

IMCB Invited Speaker



Speaker : Dr. Xavier Gidrol,
*Director of Research, Head of Laboratoire Biomixs,
CEA (Atomic Energy Commission), Inserm U1038,
Grenoble, France*

Date : 21 January 2013 (Monday)

Time : 11:00AM - 12:00PM

Venue : Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Host : Prof. Wanjin Hong

Seminar :

Cell-based microsystems for high-content screening in oncology; a translational approach

To analyze the phenotypic consequences of perturbation in mammalian cells with drugs, RNAi or expression vectors there are increasing needs for systematic cell-based high content screening (HCS) approaches. Although several groups are performing HCS screening in human cell lines, the real challenge in translational research remains screening on a reduced number of primary cells directly obtained from patients in a microenvironment that would resemble the original tissues. While standard monolayer two-dimensional culture conditions are poor mimics of the cellular environment in-situ, microfabricated systems enable three-dimensional organotypic cell cultures and have the potential to provide biological insight not achievable before. We use microfluidics and MEMS (MicroElectroMechanical Systems) to systematically analyze the phenotypic consequences of genetic perturbations (High throughput and high content RNA interfering-based screens) on cells from patients, in 2D or 3D cultures. More specifically we address the following issue: What are the genetic and microenvironmental determinants that control the proliferation/differentiation balance and carcinogenesis in prostate cells?

About the Speaker :

Xavier Gidrol received his PhD in Molecular and Cell Biology from Aix-Marseille University in 1984. He performed post-doctoral research at Harvard School of Public Health and at the Institute of Molecular and Cell Biology (NUS) Singapore. He was specialized in transcriptional regulation of gene expression.

He got a tenure position at INRA France, and then served as Associate Director of R&D at Xenometrix Inc. in Boulder Colorado where he got interested in global approaches and genomics. He then joined the newly created Functional Genomics Laboratory at France's Atomic Energy Commission (CEA) in Paris and managed it until recently. This laboratory used large scale functional genomics approaches to analyze proliferation/differentiation balance in human cells. In 2009 he was appointed director of a new laboratory, "Biomixs" at CEA in Grenoble, using microsystems for cell biology, where he focuses on large scale RNAi screen in oncology.