Skin Research Institute of Singapore (SRIS)

Agency for Science, Technology and Research SINGAPORE | NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE | NATIONAL SKIN CENTRE National Healthcare Group

Seminar Announcement

- All Are Welcome -

Speaker : **Prof Jonathan Slack**
Emeritus Professor, University of Bath, UK.
Emeritus Professor, University of Minnesota, USA.

Title : ***"Stem Cell Therapy of the Eye"***

Date : 28 September 2018 (Friday)
Time : 11:00am – 12:00pm
Venue : Creation Theatrette, Matrix Level 4, Biopolis
Hosts : Prof Birgit Lane
(Chief Scientist, Skin Research Institute of Singapore)

Abstract:
This is a review lecture on an area where modern stem cell technology has been put into practice and is now entering the clinic. It will deal both with corneal grafts and with retinal pigment epithelium grafts. Corneal grafts normally have their epithelium repopulated from stem cells located in the limbal area of the host eye. Limbal cells can be cultivated in vitro and grafted to an autologous eye to repair damage to the epithelium. This therapy is licensed in Europe as "Holoclar". The corneal endothelium does not renew in vivo but can be cultivated and some allografts have been successfully performed in patients. The retinal pigment epithelium (RPE) has many important roles including the recycling of visual pigment, regulating vascular growth, and the removal of debris from the retina. Its proper function is important for preventing age-related macular degeneration. RPE can be made from human pluripotent stem cells and several clinical trials are in progress investigating grafts of these cells for treatment of macular degeneration and associated conditions.

About the Speaker:
Jonathan Slack did his first degree in Biochemistry at Oxford University and his PhD at Edinburgh University. He became interested in the molecular basis of embryonic development, and, while working for the Imperial Cancer Research Fund in 1986, was the first to identify an embryonic inducing factor, fibroblast growth factor, and showed that it had a prominent role in the early development of vertebrate animals. He has subsequently worked on various topics including organogenesis, regeneration and metaplasia.

He moved to the University of Bath in 1995, and was Head of the Department of Biology and Biochemistry from 2000-2006. In 2007 he moved to the University of Minnesota in the USA and until 2013 was Director of its Stem Cell Institute, also holding the Tulloch Chair of Stem Cell Biology. He also previously served on the Scientific Advisory Board of the Institute of Medical Biology in Singapore. Professor Slack has published over 200 research and review papers in scientific journals, and has also written six books. "From Egg to Embryo" served to introduce experimental embryology to molecular biologists. "Egg and Ego" is a light-hearted account of life in academic science. "Essential Developmental Biology" and "The Science of Stem Cells" are textbooks for students. Two titles for the Oxford University Press "Very Short Introduction" series: "Stem Cells" and "Genes", are both introductions for the general public. He is an elected member of the European Molecular Biology Organization (EMBO), was awarded the Waddington Medal of the British Society for Developmental Biology in 2002, and elected a Fellow of the UK Academy of Medical Sciences (FMedSci) in 2004. He no longer runs a research lab but remains active in academic writing and also continues to do some teaching at the University of Bath.