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News Release

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Research facility seeks to speed application of DNA discoveries

Pioneering developments in medicine and other key areas of scientific discovery could be accelerated with the creation of a new research facility.

Scientists at the centre, to be known as the Edinburgh Genome Foundry, will build and study DNA to inform the development of products with applications in health, agriculture and biofuels.

The Foundry's researchers will seek to create and modify long strands of DNA that can be used to equip cells or organisms with new or improved functions.

This could lead to advances such as programming stem cells for use in personalised medicines, developing bacteria that can detect disease in the gut, or altering the DNA of biofuel crops to enable a higher yield.

Other applications could include tests to detect the multiple changes in cancer cells, creating synthetic viruses to aid the development of more effective vaccines, and engineering cells that can be used to produce novel drugs or clean fuels.

Researchers at the Foundry will design and manufacture genetic material on an unprecedented scale, using highly automated robotics. They will be able to design and build large, complex pieces of DNA code quickly at relatively low cost.

Scientists will seek to build on their research through collaborations with academic partners around the world and to develop commercial applications with industry.

The Foundry, to be established in newly refurbished labs within the University of Edinburgh's School of Biological Sciences, will be supported by £1.8 million from the Biotechnology and Biological Sciences Research Council.

Professor Susan Rosser, co-director of the facility, said: "This further strengthens Edinburgh's position as a leading centre for synthetic biology in the UK. Being able to build DNA on a large scale accelerates our ability to understand how cells and organisms operate."

For further information, please contact:
Catriona Kelly, Press and PR Office, tel 0131 651 4401, email Catriona.Kelly@ed.ac.uk