



Delivering Excellence with Impact

The 2008-2011 Delivery Plan of the Biotechnology and Biological Sciences Research Council (BBSRC)

● BBSRC's budget will increase from £386M to £471M by 2010-2011. Our top priority is to help maintain the UK's world-leading position in bioscience research by providing the best possible environment in which excellence can flourish and be harnessed for economic and social benefits. To do this, we will orchestrate several discrete factors – including support for strategically-driven and for 'blue skies' science; training; provision of infrastructure and unique facilities; and promotion of knowledge transfer and innovation. This will provide the mix of stability, redirection and flexibility necessary to address the scientific and wider social challenges facing the biosciences.

At a glance

- Further investment in systems/predictive biology (including research tools and resources)
- Annual increase for responsive mode funding
- More money for:
 - research relevant to industry
 - PhD Studentships, Fellowships
 - Research and Technology Clubs
 - Research relevant to: renewable bioenergy, environmental change, biology of ageing and nanotechnology, diet and health
- Capital commitments of £200M, focussing on animal health and welfare



A healthy and competitive bioscience research base

Our overall support for investigator-led research will rise to around £237M by 2010-2011. We are increasing funding by a third, to £62M, for fellowships, research training and skills development.

Research funding

We will increase our responsive mode funding for the best research ideas across our remit by 3% a year; and we aim to maintain our application success rate of 25%. In addition our funding for Full Economic Costing of grants and fellowships will rise from £30M to £80M p.a.

We will invest further in areas of strategic priority: notably £115M in systems/predictive biology, including support for research tools and resources, to facilitate multidisciplinary networks and a 'systems' approach across the board; £38M for bioenergy including £18M for exploring longer-term alternatives to petrochemicals; and a further £44M on research on ageing.

Key areas include:

- Systems biology
- Stems cells
- Synthetic biology
- Nanotechnology
- Renewable bioenergy
- Environmental change/ sustainable agriculture
- Ageing research
- Global threats to security – animal and plant diseases

Research training and career development

(see also page 4)

We will increase the number of PhD students we support each year from 2000 to around 2,400 by 2010-2011. All PhD studentships will be delivered through flexible four-year Doctoral Training Grants, which enable students to conduct challenging research AND develop specialist and transferable skills. This is an increase in investment from £39M to £51M a year by 2010-2011, including stipend increases in line with inflation.

We will almost double our funding for fellowships to £10M by 2010-2011, and particularly focus investment on our prestigious David Phillips Fellowships for talented early-career bioscientists, and on Research Development Fellowships for mid-career researchers.

We will establish a new Code of Practice for the employment of researchers and fund development of research staff on BBSRC grants at universities and other research organisations.



Facilities, infrastructure and national capability

We will build on and invest further in the research tools and resources needed to embed systems biology as 'normal business' in bioscience research. Within this, we will drive greater use of e-science and establish a culture for, and facilitate, data sharing. We will also provide regular funding to develop and support databases and biological collections.

We will continue to support critical UK capability in: sustainable agriculture and land use; animal health and welfare; and biomedical/diet and health research, through research institutes. We will do this by providing a further £17.5M to enhance sustainability, secure national facilities and modernise governance.

BBSRC remains committed to major capital investments in the area of animal health and welfare. We will do this by redeveloping (with Defra) the Pirbright site of the Institute for Animal Health (IAH); providing new laboratories for an enlarged Roslin Institute within the University of Edinburgh, and starting the planned replacement of facilities at IAH Compton.

We will continue to fund our Systems Biology Centres. We will also establish a new Centre on Bioenergy, to bring together cutting edge bioscience with societal, environmental and economic elements to provide a national flagship for bioenergy. Within RCUK and with other partners, we will contribute to the revision and prioritisation of the UK Large Facilities Roadmap.

International

We will promote the movement of researchers – with MRC we pay the UK subscriptions to the Human Frontiers Science Program (HFSP) and the European Molecular Biology Organisation. We will expand our Partnership Awards scheme to include the USA.

We will increase opportunities for collaborative projects with funders in partnering countries.

We will support joint research through HFSP, ERA-Net and ESF schemes, as well as bilaterally.

