IMCB Invited Speaker



Speaker : **Dr. Federico Calegari**
Group Leader, Proliferation and Differentiation of Neural Stem Cells, Center for Regenerative Therapies Dresden (CRTD), Germany

Date : 21 August 2012 (Tuesday)

Time : 11:00AM - 12:00PM

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

Host : Dr. Philipp Kaldis

Seminar :

Conditional expansion of neural stem cells in the mammalian brain

During mammalian brain development, increasing proportions of neural stem and progenitor cells (NSC) swtich from divisions that generate additional NSC (expansion) to divisions that generate fate restricted neurogenic progenitors and postmitotic neurons (differentiation). Thus, manipulating the switch of NSC from expansion to differentiation may allow us to increase the number of neurons generated in the developing brain. We found that this switch can be temporally controlled by acute manipulations that lengthened/shortened the G1 phase of the cell cycle of NSC and developed a numbers of tools that allow us to temporally control their expansion versus differentiation in the embryonic and adult brain. Our findings will be discussed in the context of i) stem cell contribution to tissue formation, ii) control of brain size during development and evolution, iii) the role of adult neurogenesis in tissue homeostasis and cognitive function and iv) therapy.

About the Speaker :

Dr. Federico Calegari earned his Master's Degree in University of Milano, Italy in 1998. He was a Visiting scientist in University of Heidelberg, Germany and obtained his Ph.D in 2000. He join Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG) for his Postdoc training and continued as a staff scientist till 2006. He has been a Group Leader at Center for Regenerative Therapies Dresden (CRTD), Germany since 2007.

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