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Edinburgh to lead landmark European Initiative in Stem Cell Research

Scientists from throughout Europe will meet in Edinburgh this week for the launch of an EU-funded research project that will establish foundations for future clinical trials of stem cell therapies. The four year project involves 14 organizations from 8 European countries and will be coordinated from the Institute for Stem Cell Research in Edinburgh.

Stem cells may hold the key to replacing damaged tissue in devastating diseases such as Parkinson's and muscular dystrophies, but more basic information about stem cells is required before they can be tested in the clinic. EuroStemCell is a trans-European research effort to obtain this knowledge for different types of stem cell and investigate their potential for treating degenerative diseases.

The breadth and scale of the EuroStemCell project are unprecedented in the field of stem cell research. For the first time, an integrated team of world-class scientists will compare the basic properties of stem cells from embryonic, foetal and adult tissues and in parallel will evaluate their therapeutic prospects. The project also aims to promote the development of a European stem cell bio-industry that can compete effectively with North America and Japan.

Key scientists taking part in EuroStemCell will be meeting in Edinburgh this week for the launch of the project. Professor Austin Smith, Director of the Institute for Stem Cell Research, University of Edinburgh, who has the task of co-ordinating EuroStemCell says "After all the hype, now is the time to find out whether we can understand stem cells well enough to use them for medical benefit. The EuroStemCell project is very exciting because it unites the very best European stem cell researchers in this challenge. Our common goal is to advance this research from the laboratory towards the clinic."

Professor Anders Bjorklund, Lund University, Sweden, who has pioneered research into stem cell transplantation therapy for Parkinson's disease, is Deputy Coordinator of EuroStemCell. He comments: "We have seen some real benefits in some, but not all, Parkinson's patients who have undergone cell transplantation therapy. We are convinced that the benefits and safety of such treatments can be improved by using properly defined stem cells"

European Funding

EuroStemCell is funded through the European Union's Sixth Framework Programme and more specifically the priority on Life Sciences, Genomics, and Biotechnology for Health, which aims to advance medicine and quality of life for European citizens. The Commission is providing €11.9 million support to the EuroStemCell Project during its four year duration. The 14 participants are from Scotland, England, Sweden, France, Denmark, Italy, Germany, and Switzerland. They comprise universities, research institutes and 3 biotechnology companies. The project was selected after a call for proposals and very positive evaluation by independent experts.

Note to Editors:

European Union's Sixth Framework Programme (FP6). The Framework Programme is the main European instrument for research funding in Europe. FP6 aims to contribute to a true 'European Research Area' (ERA). At the Lisbon summit in March 2000, EU governments called for a better use of European research efforts through the creation of an internal market for science and technology – a 'European Research Area'. FP6 is the financial instrument to help make ERA a reality.

The Institute for Stem Cell Research The Institute for Stem Cell Research is an interdisciplinary research institute focussed on stem cell biology. Building an international reputation in embryonic stem (ES) cell research they have established a co-ordinated programme of research into molecular, cellular and developmental biology of mammalian stem cells. The Institute has recently been awarded MRC funding to develop a new centre of excellence in stem cell biology (www.iscr.ed.ac.uk).

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Important Note: The *EuroStemCell* project includes work on mouse embryonic stem cells and tissue stem cells of mouse and human origin. Research on human embryonic stem cells is not currently included in the project.

Glossary of stem cells:

Stem Cell - unspecialized cell that has the ability to divide for indefinite periods of time, and can also give rise to specialized cell types in the body.

Embryonic stem cell - Stem cells originating from the early embryo that have the potential to make most cell types both in the body and in the laboratory

Adult stem cell - Tissue stem cells taken from adults (i.e. bone marrow, skin, muscle etc.). Tissue stem cells are undifferentiated cells found in a specialized tissue. They have the ability to make a limited range of specialised cell types.

Foetal Stem Cell - Tissue stem cells originating from the foetus that have the potential to make a limited range of specialised cell types.

Regenerative medicine - It is hoped that stem cells will be able to replace/replenish tissue that has been diseased or damaged. For example, in Parkinson's disease for which there is no effective current cure, it is hoped that stem cells will be able to replenish the damaged nerve cells.

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