

**BIOSCIENCE FOR INDUSTRY STRATEGY PANEL**

**MEETING: 2 MARCH 2009**

**SUBJECT: UPDATE ON KNOWLEDGE TRANSFER AND INDUSTRIAL  
COLLABORATION ACTIVITIES**

**SUMMARY**

BBSRC activities to support knowledge transfer and innovation can be divided into four main areas: collaboration in research; industrial involvement in training; people and knowledge flow; and commercialisation. This paper provides an update on key progress, since the last meeting, in KT and collaborative activities not covered elsewhere in the meeting papers.

**ACTION**

The Panel is invited to **NOTE** progress with KT and industrial collaboration activities.

**ANNEXES**

Annex 1      BBSRC Knowledge Transfer Schemes

**Innovation and Skills Group  
March 2009**

## UPDATE ON KNOWLEDGE TRANSFER AND INDUSTRIAL COLLABORATION ACTIVITIES

The following paragraphs summarise progress with BBSRC knowledge transfer schemes. More detailed information on individual schemes can be found at **Annex 1**.

1. Responding to recommendations made in the Warry Report, the Research Councils have developed a **Knowledge Transfer Portal**. This portal offers a single point of access for those in, for example, academia, business, public, private and third sectors, who want to find out about Research Council knowledge transfer activities, and how to get involved. Further information can be found at <http://www.rcuk.ac.uk/innovation/ktportal/default.htm>.

### Collaborative Research

A detailed update on collaborative research activities with industry is provided in **BSI04-09**.

2. The table below shows the number of **Industrial Partnership Award** applications submitted, those funded and funding provided in 2008.

Responsive mode round (2008)	Number of IPA Applications Received	Number of IPA Applications Funded	Value of Funded IPA Applications
Spring	4	1	£0.3M
Summer	10	5	£2.6M
Autumn	11*	Not announced	-
Winter	7*	Not announced	-

\*provisional figure pending approval of IPA status for applications

### Industrial Involvement in Training

3. Two new awards were made under the **Modular Training for Industry** (MTI) Programme in November 2008:
  - Distance Learning MSc in Meat Science - University of Bristol (Dr P R Sheard)
  - Masters-level training programme in Vaccinology – University of Oxford (Professor A V S Hill)
4. An update on Industrial CASE is reported in **BSI08-09**

### People and Knowledge Flow

5. **Industry Interchange Programme:** Four new awards were made in autumn 2008:
  - Commercial and scientific evaluation of in vitro methodologies to improve predictive toxicological test and reduce animal testing (University of Lancaster and The REACH Centre Ltd)
  - Convergence of biological and instrumentation strategies for absolute quantification in proteomics (University of Liverpool and Waters Corporation)
  - Development of an oral delivery system to treat skin barrier defects (The University of Manchester and Meldex International plc)
  - The application of industrial high content biology in orthopaedic cell and tissue engineering (Keele University and Imagen-Biotech Ltd)
6. The **BBSRC Industrial Impact Fellowships:** is a new scheme that seeks to enable highly skilled research and technology leaders from industry to transfer

their skills and experience into an academic setting. The closing date for the first call under this Scheme is 26 February 2009.

7. **The Industry Fellowship Scheme:** The current call for applications closed in October 2008 with the receipt of seventeen applications, three of which are of interest to BBSRC. These will be assessed and awards announced in spring 2009.
8. **BBSRC Parliamentary Fellowships:** The first call for applications closed in September 2008 with the receipt of 31 applications. Six applicants were interviewed in October 2008 and three Fellowships have been awarded. The Fellows will take up their three-month Fellowships in spring 2009.

