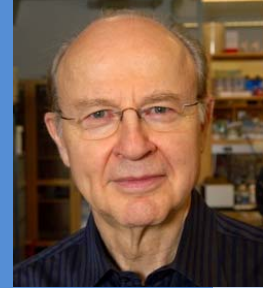


CANCER SCIENCE INSTITUTE OF SINGAPORE DISTINGUISHED SPEAKERS' SERIES 2012

Prof Robert G. Roeder

Laboratory of Biochemistry and Molecular Biology,
The Rockefeller University



Transcriptional Regulatory Mechanisms in Animal Cells

Date: Friday, 17 February 2012

Time: 11am – 12pm

Venue: Clinical Research Centre (CRC) Auditorium @ MD 11
10 Medical Drive, Singapore 117597

Host: Prof Fu Xin-Yuan

Abstract:

Transcriptional regulation by gene- and cell-specific DNA-binding factors underlies key events in development and in cell growth, differentiation and transformation. However, their effects on specific genes depend upon complex arrays of cofactors (coactivators and corepressors) that add additional layers of regulation. These cofactors include both chromatin remodeling/histone modifying factors and other factors that facilitate more direct communication between promoter-bound regulatory factors and the general transcription machinery. Emphasizing biochemical approaches, the function of selected cofactors will be discussed in relation to gene regulation by tumor suppressor p53, nuclear hormone receptors, E-proteins, or leukemogenic fusion proteins.

Biography:

Professor Robert G Roeder is a pioneer in research on eukaryotic transcription. He originally discovered the three different mammalian RNA polymerases I-III. He has pioneered studies on the cell-free reconstitution of the transcription process which has resulted in the discovery and characterization of basal transcription factors (such as the TATA box binding TFIID complex). Roeder also discovered the first mammalian gene-specific activator, called TFIIA and more recently general and cell type-specific transcriptional coactivator proteins. Roeder has received numerous prestigious scientific awards (e.g. the Albert Lasker Award for Basic Medical Research in 2003) and is a member of the National Academy of Sciences of USA.