

Need money to commercialise your research?



BBSRC's Follow-on Fund helps you take the first step

Since it started in 2004, our Follow-on Fund has enabled over 60 researchers to bridge the gap between basic science and its commercialisation. The Fund has generated an impressive portfolio of spin-out companies, licensing deals, and industrial collaborations. It now plays a key role in taking outputs from the laboratory to the business sector. For many scientists, the Fund has been the lynchpin in securing significant investment and support from the private sector and other agencies.

Fundamental and strategic research often generates unexpected or new opportunities for commercial application. We are helping to ensure that these opportunities are not missed.

Our Follow-on Fund provides the money researchers need to refine and focus their ideas to a stage where they can secure industrial partnerships, venture capital and other investment. Awards are typically between £50k and £100k. BBSRC has invested around £6M so far; and we plan to double our current level of support to £3M a year over 2008-2011.

Around three quarters of recipients say that the Award increased the attractiveness of commercialisation, and helped them identify the best route for their research.

£3/4M secured for prototype sensor

Dr Steffi Krause and Dr Michael Watkinson at Queen Mary University of London used their follow on funding of around £90k to develop tailored hydrogel coatings that could act as generic sensor materials for key enzyme indicators of periodontal disease (inflammation of the supporting tissues of teeth). It enabled them to strengthen their existing Intellectual Property, and to validate the feasibility of the technology for use in novel sensors.

"The funding also gave us the time to approach dental companies and developmental partners," says Dr Krause. "From the results we obtained during this period, we were able to make a successful bid for £738k from the Technology Strategy Board, to develop a prototype sensor



Dr Steffi Krause

clinical trial, with partners in the University of Sheffield and dental and sensor technology companies."

The new project started in April 2008.

The research team also formed a spin-out, DegraSense Ltd, with funding from IP2IPO Ltd and Combined London Colleges University Challenge Limited Partnership, who together provided a further £60k.

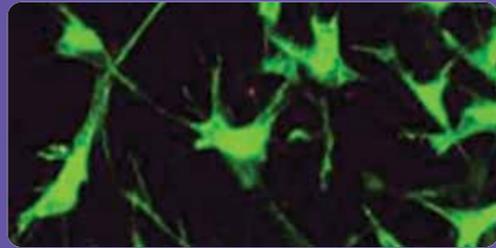
Follow-on funding supports research across our portfolio. Current examples include: improvements to artificial blood; better gums and stabilisers for the food industry; new diagnostics for human and livestock health; as well as new technologies and R&D tools for the pharmaceutical, bioprocessing and industrial biotech sectors.

Routes towards commercialisation are equally varied.

A new medical device, the 'HistoMag', to make the early detection of breast cancer more cost effective and easier to administer by detecting cancerous cells in tissue samples. **Professor Quentin Pankhurst, University College London** New patent; and collaborative agreement with pharmaceutical companies



Validated computer modelling for drug discovery and development **Professors Michael Sternberg and Stephen Muggleton, Imperial College London** £500k of seed funding raised Progressing through spin-out, Equinox Pharma, at Imperial's Biocubator Caption: Dr Ata Amini (funded by Follow-on Fund now working for Equinox), Judy Cairns (Company Secretary), Dr Tony Baxter (Chairman), David Gough (CEO), Professor Michael Sternberg (PI on Follow-on Fund (co-I Prof Stephen Muggleton, not present and Founder)



Simple, robust bioreactor technology for cell culture and 3-D tissue growth, based on patented technology with potential in drug and toxicity testing **Professor Z Cui, University of Oxford** Development contract secured with big pharma

ABsynth Biologics

BBSRC-funded research by Professor Simon Foster and colleagues at the University of Sheffield helped to identify a unique group of surface-exposed proteins of *S. aureus* that are essential for the bacterium's survival, and are very similar in all strains, including MRSA. These proteins are good novel targets for a vaccine and for prophylactic or therapeutic antibodies to control infections. The combined market value of such treatments is estimated to reach \$5Bn by 2020. The research findings are being taken towards clinical application by ABsynth Biologics. This company was launched by the University's Life Science IP commercialisation partner, Biofusion plc, which has invested £325k to help take the early-stage research to the production of lead candidates for clinical trials.



www.biofusion.co.uk/Portfolio/Medicine/AbsynthBiologics

Procarta Biosystems Ltd

Procarta aims to develop novel proprietary therapeutics against drug-resistant pathogens. It draws upon Dr Michael McArthur's and Professor Mervyn Bibb's expertise at the John Innes Centre on the genetic regulation of metabolism in *Streptomyces* bacteria. Working with PBL, Dr McArthur developed a novel way of characterising the regulatory proteins that interact with molecular 'switches' to turn *Streptomyces* genes on and off. This opens up the potential for targeting particular switches and turning off those that control genes that make the bacteria resistant to antibiotics. The scientists have also patented a way of discovering 'decoys' in bacteria, without having to know the genes involved. This means they can develop a product line of cost-effective therapies targeting many infectious diseases.



www.procartabio.com

“Whether you're an early career researcher or an established senior scientist, the Follow-on Fund gives you the time and opportunity to demonstrate the all important 'proof of principle'. This gives you the springboard for attracting serious investors.”



Dr Celia Caulcott
BBSRC Director for Innovation and Skills

The Fund continues to generate high-tech spin-out companies. A recent review showed that of the first 24 awards alone, 20 have been commercialised, and nine of these resulted in spin-outs. Current examples include:

Conformetrix

Established from a first Follow-on Fund award, the company is based on proprietary technology that provides solution-phase 3-D and dynamic structural data for use by medicinal and computational chemists.



