



Institute of
Molecular and
Cell Biology

SEMINAR ANNOUNCEMENT

DATE: 8 March 2012, Thursday
TIME / VENUE: 11:00AM @ Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis
SPEAKER: Prof. Christopher Heeschen
TITLE OF SEMINAR: **Identifying the Achilles heel of metastatic cancer stem cells**



Stem cells play a crucial role in the generation and maintenance of adult tissues, but emerging evidence suggests that they are also key elements in the development and progression of malignancies. Many solidcancers harbour a distinct subpopulation of cancer cells that bear stem cell features and are therefore termed cancer stem cells. Cancer stem cells are exclusively tumorigenic and essential drivers for tumour progression and metastasis. Tumours do not only contain one homogeneous population of cancer stem cells, rather than harbour diverse subpopulations including metastaticcancer stem cells that may have evolved during tumour progression. Clinically even more important, however, is the observation that cancer stem cells are highly resistant to chemo- and radiotherapy resulting in their relative enrichment during standard treatment and rapid relapse of the disease. By in-depth characterization of these cells in their biological context including the tumour microenvironment, we are aiming for a better understanding of their regulatory machinery. In this process, novel imaging, sorting and drug delivery modalities in conjunction with clinically most relevant cancer stem cells models are being utilized. These studies bear the potential to pave the way for developing novel platforms for targeted theragnostics and may eventually help improving the prognosis of patients suffering from these deadly diseases.

Host: Prof. Wang Yue

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