some now expressed in the future of biotechnology in the UK represented similar euphoria. One response was that the biotechnology industry was already there, but the question was whether the UK would be a player. Another speaker wondered, given the strength of the science base, who could make it work if it could not be done in the UK. Another view was that the UK biotechnology sector was second only to the US, which was not bad, and that it was nanotechnology rather than biotechnology which was currently the subject of unrealistic euphoria.

Jeff Gill

The presentations are available on our web site [www.foundation.org.uk](http://www.foundation.org.uk)

Background information:  
[www.bbsrc.ac.uk/business/biu/biosci\\_innov.pdf](http://www.bbsrc.ac.uk/business/biu/biosci_innov.pdf)  
[www.bioindustry.org/bigtreport](http://www.bioindustry.org/bigtreport)  
[www.abpi.org.uk](http://www.abpi.org.uk)  
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