

Update on Research Councils and Technology Strategy Board investments and future plans in Synthetic Biology

Synthetic Biology Leadership Council 13 December 2012

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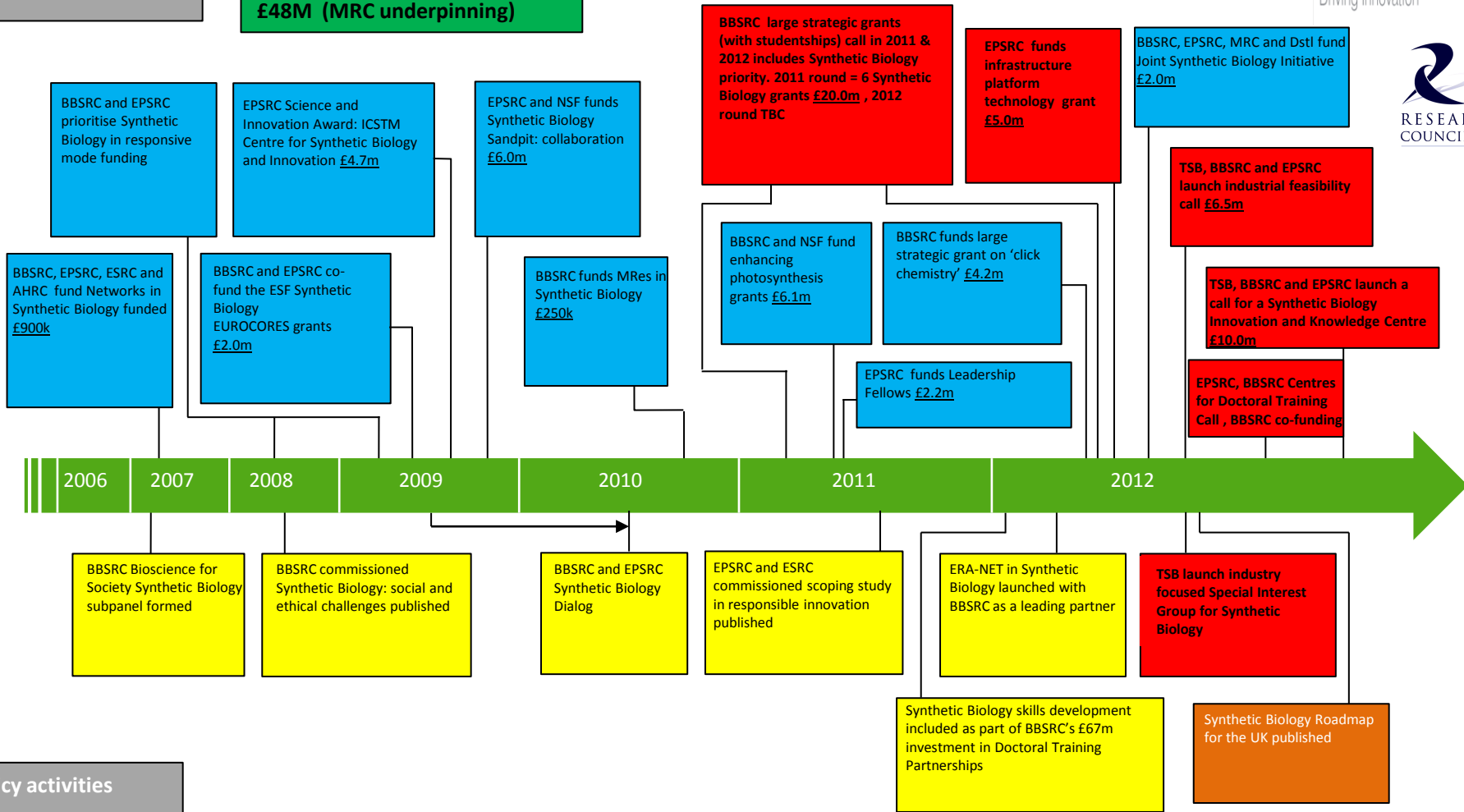


Roadmap recommendations: Delivery underpinned by current activities

Funding and policy timeline

Funding activities

**Grants: £66M (BBSRC/EP SRC);
£48M (MRC underpinning)**



Policy activities



Projects

- £2.9M to help make low-carbon fuel
- £4.5M to understand natural biological ‘factories’ and their role in producing novel agrochemicals
- £4.0M to establish a sophisticated new methodology for creating useful microorganism strains.
- £4.0M to engineer synthetic microbial communities for biomethane production
- £4.4M for the use of synthetic micro-organisms to develop industrial biocatalysts
- £2.5M for the first step in engineering cereals that is less reliant on fertiliser

Partnership

- Substantive EPSRC (approx £2M) and industry (approx 3M) funding



- **The Flowers Consortium: Five universities, Imperial College London, Cambridge, Edinburgh, Newcastle and King's College London**
- **Professional registry of biological parts and devices using a robotic data-collection pipeline for characterisation**
- **SynBIS – information system. Uses a web-based environment to host BioCAD and modelling tools for the field**
- **An important new resource for the academic and industrial community in synthetic biology**



