

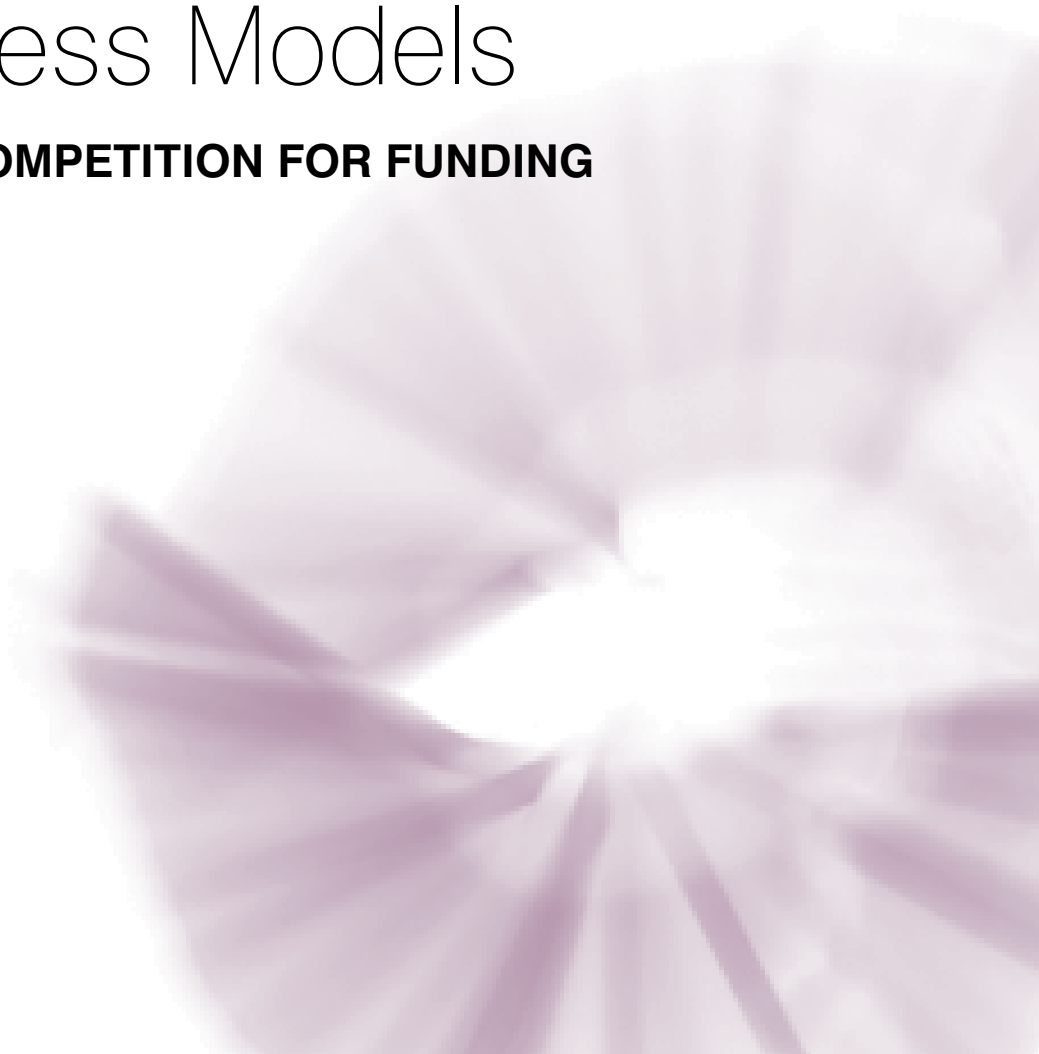
**Technology Strategy Board**

Driving Innovation



# Regenerative Medicine Programme: Value Systems and Business Models

**SEPTEMBER 2009 COMPETITION FOR FUNDING**



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## SEPTEMBER 2009 COMPETITION FOR FUNDING

### Summary

As part of an £18m programme in Regenerative Medicine, the Technology Strategy Board is to invest up to £1.5m in commercial research and development projects in the area of Regenerative Medicine: Value Systems and Business Models. Proposals should ideally be business led and business driven, and must clearly present the benefits to business. Applications must be for collaborative R&D: there must be at least two consortium partners, one of which must be a business.

