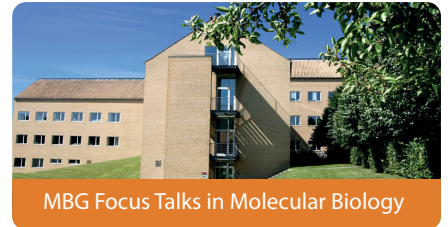


MBG FOCUS TALK

hosted by Ditlev E. Brodersen



Friday 14 December, 10.15 am

Science Park Conference Room (3130-303)

Francesco Bisiak

EMBL Grenoble, France

Structural studies of the Roundabout and Uncoordinated-5 receptors

The creation of complex networks, like the neuronal or vascular systems, relies on ligand-receptor interactions that mediate attraction or repulsion towards specific targets. This process, called guidance, is mediated by seven families of receptors and their respective ligands, which influence each other and can act on the neuronal system, the vascular system or both.

Robo4 and UNC5B are two single-pass transmembrane proteins, respectively part of the Roundabout and Uncoordinated-5 receptor families, that are majorly involved in angiogenesis. We investigated the interaction between Robo4 and UNC5B, and used synthetic antibodies to probe the structure of the extracellular domain of Robo4 to improve crystallisation chances. We observed that the previously described direct interaction between Robo4 and UNC5B, might not be as simple as originally thought, and we present the novel crystal structure of the almost complete extracellular domain of UNC5B.

All welcome