



Evonetix awarded Innovate UK funding for £1.3 million (\$1.75M) gene synthesis project

Funding will support development of a novel enzymatic process for DNA synthesis in collaboration with Durham University

CAMBRIDGE, UK, 02 July 2018 – EVONETIX LTD ('Evonetix'), the Cambridge-based company pioneering an innovative approach to enable scalable and high-fidelity gene synthesis, announced today that it had been awarded substantial funding to support the development of a novel enzymatic approach to DNA synthesis. Innovate UK, the UK's innovation agency, will co-fund the £1.3 million project, which will be undertaken in collaboration with Durham University.

Evonetix is revolutionising gene synthesis with the aim of producing DNA at scale to facilitate many applications in the rapidly growing field of synthetic biology, from the development of novel pharmaceuticals, to industrial biotech, renewable fuels and agriculture. Evonetix's novel silicon array, combined with its unique synergistic thermal control chemistry and process of error detection throughout assembly, permits massive parallelism in *de novo* DNA synthesis, enabling high-throughput on-chip assembly of high-fidelity gene-length DNA at scale. As part of the Innovate UK co-funded project, Evonetix will develop a novel enzymatic approach to gene synthesis and integrate it into its proprietary, thermally addressable silicon array.

The research will be directed by Dr Raquel Sanches-Kuiper, Director of Biology at Evonetix, whose group will develop engineered enzymes that are able to efficiently incorporate modified nucleotides. The group of Dr David Hodgson, Associate Professor of Chemistry at Durham University, will develop the modified nucleotides for enzymatic synthesis in Evonetix's silicon array.

Dr Tim Brears, CEO at Evonetix, said: "The funding from Innovate UK will enable us to expand our approach to include enzymatic gene synthesis and will be vital in bringing this project to a successful outcome. The extension of our platform's capabilities will be of great value as we seek to address the needs of the rapidly growing synthetic biology market, which is estimated to reach \$40 billion by the mid-2020s".

Dr Raquel Sanches-Kuiper, Director of Biology at Evonetix, said: "We believe the use of enzymatic oligonucleotide synthesis, which operates under milder aqueous conditions compared to phosphoramidite chemistry, will provide a significant commercial advantage and offer a highly valuable tool for *de novo* gene synthesis with our platform. It will achieve this by being more environmentally friendly and by further streamlining the industrialisation of high-fidelity DNA synthesis.

The team at Durham's Department of Chemistry has many years of experience in nucleotide chemistry and will complement our expertise in protein engineering, DNA synthesis and assembly."

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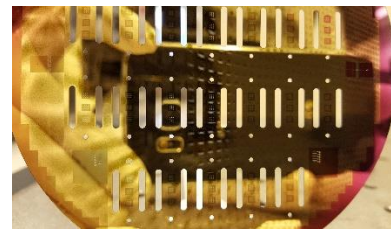
Photos: For high-res images contact michelle.ricketts@zymecommunications.com



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Evonetix's silicon technology

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Notes to Editors

About Evonetix Ltd

Evonetix is revolutionising gene synthesis with the aim of producing DNA at scale to enable many applications in the rapidly growing field of synthetic biology, across a wide range of industries, from pharmaceuticals to industrial biotech, specialty chemicals, renewables, bioremediation, agriculture and potentially also digital data storage.

The Company's platform is based upon a novel silicon array and unique synergistic thermal control chemistry, capable of synthesising oligonucleotides in parallel, at each of the 10,000 miniaturised reaction sites. The technology is compatible with both chemical and enzymatic gene synthesis and allows for exquisite control at each site of synthesis. It uses a process of error detection throughout assembly to yield high-fidelity long DNA molecules, including challenging sequences with high-GC content or repeats. Thus, Evonetix's approach permits massive parallelism in *de novo* DNA synthesis and enables high-throughput on-chip assembly of high-fidelity gene-length DNA at scale.

Evonetix is based in Cambridge, UK and was founded in 2015 by Cambridge Consultants Ltd and Providence Investment Company Limited. The Company raised £9 million in a series A financing, co-led by DCVC and Draper Esprit, and has been awarded Innovate UK co-funding for a £1.3 million gene synthesis project.

For further information see www.evonetix.com

About Durham University www.dur.ac.uk

- A world top 100 university with a global reputation and performance in research and education (QS 2019 and THE World University Rankings 2018) <https://www.dur.ac.uk/about/rankings>

- Ranked fifth in both the UK in the Guardian University Guide 2019 and the 2018 Times and Sunday Times Good University Guide.
- A member of the Russell Group of leading research-intensive UK universities.
- Research at Durham shapes local, national and international agendas, and directly informs the teaching of our students.
- Ranked the world top 40 globally for the employability of its students by blue-chip companies world-wide (QS World University Rankings 2019).
- Highest rate of employment and further study in the UK for undergraduates completing their first degree (Higher Education Statistics Agency 2017/18).

About Innovate UK

Innovate UK drives productivity and economic growth by supporting businesses to develop and realise the potential of new ideas. It connects businesses to the partners, customers and investors that can help them turn ideas into commercially successful products and services and business growth.

Innovate UK funds business and research collaborations to accelerate innovation and drive business investment into R&D. Its support is available to businesses across all economic sectors, value chains and UK regions.

Innovate UK is part of UK Research and Innovation. For more information visit www.innovateuk.ukri.org

About synthetic biology

With the huge increase in DNA sequence information available to mankind over the past ten years, there now exists an unprecedented opportunity to, for example, engineer metabolic pathways and organisms, improve industrial processes, create new processes and engineer genomes with new or improved traits. This opportunity, known as synthetic biology, is estimated to grow rapidly over the coming years, reaching \$40 billion in value in the mid-2020s. Synthetic biology will have a massive impact across many industries and will be fundamental to helping us manage the Earth's resources.

However, only a highly disruptive technology is likely to achieve the significant improvements in DNA synthesis required to enable and facilitate these opportunities. Evonetix believes that, by providing high-fidelity DNA at scale, without the need for post-synthesis error correction, it will be well placed to capture a significant part of the growing multibillion-dollar synthetic biology opportunity.