### Challenge

To develop a better understanding of where and how value will be created in the regenerative medicine value chain, and to develop business models that will enable businesses to best capture that value.

### Background

Regenerative medicine is an interdisciplinary approach that spans tissue engineering, developmental and stem cell biology, gene therapy, cellular therapeutics, biomaterials (scaffolds and matrices), nanoscience, bioengineering and chemical biology. It may involve:

- Transplanting stem cells, progenitors or tissue
- Stimulating dormant repair processes
- Cells as delivery vehicles: genes, cytokines, small molecules
- Engineered cells (synthetic biology).

Regenerative medicine has already provided significant medical advances in areas such as skin regeneration for burns patients, and it has the potential to go much further, with next-generation products offering cures or treatments with long-term benefits.

The number of UK companies working in regenerative medicine has been growing since 2003, and the UK is a world leader in this area, with a strong academic science base and a supportive clinical and regulatory environment. There has been much recent progress, but if the UK is to fulfil its potential in this field, a number of development challenges need to be overcome so that businesses can successfully exploit promising discoveries.

It is within this context that the Technology Strategy Board is launching a Regenerative Medicine Programme. To ensure that UK businesses can achieve a commercially competitive edge with global impact, we aim to:

- Underpin and enable the best regenerative medicine businesses in the UK to flourish, and
- Build a connected regenerative medicine community by forming well-linked programmes of work and activities to develop medicines and technology platforms.

We are launching this programme of competitions in September 2009 and will be investing a total of £18m to support priority areas of commercial R&D activity and the development of partnerships. The programme will be developed in partnership with the Medical Research Council, the Engineering and Physical Sciences Research Council, and the Biotechnology and Biological Sciences Research Council, which will together provide additional funding of at least £3.5m. A high-level industrially-focused group comprising industry and academic experts will guide the development of the programme.

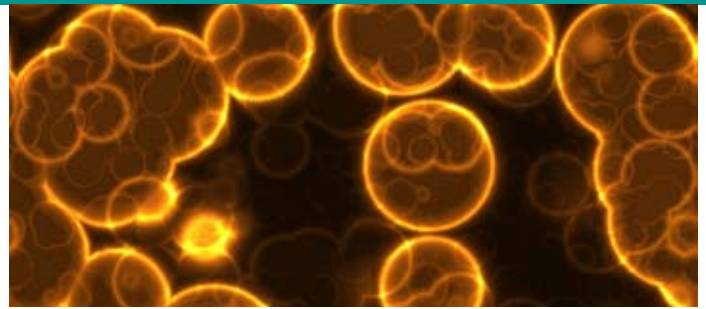
### Value systems and business models

We will invest about £1.5m in projects on value systems and business models.

Regenerative medicine companies operate in an emerging business sector in an international environment, where the delivery of regenerative medicine could take a number of different approaches as the products and services are developed. The aim of this competition is to support research into how UK companies should best configure their activities to extract the most value, both for themselves and for the UK. The area of value systems was specifically identified for investigation in Lord Sainsbury's 2007 report *The Race to the Top*, and is particularly relevant to the Technology Strategy Board's High Value Manufacturing strategy (you can download this report at [www.innovateuk.org](http://www.innovateuk.org)).

