
The 49th iCeMS SEMINAR

Tue 30 Mar 2010
13:00-14:00

Therapeutic and Research Potential of Human Stem Cells

Lecturer: **Dr. Stephen Minger**

R&D Leader Cell Technologies, GE Healthcare Life Sciences

Venue: Roof Terrace, 5F of the East Building

Institute for Frontier Medical Science, Kyoto University

The real potential of stem cells has never been closer to reality as it is now, both in the therapy field and as an enabling technology in drug research and development. There has been significant interest in the therapeutic and scientific potential of stem cells since reconstitution of the haematopoietic system was first realized by bone marrow transplantation in the 1960s.

On the therapy side, the isolation of tissue-specific, multipotent stem cells from adult organs and the derivation of pluripotent human embryonic stem cells, could offer the potential for regeneration of a number of different tissues and organs susceptible to age-related degenerative conditions and traumatic injury.

While researchers around the world are looking at the possibilities to repair heart tissue damaged by myocardial infarction, to replace neuronal cells lost in Parkinson's and Alzheimer's diseases, to transplant new insulin producing cells for diabetics and myelinating cells for individuals afflicted with multiple sclerosis, and to replace bone and cartilage lost through aging and inflammatory disease, researchers are hoping to revolutionize drug discovery and investigation. The generation of specific populations of defined subtypes of human cells has tremendous potential to enhance the understanding of disease at a cellular level.

Contact: iCeMS Nakatsuji Lab at nakatsuji-g@icems.kyoto-u.ac.jp

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