#### **Commercialisation of Research and Development**

9. **The Biotechnology Young Entrepreneurs Scheme:** A total of 83 teams took part in the 2008 competition. A team of bioscientists from the University of Reading was declared the winners at the final, held in London, on 8 December 2008. The team impressed the panel of judges with its proposal for a hypothetical company, Ovega, and its revolutionary new product which aims to produce vegetarian omega-3 oil from food industry waste. A short video is available at <http://uk.youtube.com/user/bbsrcmedia>.
10. **BBSRC/RSE Enterprise Fellowships:** Three new Fellowships were awarded in autumn 2008:
  - Dr Stefan Przyborski (University of Durham) Commercialisation of technology for three-dimensional cell culture
  - Ms Angela Murray (University of Birmingham) Biorecovery of precious metals from secondary sources
  - Dr Jorge Garcia-Lara (University of Sheffield) Novel vaccine and antibody therapy against *Staphylococcus aureus* (MRSA) infections
11. **The Research Councils' Business Plan Competition:** Six teams presented their ideas to a panel of judges at the final held in London in December 2008. The winning team, Blackford Analysis - Real-Time Image Registration, led by Dr Ben Panter from the University of Edinburgh, has developed a complex algorithm which will stabilise MRI images, ensuring scans deliver their life-changing results. It was encouraging that a third of the 41 projects invited to second stage had some relevance to BBSRC.
12. **Follow-on Funding:** The third call for 2008 closed in October with 20 applications, 6 of which are to be funded with a total value of £798,422. The next closing date for applications is 20 February 2009. In addition, eleven awards have been made under the **Follow-on Funding Pathfinder Scheme** this Scheme with a total value of £91,738.

#### **BBSRC Incentive Schemes**

13. **Innovator of the Year:** The first call under this Scheme closed on 17 December 2008 with the receipt of 22 applications. An assessment panel met on 20 January 2009 to consider these applications and selected six entrants to go through to the final which will be held 24 March 2009.
14. **Excellence with Impact Awards:** The call closed on 17 December 2008 with the receipt of 20 expressions of interest.

## BBSRC KNOWLEDGE TRANSFER SCHEMES

**Industrial Partnership Awards** are science-base led research grants that have a 10% cash contribution from an industrial partner. IPA projects judged to be of appropriate quality would normally be funded in preference to a standard grant of equivalent scientific merit, due to the significant user interest demonstrated by the industrial contribution to the cost of the project. Further information can be found at:

[http://www.bbsrc.ac.uk/business/collaborative\\_research/industrial\\_partnership\\_awards.html](http://www.bbsrc.ac.uk/business/collaborative_research/industrial_partnership_awards.html)

The **LINK Scheme** is aimed at promoting academic/industrial research collaboration in a pre-competitive research area. The initiative stimulates collaboration between partners from industry and the research community by providing up to 50% of the funding for joint projects in key scientific areas, the remaining 50% of the project costs coming from the industrial partner. BBSRC can support LINK projects in any area of BBSRC's remit. Further information can be found at:

[http://www.bbsrc.ac.uk/business/collaborative\\_research/link/index.html](http://www.bbsrc.ac.uk/business/collaborative_research/link/index.html)

**Research and Technology Clubs** support a research portfolio of strategic importance to industry. The research is funded through the combined investment of BBSRC, member companies, and in some cases, other Research Councils.

- THE **BIOPROCESSING RESEARCH INDUSTRY CLUB (BRIC)**, A £14M, 5-YEAR PARTNERSHIP BETWEEN BBSRC, EPSRC AND A CONSORTIUM OF LEADING COMPANIES (£1M) SUPPORTS INNOVATIVE BIOPROCESSING-RELATED RESEARCH, INCLUDING THAT NEEDED FOR THE MANUFACTURE OF COMPLEX BIOPHARMACEUTICALS. FURTHER INFORMATION CAN BE FOUND AT:

[HTTP://WWW.BBSRC.AC.UK/BUSINESS/COLLABORATIVE\\_RESEARCH/INDUSTRY\\_CLUBS/BRIC/INDEX.HTML](http://www.bbsrc.ac.uk/business/collaborative_research/industry_clubs/bric/index.html)

- The **Diet and Health Research Industry Club (DRINC)**, a £10M, 5-year partnership between BBSRC and a consortium of leading companies, supports high quality research into diet and health to obtain underpinning knowledge that will, enable in the longer term, the UK food industry to develop and deliver new foods of benefit to the consumer. Further information can be found at:  
[http://www.bbsrc.ac.uk/business/collaborative\\_research/industry\\_clubs/drinc/index.html](http://www.bbsrc.ac.uk/business/collaborative_research/industry_clubs/drinc/index.html)
- The **Integrated Biorefinery Technologies Initiative Research and Technology Club (IBTI Club)**, is a £5M, 5-year partnership between BBSRC, a consortium of leading companies and the Bioscience for Business Knowledge Transfer Network. The Club aims to support high quality research into the development of biological processes for the production of chemicals, materials and polymers to replace petro-chemical derived sources and thereby reduce our current dependence on fossil fuels. Further information can be found at:  
[http://www.bbsrc.ac.uk/business/collaborative\\_research/industry\\_clubs/ibti/index.html](http://www.bbsrc.ac.uk/business/collaborative_research/industry_clubs/ibti/index.html)