- Centres focus on a specific topic where there is a skills need – synthetic biology priority topic
- Synthetic biology training must build the next generation community with depth within core disciplines and the ability to work in cross-disciplinary collaboration; and high-level, broad interdisciplinary synthetic biology expertise.
- Training should cover industrial, economical and ethical issues associated with synthetic biology. Integrated internships encouraged.
- Centres will be a joint funding partnership between EPSRC and BBSRC.
- Call issue February 2013 – preview of priority topics now live



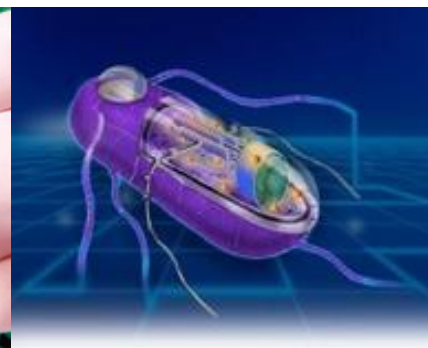
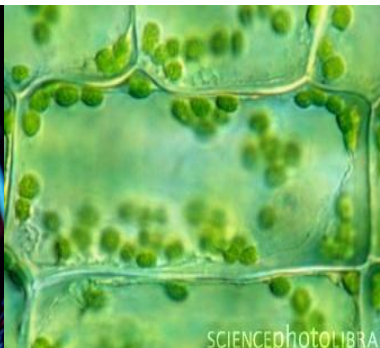
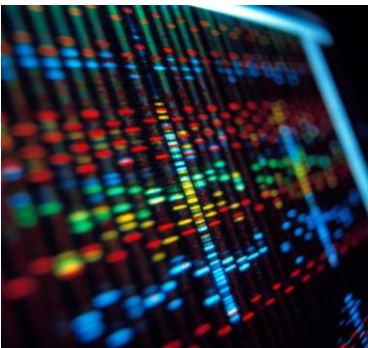
- Set up to help partner the UK's research-base expertise in synthetic biology with relevant industrial communities.
- Aims to ensure the translation and development of the UK's world-leading synthetic biology research into commercial applications to enhance future business performance.
- The SynBio SIG is hosted and coordinated by the Biosciences Knowledge Transfer Network
- Established May 2012, 500+ members (Dec 12)
- Five SPARK Awards for Synthetic Biology, worth £5,000 each



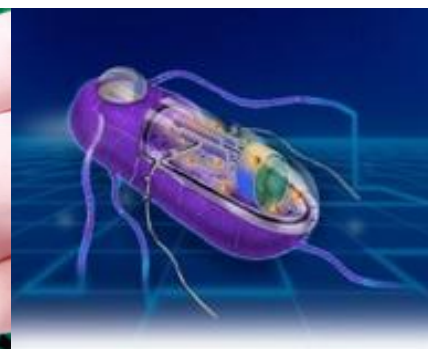
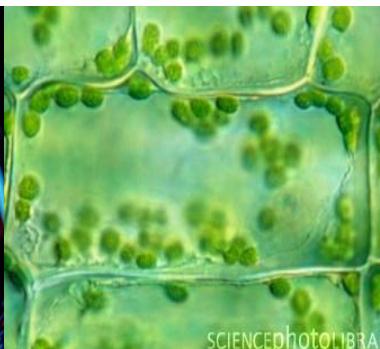
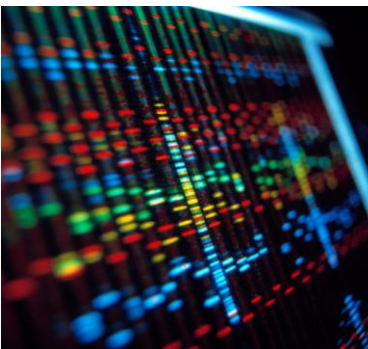
- To encourage businesses to explore innovative industrial applications of synthetic biology
- Projects will demonstrate the feasibility of using the synthetic biology approach in the creation of novel or improved products or processes
- Projects must be collaborative and business-led
- 32 applications received and assessed; short list agreed
- Projects considered in the context of a Responsible Innovation Framework
- Successful projects to be announced Jan 25th 2013



- **IKC aims to:**
 - **Accelerate the commercialisation of world class science and emerging technologies into new products, processes or services**
 - **Foster collaboration and deliver competitive advantage to the businesses with whom they interact**
- **IKC call in synthetic biology issued 2nd November :**
 - **EoI submission closing date 20th Dec 2012**
 - **Invitations to submit full proposals 18th Jan 2013**
 - **Final submission date late March 2013**
- **International review panel**
- **EPSRC leading call administration and management**



- **10 December 2012: Strategy for UK Life Sciences One Year On: “An additional £50m... to enable a network of new multidisciplinary research and training centres, including for gene synthesis, to be established as a foundation for commercial success.” Funders currently progressing the business plan**
Roadmap Recommendations 1,2,3
- **ERANET EU member state strategy development**
Roadmap Recommendation 4
- **ERANET Synthetic Biology funding calls**
Roadmap Recommendation 4
- **International researcher partnering**
Roadmap Recommendation 4
- **OECD working party on biotechnology**
Roadmap Recommendation 4



CONTACTS

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Driving Innovation

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