We will lead for RCUK and DIUS in updating the European Roadmap for new large-scale facilities (European Strategy Forum on Research Infrastructure).

We will establish a joint programme, with DFID and others, on animal health research for international development, anticipated to exceed £8M.



A step change in economic and social impact

We aim to achieve a significant increase in the economic and social impact of research we fund by bringing academics and industry together and by establishing an environment and culture that empowers researchers to translate their science into innovative industrial processes.

We are establishing an economic baseline against which we can measure further progress.

Increasing collaborative research with business

We will commit around £50M towards industry relevant research. In this we will work closely with the Technology Strategy Board (TSB), providing at least £34M for complementary and collaborative activities.

We will build on the success of our first two Research Technology Clubs (in bioprocessing, and diet and health), developing further clubs with company partners – including one on biorefineries. To move the technologies on from the Clubs to industrial practice we will work with TSB and also test the concept of Innovation and Knowledge Transfer Centres in the biosciences, and explore Innovation Platforms.

Encouraging entrepreneurship and commercialisation

In addition to across-the-board activities through RCUK to effect a culture change in universities around the concept of scientific excellence with impact, we are increasing our activities in key areas.

We will increase to around 350 the number of participants in the annual Biotechnology Young Entrepreneurs Scheme (Biotechnology YES), which provides commercial awareness and training for early-career bioscientists.

We plan to double our support for Follow-on Funding to £3M a year, giving more opportunities for researchers to demonstrate the commercial potential of their science through 'proof of concept' activities. We will also increase the number of Enterprise Fellows we support from 10 to 15. This funding enables researchers to dedicate their time to commercialising their research.

We will maintain close involvement with the Business Plan Competition, delivered through RCUK, which encourages and supports development of new commercial ventures across the sciences.



Facilitating people and knowledge flow

Enabling researchers to move between, and experience, research in academic and commercial environments, remains a potent factor in knowledge transfer and in facilitating collaborative research.

We will increase the number of the Industry Interchange Awards we make by 50% with the aims of: increasing the level of research contracts and collaborations; increasing industry contributions to training; and increasing academic input in product development.

We will explore the development of mini Knowledge Transfer Partnerships, to provide monitoring and support for postgraduate and postdoctoral scientists within collaborative research programmes with industry.



Skills and Training *(see also page 2)*

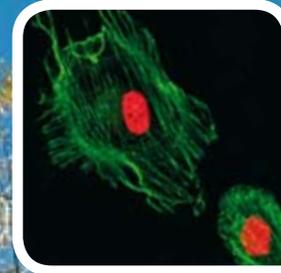
Within the planned expansion of our funding for PhD studentships, we will double our targeted priority studentships to 100. This will support training in strategically and economically important areas, especially those related to our Research Technology Clubs.

We will award up to 75 CASE studentships a year to major industrial partners. These studentships are for four-year training programmes that help industry develop researchers' skills as needed.

We will award up to 45 studentships a year to companies, particularly SMEs, to provide students with the experience of the challenges smaller business companies face.

We will continue to work with RDAs to encourage SME involvement.

We will maintain our Modular Training Programme of support for short courses that meet industry training needs.



Addressing major policy and societal issues

We are addressing many of the global and national challenges around the biosciences: understanding ageing, diet and health, sustainable land use and combating the impacts of climate change. We are doing this both directly through targeted funding programmes, and through embedding the systems biology approach critical to generating the breadth and depth of knowledge needed to underpin realistic, sustainable solutions.

In particular, we are contributing to cross-Research Council programmes to address the long-term policy challenges identified by Government: the ageing population; maintaining international competitiveness in science, promoting innovation and skills to support a knowledge-driven economy; tackling security threats including bioterrorism; and increasing long-term sustainable land use to mitigate the effects of climate change.

We fund research in several areas of broad social interest including: nanotechnology, stem cell science and synthetic biology. BBSRC will continue its programmes of activities to raise public awareness and promote dialogue around issues associated with this research.

We will continue to support research and training to reduce, refine and replace the use of animals in research. This will include increasing our funding of the NC3Rs to over £3M by 2010-2011.

