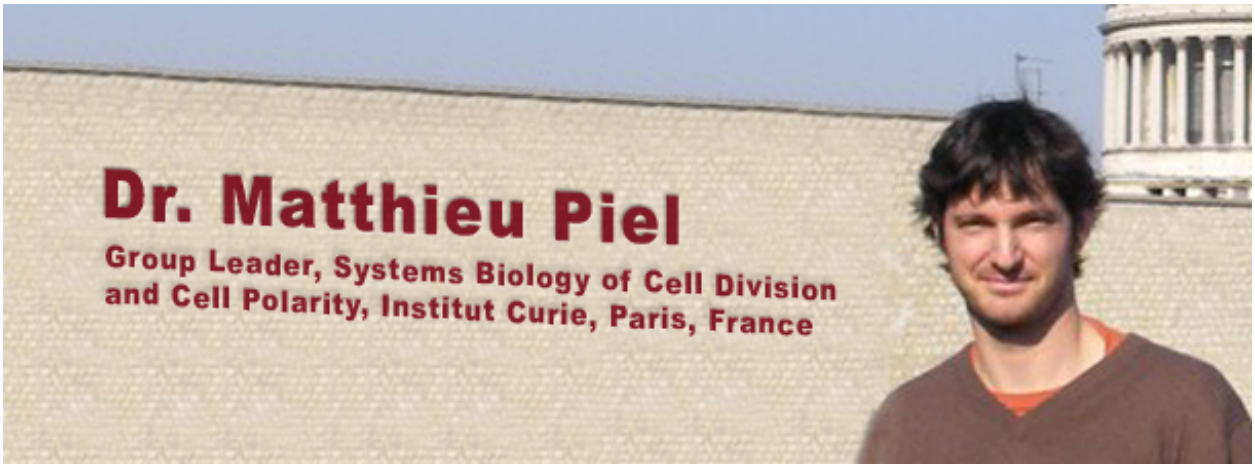
Institute of Molecular and Cell Biology

A*STAR

SEMINAR ANNOUNCEMENT

DATE:	22 February 2012, Wednesday
TIME / VENUE:	11:00AM @ Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis
SPEAKER:	Dr. Matthieu Piel
TITLE OF SEMINAR:	**Migration of Dendritic Cells**



Dendritic cells are the sentinelles of the immune system. These cells collect antigens and pathogens in peripheral tissues to then present then to T cells in lymph nodes, triggering the adaptive immune response. To achieve this function, they combine impressive migration capacity with uptake of large amounts of fluids through macropinocytosis. This migration and uptake take place in dense tissues, like the skin. Dendritic cells thus have to constantly deform and squeeze to move and extend protrusions through tiny gaps without disrupting the tissue. In this presentation I will present recent results we obtained showing that efficient antigen uptake requires transient slow down of the cell, which has important implication for the optimal tissue scanning strategy of these cells. I will also show more biophysical experiments aiming at understand how cells move when they are confined, and in particular how they can squeeze their nucleus throug small gaps and switch from adhesion based/lamellipodial to friction based/amoeboid migration depending on confinement and substrat adhesion properties.

Host: Dr. Frederic Bard

For upcoming seminars in IMCB, please visit our website at
http://www.imcb.a-star.edu.sg/php/seminars.php