

Molecular Biotechnology Center (MBC)

Department of Molecular Biotechnology and Health Sciences



SIBBM LECTURE

Sponsored by the Società italiana di Biofisica e Biologia Molecolare

Venerdì 4 dicembre 2015 ore 14:00

Molecular Biotechnology Center

Aula Darwin

Prof. Bart Vanhaesebroeck

UCL Cancer Institute, London (UK)

**"Isoforms of PI 3-kinase:
from the bench to the clinic"**

Ospiti: Valeria Poli and Emilio Hirsch

Prof. Vanhaesebroeck CV

Following a PhD from the Laboratory of Molecular Biology at Ghent University, Belgium (with Johan Grooten and Walter Fiers), Bart Vanhaesebroeck carried out postdoctoral studies at the Ludwig Institute for Cancer Research (with Mike Waterfield, FRS) at University College London (UCL), supported by a long-term Career Development Award from the NFWO (Belgian National Science Foundation; now: FWO, Fonds voor Wetenschappelijk Onderzoek, Flanders). Bart Vanhaesebroeck became Professor at UCL in 2005, and moved to Barts Cancer Institute, Queen Mary University of London in 2007. In 2014, BV became Professor of Cell Signalling at the UCL Cancer Institute. Professor Bart Vanhaesebroeck is a leading expert in cell signalling – the molecular messages that are sent between and within cells. These signals control how cells behave, but they are often faulty in cancer. Professor Vanhaesebroeck's work is forming the foundations for research into drugs that can block the faulty signals, which could be a powerful way to treat cancer in the future.

Recent main publications:

Guillemet-Guibert, J., Smith, L. B., Halet, G., Whitehead, M. A., Pearce, W., Rebourcet, D., . . . Vanhaesebroeck, B. (2015). Novel Role for p110 β PI 3-Kinase in Male Fertility through Regulation of Androgen Receptor Activity in Sertoli Cells. *PLoS Genetics*, 11 (7).

Ali, K., Soond, D. R., Piñeiro, R., Hagemann, T., Pearce, W., Lim, E. L., ..Vanhaesebroeck, B. (2014). Inactivation of PI(3)K p110 δ breaks regulatory T-cell-mediated immune tolerance to cancer. *Nature*. doi:10.1038/nature13444

Aksoy, E., & Vanhaesebroeck, B. (2014). p110 β PI3K isoform regulates microcrystals phagocytosis and crystal- mediated inflammasome activation in autoinflammatory disease. *IMMUNOLOGY*, 143, 120-121.

Blair, T. A., Moore, S. F., Williams, C. M., Poole, A. W., Vanhaesebroeck, B., & Hers, I. (2014). Phosphoinositide 3-kinases p110 α and p110 β have differential roles in insulin-like growth factor-1-mediated AKT phosphorylation and platelet priming. *Arteriosclerosis, Thrombosis, and Vascular Biology*. doi:10.1161/ATVBAHA.114.303954

Aksoy, E., Taboubi, S., Torres, D., Delbaue, S., Hachani, A., Whitehead, M. A., . . . Vanhaesebroeck, B. (2012). The p110 δ isoform of the kinase PI(3)K controls the subcellular compartmentalization of TLR4 signaling and protects from endotoxic shock. *Nat Immunol*, 13 (11), 1045-1054.

Foukas, L. C., Berenjeno, I. M., Gray, A., Khwaja, A., & Vanhaesebroeck, B. (2010). Activity of any class IA PI3K isoform can sustain cell proliferation and survival. *Proc Natl Acad Sci U S A*.