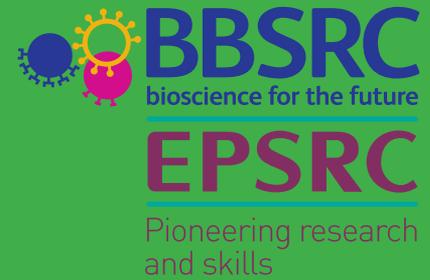


OpenPlant

Synthetic Biology Research Centre



OpenPlant is a BBSRC-EPSC funded Synthetic Biology Research Centre. It is based in the United Kingdom and is a collaboration between the University of Cambridge and the John Innes Centre and The Sainsbury Laboratory, Norwich. The OpenPlant SBRC is focused on the development of open foundational technologies for plant synthetic biology and their application for engineering new traits in crop systems.



OpenPlant will (i) fund interdisciplinary efforts in plant Synthetic Biology, to explore novel foundational technologies and applications, build shared resources and provide a point of exchange for young scientists and entrepreneurs; (ii) promote two-tier intellectual property models that will promote sharing of DNA components and freedom-to-operate for commercial applications of plant synthetic biology, and (iii) address responsible innovation, and explore the potential wider impacts of synthetic biology on sustainable practices in agriculture, bioproduction, land use and environmental conservation. (<http://www.openplant.org>)

Foundational technologies

As part of the OpenPlant initiative, we will implement: open-source DNA registries for sharing plant specific parts; *Marchantia polymorpha* as a major new plant chassis for Synthetic Biology; new DNA parts for the control and quantitative imaging of genetic circuits in plants; techniques for routine genome-scale engineering in plants; and software tools with improved performance for assembly of synthetic gene circuits and cellular morphogenesis.

Trait Engineering

The development of new foundational tools and parts will directly contribute to the engineering of new traits in plants, such as: altered photosynthesis and leaf structure; modified production of plant carbohydrates; engineered pathways for the metabolic engineering of natural products; new forms of symbiosis and nitrogen fixation; methods for high level production of biomolecules by virus-derived mechanisms.

The experimental science component of the OpenPlant programme is multidisciplinary and spread over a number of laboratories in Cambridge and Norwich. Over the course of the next five years, postdoctoral, technical and programme coordinator positions will be available for work in the participating laboratories: Baulcombe, Haseloff, Ajioka, Cicuta, Dupree, Hall, Harrison, Hibberd, Howe, Locke, Smith, Schornack, Webb (University of Cambridge); Osbourn, Field, Lomonosoff, Martin, O'Connor, Oldroyd, O'Maille, Smith (John Innes Centre, Norwich); Patron, Jones (The Sainsbury Laboratory, Norwich).

Positions available

A number of these positions are available immediately. Applications for the first round of positions will close on September 1st, 2014. Details can be found at <http://www.openplant.org>, as well as at each participating institution, the University of Cambridge (<http://jobs.cam.ac.uk>); the John Innes Institute (<http://jobs.nbi.ac.uk>) and The Sainsbury Laboratory (<http://www.tsl.ac.uk>), and jobs.ac.uk.



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