It offers a range of bespoke partnerships to companies at different stages of drug discovery.

A second award is enabling lead researcher, Dr Andrew Almond of the University of Manchester, and colleagues to customise their software and move into product analysis and development.

Dr Almond is also supported as a RSE/BBSRC Enterprise Fellow.

CEPOS Insilico Ltd

Founded jointly by researchers at the universities of Erlangen (Germany) and Portsmouth and with a licensing agreement with the University of Aberdeen.



Drug design software using surface-based modelling techniques that predict molecular responses to drug receptors and other biological activities.

Software sold as dedicated modules or toolkits, to customers including: Bayer Healthcare, Boehringer Ingelheim, Sanofi-Aventis and Hoffmann-la-Roche Pharma.

Leader: Professor Tim Clark.

Tissue Regenix Ltd

Now being incubated in the Leeds Innovation Centre, Tissue Regenix Ltd is developing cell-free biological scaffolds that should function like native tissue in transplantation therapies.



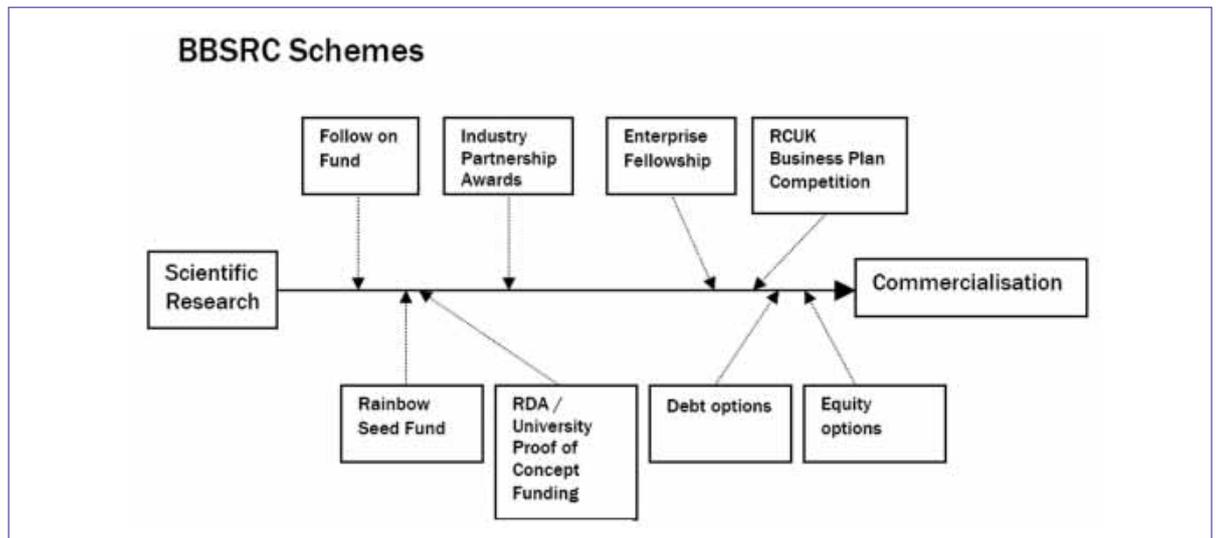
The company's platform technology derives from long-standing research funded by BBSRC and EPSRC; and led by Professors John Fisher (bioengineering and biomaterials) and Eileen Ingham (immunology and biocompatibility). The company was formed on the back of a Follow-on Fund Award in 2004 that led to over £4M investment funding.

Several of Regenix's surgical patches and grafts are in pre-clinical stages, with one – for a heart valve – at clinical testing stage.



Putting it all together.....

Around 70% of Follow-on Fund recipients take further steps to commercialise their research, either through complementary BBSRC schemes or with other funders.



Several researchers gain 'added value' by using a suite of support mechanisms. **Examples are:**

Magic Tag Immobilisation Technology

Drs Paul Taylor and Suzanne Dilly,
 University of Warwick and a2sp Ltd

A2sp Ltd applies its proprietary technology to provide rapid, cost effective identification of novel drug-protein interactions.

The company is built on outputs from a BBSRC Exploiting Genomics grant and support from the Follow-on Fund. It has also benefitted from participation in the RCUK Business Plan Competition and through an RSE/BBSRC Enterprise Fellowship to Dr Dilly.

"We have been able to progress at the rate determined by our science and our business ambitions, and have applied to the relevant BBSRC support scheme as we develop," says Dr Taylor. "The practical advice and support from our mentors made a very significant difference."

The company has recently registered its Magic-Tag brand, and has attracted a further £75k Spinner investment.

IntelliHep

Professor Jeremy Turnbull, University of Liverpool

Professor Turnbull, Dr Ed Yates and Dr Andrew Powell established the spin-out IntelliHep on the basis of results from two standard BBSRC research grants, held initially at the University of



Birmingham and later at the University of Liverpool.

With a Follow-on Fund award in 2005, they have now patented heparin-based compounds as novel therapeutics for Alzheimer's disease, and licensed them to the company. Lead compounds are now in pre-clinical testing.

"Ours is perhaps a classic example of how the Follow-on Fund can help in taking ideas generated in the research laboratory through towards commercialisation. Without this support, we would not be in the strong position we are now, with exclusive rights to these lead compounds," says Professor Turnbull. "We are negotiating with several partners and have received management support from Ithaka Life Sciences."

CONTACT

Mary McDonagh	
Tel:	01793 413275
email:	Mary.mcdonagh@bbsrc.ac.uk
web:	www.bbsrc.ac.uk/business/commercialisation/follow-on.html