細胞機能科学セミナー

生物物理北海道支部・HSI2019 後援

来聴歓迎

Study of developmental processes by Fluorescence Correlation Spectroscopy

Dr. Dimitrios K Papadopoulos
Human Genetics Unit (HGU) Institute of Genetics and Molecular Medicine (IGMM) University of Edinburgh

開催日時:2019　年　9 月 11 日(水)　11 時～

場所:北海道大学　北キャンパス　シオノギ棟一階

要旨：During the development of multicellular organisms, cells and tissues need to be specified (commit themselves to a certain developmental programme) with very high precision, at the correct time and space. Certain genes encoding Transcription Factors bind the genome and regulate expression of genes, required for cell and tissue differentiation. To do this, these proteins need to interact with the chromosomal DNA, find specific sequences to which they can bind (called transcriptional enhancers), loop the chromatin, interact with other important transcriptional enzymes and allow gene transcription to proceed. The absolute amounts, stoichiometries of the protein complexes and dynamic behaviour of these regulatory molecules are very important, but they remain largely unknown. However, we know that when too much or too little amount of Transcription Factors is present in cells, this leads to developmental abnormalities and disease. This lecture will discuss various systems in which Fluorescence Correlation Spectroscopy allows to study the concentration, diffusion properties and chromatin binding behaviour of Transcription Factors and why this is so important for developmental biology, genetics and the study of human disease.

主催：北海道大学先端生命科学研究院　細胞機能科学研究室
問合せ先：金城 政孝
Tel: 706-9006　E-mail:Kinjo@sci.hokudai.ac.jp