The **Modular Training for Industry Programme** enables the provision of industrially-relevant training for graduates working in industry. Evidence of a clear industrial need for the training is a key requirement of funding. Further information can be found at:

[http://www.bbsrc.ac.uk/business/training/modular\\_training.html](http://www.bbsrc.ac.uk/business/training/modular_training.html)

**Industrial CASE Studentship Awards** are PhD studentships made to the company collaborator rather than the academic giving the company more freedom to select a research topic relevant to its own priorities, and choose the academic partner. Companies involved in the scheme gain closer control of their portfolio of university-based research as well as gaining new collaborations and direct experience of potential company recruits. Further information can be found at:

[http://www.bbsrc.ac.uk/business/training/industrial\\_case.html](http://www.bbsrc.ac.uk/business/training/industrial_case.html)

The **Biotechnology Young Entrepreneurs Scheme** aims to raise awareness of the commercialisation of bioscience research amongst postgraduate and postdoctoral researchers. Participants compete in teams to develop a hypothetical business idea with the help of expert mentors from the biotechnology sector. Workshops are held throughout the UK, feeding into a National Final with a prize of £1000 for the winning team. Further information can be found at:

[http://www.bbsrc.ac.uk/business/commercialisation/biotechnology\\_yes.html](http://www.bbsrc.ac.uk/business/commercialisation/biotechnology_yes.html)

The **Research Councils Business Plan Competition** aims to help researchers turn great research into great business. Researchers provide the idea, and the Research Councils provide the skills, knowledge and support needed to develop a business plan. This is provided through expert trainers, coaches and mentors. In addition, there is an opportunity to win funds to help with the development of the business idea. The competition is open to researchers based in UK Higher Education Institutions or Public Sector Research Establishments. Further information can be found at:

[http://www.bbsrc.ac.uk/business/commercialisation/business\\_plan.html](http://www.bbsrc.ac.uk/business/commercialisation/business_plan.html)

To encourage awareness of Intellectual Property (IP) and commercialisation issues within the research community, BBSRC provides support for **IP Workshops** organised by Technology Transfer Offices in Universities and Institutes. The workshops inform existing and potential BBSRC-funded scientists of issues surrounding the identification, protection and exploitation of IP and can cover any aspect of the commercialisation process. Further information can be found at:

[http://www.bbsrc.ac.uk/business/commercialisation/ip\\_workshops.html](http://www.bbsrc.ac.uk/business/commercialisation/ip_workshops.html)

The **Royal Society of Edinburgh Enterprise Fellowships** support researchers employed by a UK Higher Education Establishment or BBSRC-sponsored Institute, who want to be actively involved in commercialising their own research. The business idea may be in any area of BBSRCs remit provided most of the original research was funded by BBSRC. Fellowships include business training to help Fellows develop their business plan, a year's salary to allow Fellows to concentrate on developing the commercial potential of their research, and access to mentors, business experts and professional advisors. Further information can be found at:

[http://www.bbsrc.ac.uk/business/commercialisation/enterprise\\_fellowships.html](http://www.bbsrc.ac.uk/business/commercialisation/enterprise_fellowships.html)

The **Follow-on Funding Scheme** is designed to help demonstrate the commercial potential of ideas arising from Research Council-funded research. It provides financial support at the very early or pre-seed stage of turning research outputs into a commercial proposition. Further information can be found at:

[http://www.bbsrc.ac.uk/business/commercialisation/follow\\_on.html](http://www.bbsrc.ac.uk/business/commercialisation/follow_on.html) The **Follow-on Funding Pathfinder Scheme** enables potential follow-on funding applicants to secure small amounts of funding to carry out preliminary commercial activities. These activities will help to develop a clearer understanding of the commercial potential of the outputs of a research grant and assist with the development of a full follow-on funding application. Further information can be found at: [http://www.bbsrc.ac.uk/business/commercialisation/follow\\_on\\_pathfinder.html](http://www.bbsrc.ac.uk/business/commercialisation/follow_on_pathfinder.html)

The **Industry Fellowship Scheme** promotes collaboration between the UK science base and industry by supporting the exchange of mid-career researchers either from the science base to industry or vice-versa. The Fellowships are administered by the Royal Society and co-sponsored by the BBSRC. Further information can be found at: [http://www.bbsrc.ac.uk/business/people\\_information/industry\\_fellowship\\_scheme.html](http://www.bbsrc.ac.uk/business/people_information/industry_fellowship_scheme.html)

