

SFCPR/03/2011

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Funding boost brings industrially-generated blood closer to reality

The constant search for enough donated blood to meet demand could become a thing of the past, thanks to research into the development of industrially-generated blood funded by the Scottish Funding Council (SFC).

Funding of £2.5 million over five years will go to four Scottish universities – Glasgow, Heriot-Watt, Edinburgh and Dundee, working with Scottish Enterprise and the Scottish Blood Transfusion Service – for this ground-breaking project to generate red blood cells and establish a new bioengineering and manufacturing capacity for Scotland.

The industrial generation of blood from stem cells would end current problems in maintaining supply of blood for transfusion, managing the risk of infection and ensuring compatibility between donor and recipient.

The cutting-edge project, which is unique to the UK, has the potential not only be transformational for public good but also to deliver major economic benefits for Scotland. There is a massive unmet and increasing clinical demand for blood – in the UK alone 2.2 million units of blood are used each year at a cost of around £140 per unit. It is estimated that the UK market could be worth up to £308 million per year and worldwide over £11.2 billion per year (based on an estimate of 80 million units).

Coordinated by the internationally-leading stem cell research team at the University of Glasgow, this collaboration will be multi-disciplinary, with key research teams in the biochemistry, engineering and social science fields.

The funding will support three key posts at Glasgow, Edinburgh and Heriot-Watt universities and contribute towards two further posts at Dundee University and the Innogen Centre within Edinburgh University.

Mark Batho, chief executive of the Scottish Funding Council, said: “The Funding Council is delighted to provide funding for this ground-breaking project. This exciting collaboration aims to provide a solution to a longstanding problem and one that touches many lives; if successful then this will not only be of great benefit for people in Scotland but has the potential also to deliver significant economic gain.”

Joanne Mountford, of the Scottish National Blood Transfusion Service and University of Glasgow, said: “This funding will allow us to really start translating basic laboratory science into industrial processes. One of the main challenges of this project is the very large number of cells that will be needed; therefore we will need to develop new bio-process and engineering solutions alongside the biology. Funding for such cross-disciplinary work is uncommon and we are delighted to receive this investment to truly integrate these approaches.”

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Notes to editors:

- 1 The Scottish Further and Higher Education Funding Council (SFC) is responsible for allocating public funds to colleges and universities in support of Scottish Government priorities. SFC was established by the Scottish Parliament in 2005 and is a non-departmental public body of the Scottish Government.
- 2 The Council’s funding contributes towards the costs of learning and teaching, skills development, research, innovation and other costs such as staff, buildings and equipment in Scotland’s 16 universities and four higher education institutions (HEIs)

(collectively know as the university sector) and 43 further education (FE) colleges. The Council also provides resources to enable colleges to offer bursaries to students on non-advanced courses.

- 3 The Council's mission is to invest in the development of a coherent college and university system which, through enhanced learning, research and knowledge exchange, leads to improved economic, educational, social, civic, and cultural outcomes for the people of Scotland.

For further information please visit our web site at www.sfc.ac.uk