Potential applicants can find more details about the thinking behind this work in the joint Advanced Institute for Manufacturing/Technology Strategy Board report *High Value Manufacturing: Delivering on the Promise* (available at [www.aimresearch.org](http://www.aimresearch.org)). The Research Challenges 7, 8, 9 and 10 are particularly important. Projects should also consider how much the opportunities to realise value for the UK regenerative medicine industry are enhanced, or reduced, by factors outside the boundaries of individual businesses or specific value chains. Examples of factors that can critically affect the realisation of value include: relationships with sources of finance; collaborations with universities, the NHS, and other healthcare systems; logistics; point of care and end user issues; and regulatory, ethical and fiscal frameworks.

Where helpful to the exchange of best practice, and not damaging to commercial interests, the results from this work should be made public on a voluntary basis and a strategy for dissemination of generic outputs from the funded project should be included.



The aim of a project might be to create a series of archetypal business models that could be used by small and medium-sized enterprises and start-up companies to give them the greatest chance of creating a sustainable business. The findings will be of application to the NHS, encompassing the supply chain up to the point of use.

Projects might also identify areas in public policy that would enable UK regenerative medicine businesses to realise value more effectively.

## Scope for applications

In support of these aims, we wish to encourage applications for co-operative research that address the issues noted above and that could be based around the development of technology in the following areas:

- Modelling, analysis and simulation: predicting behaviour to optimise performance, reduce risk and accelerate time to market
- High-value products: creating new markets or substantially increasing share in existing markets, through innovative combinations of design and technology
- Resource-efficient and sustainable processes: improving productivity or reducing the consumption of materials, energy and resources in production processes
- Disposal and recycling: maximising the reuse of valuable resources at the end of life, remanufacturing, or reducing the impact of disposal
- Whole life planning: modelling whole-life costs and other parameters so that business offerings can be designed and evaluated accurately
- Innovative service solutions: developing lifetime service offerings
- Design and innovation process: developing technologies to support rapid innovation, possibly within an international context, and supporting open innovation concepts

- Collaboration within extended operations and value chains: developing business tools for success within global networks and extended systems.

## Funding allocation and project details

We have allocated up to £1.5m to fund collaborative R&D projects that address the challenge and align with the scope described above. Projects can involve science-to-business or business-to-business interactions. They should ideally be business-led and must clearly present the benefits to business. Applications are expected in the area of basic research, which can attract up to 75% public sector funding of total eligible project costs.

Further information is available in the Guidance for Applicants (see the Competitions section of our website, [www.innovateuk.org](http://www.innovateuk.org)), and at an optional briefing that will be held in London on 8th September.

All applications will need to:

- Meet the scope of the competition
- Present a clear and strong business case for the project
- Explain what is innovative about the proposed project
- Identify commercial benefits and market opportunities
- Show that there is a need for R&D in the area and explain what benefit the Technology Strategy Board investment will bring.

## Application process

This is a single-stage competition that will open on 1st September 2009 and close on 15th October 2009. The Guidance for Applicants explains in detail how to register and apply (see the Competitions section of our website at [www.innovateuk.org](http://www.innovateuk.org)).

## Key dates

Competition opens	<b>1st September 2009</b>
Briefing (optional)	<b>8th September 2009</b>
Registration of intent to submit (compulsory)	<b>8th October 2009 (midday)</b>
Deadline for receipt of full applications	<b>15th October 2009 (midday)</b>
Decision and feedback to applicants	<b>16th November 2009</b>



## Further information

For more information about this and other competitions, and details of how to register and apply, please see Competitions at [www.innovateuk.org](http://www.innovateuk.org)

Competition helpline:  
01355 272155

Email:  
[competitions@tsb.gov.uk](mailto:competitions@tsb.gov.uk)

## Publicity

The Technology Strategy Board frequently publicises the results of competitions and this includes engagement with the media. All applicants will be given a chance during the competition process to opt out of any publicity. Willing applicants will be asked to provide an agreed form of words for use in publicity material. E-mail [pressoffice@tsb.gov.uk](mailto:pressoffice@tsb.gov.uk) with any queries.

*The Technology Strategy Board is a business-led executive non-departmental public body, established by the Government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve quality of life.*

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