**Knowledge Transfer Partnerships** serve as a mechanism to transfer knowledge and to develop personnel for industrial careers. Postgraduates and Postdocs are recruited to innovative projects within industry and are jointly supervised by the participating industrial and academic partners. Government support is delivered through a grant to the academic partner. In addition, a contribution from the participating company fully covers an HEI's costs of participation in the scheme. Further information can be found at: [http://www.bbsrc.ac.uk/business/people\\_information/knowledge\\_transfer\\_partnerships.html](http://www.bbsrc.ac.uk/business/people_information/knowledge_transfer_partnerships.html)

A **Knowledge Transfer Network** is a single national over-arching network in a specific field of technology or business application. They bring together organisations such as universities, businesses, research and technology organisations and the finance community to enable the exchange of knowledge and stimulate innovation. Further information can be found at: [http://www.bbsrc.ac.uk/business/people\\_information/knowledge\\_transfer\\_networks.html](http://www.bbsrc.ac.uk/business/people_information/knowledge_transfer_networks.html)

The **Industry Interchange Programme** supports the short-term exchange, in either direction, of researchers between the science base and industry. The objective of the Programme is to support interchanges that provide strategic advantage to the UK science base and industry arising from reciprocal access to facilities, expertise and/or knowledge, and an increased understanding of scientific issues of common concern. Individual awards are likely to be in the range of £10,000 - £30,000 and unlikely to exceed £50,000. Further information can be found at: [http://www.bbsrc.ac.uk/business/people\\_information/industry\\_interchange.html](http://www.bbsrc.ac.uk/business/people_information/industry_interchange.html)

**Parliamentary Fellowships** enable BBSRC-funded PhD students to undertake a 3-month secondment to the Parliamentary Office of Science and Technology (POST). During his/her time in Parliament, the Fellow will work on an area of science policy by: producing a POSTnote; or contributing to a longer report; or assisting a select committee in a current inquiry; and/or related activities. The Fellowship is open to all BBSRC-funded postgraduate students registered for a PhD, who are currently engaged in their penultimate or final year of study at the time of application. Fellows will receive an extension to their PhD in addition to continued stipend payments during the secondment. Further information can be found at: [http://www.bbsrc.ac.uk/business/people\\_information/parliamentary\\_fellowships.html](http://www.bbsrc.ac.uk/business/people_information/parliamentary_fellowships.html)

**Industrial Impact Fellowships** aim to enhance the impact of BBSRC funded research by enabling highly skilled research and technology leaders from industry to

bring their industrial skills, management, and commercial experience to enhance collaboration and partnership between the academic and industrial sectors. Fellows would be expected to demonstrate how their industrial background and research will benefit the work of a BBSRC-funded centre, institute, or academic department with significant BBSRC-funded research programme. Further information can be found at: [http://www.bbsrc.ac.uk/business/people\\_information/industrial\\_impact\\_fellowships.html](http://www.bbsrc.ac.uk/business/people_information/industrial_impact_fellowships.html)

The **Innovator of the Year** is an annual competition aimed at celebrating the successes of BBSRC-supported scientists in delivering economic and/or social impact from their research. Scientists (either individuals or a team) will be required to submit an application detailing their activities that have resulted in Economic and / or Social impact. The best applications will be selected to go forward and participate in the Final. Further information can be found at: [http://www.bbsrc.ac.uk/business/impact\\_incentive/innovator.html](http://www.bbsrc.ac.uk/business/impact_incentive/innovator.html)

The **Excellence with Impact Awards** will provide reward and esteem to those University Departments which, over the next two years, are most active in embedding a culture that recognises the importance of “impact” - both economic and social - alongside research excellence. The competition will run from December 2008 to December 2010. Departments are invited to submit an Expression of Interest form describing how it plans to introduce a culture within the Department that recognises the importance of economic and / or social impact alongside excellence in research. At the end of the competition, Departments will be invited to submit a Final Report describing the progress in embedding an ‘Impact Culture’ and summarising the outcomes. Further information can be found at: [http://www.bbsrc.ac.uk/business/impact\\_incentive/excellence\\_impact.html](http://www.bbsrc.ac.uk/business/impact_incentive/excellence_impact.html)