



OIST SEMINAR

Genomics and Regulatory Systems Unit

DATE: Thursday, May 14,

TIME: 13:00-14:00

VENUE: C209, Center Bldg

Speaker: Prof. Mary Collins

Professor of Immunology Head of Division of Advanced Therapies
University College London and National Institute of Biological Standards and Control

http://www.nibsc.org/about_us/staff_profiles/professor_mary_collins.aspx

Title

Gene therapy- progress and predictions

【abstract】

The first clinical gene delivery, which involved insertion of a marker gene into lymphocytes from cancer patients, was published 25 years ago. In this seminar I shall summarize progress since then in gene therapy. Patients with some inherited single gene defects can now be treated with their own bone marrow stem cells that have been engineered with a viral vector carrying the missing gene. Patients with inherited retinopathies and haemophilia B can also be treated by local or systemic injection of viral vectors. There are also a number of promising gene therapy approaches for cancer and infectious disease. Work in my lab has focused on developing safe and efficient viral vectors; I will discuss recent work and current challenges.

【Biography】

Mary Collins studied Biochemistry at Cambridge University then moved to London to work with Enrique Rozengurt on cell signalling at the Imperial Cancer Research Fund for her PhD. Collins worked as a post-doctoral fellow on molecular immunology with Av Mitchison at University College London, then worked with Richard Mulligan at the Whitehead Institute, MIT, during the early days of retroviral vector development. She continued working with these vectors when she started her own research team at the Institute of Cancer Research in London in 1987. Together with Robin Weiss and Yasuhiro Takeuchi, the Collins group initiated a programme of viral vector development for gene therapy. They solved problems of vector inactivation by human complement, vector safety and vector production from stable producer cell lines. Collins moved to UCL as Professor of Immunology in 1997. From 2005 to 2015 she was Director of the MRC Centre for Medical Molecular Virology. After heading the Division of Infection and Immunity at UCL for 10 years, Collins was Dean of the Faculty of Life Sciences at UCL from 2009 until 2014. In September 2014 Collins took up a secondment at the National Institute for Biological Standards and Control to head a new Division of Advanced Therapies, their remit is to facilitate the deployment of safe and effective gene therapy, stem cell therapy and engineered tissue.
