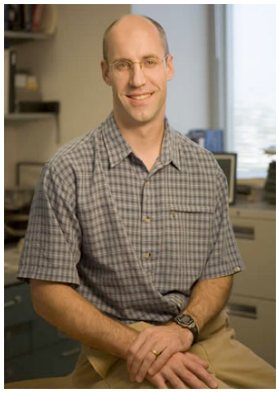
LES CONFÉRENCES DE L'ICM



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Hosted by Brahim NAIT-OUMESMAR
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Dwight BERGLES - October 3, 2011 at 11:00

Fate and function of oligodendrocyte precursor cells in health and disease

The mammalian CNS contains an abundant, widely distributed population of glial cells that expresses the chondroitin sulfate proteoglycan NG2 (CSPG4) and the alpha receptor for PDGF (PDGFaR). Although initially defined as a class of astrocytes, studies completed over the past two decades indicate that these $NG2^+$ cells represent a third class of macroglia, with physiological properties distinct from astrocytes and oligodendrocytes. Fate tracing studies indicate that these glial cells serve as progenitors for oligodendrocytes (OLs) during early development, and thus are often referred to as oligodendrocyte precursor cells (OPCs). OPCs remain abundant in both gray and white matter after myelinated tracts have been established, accounting for approximately 5% of all cells in the mature CNS, and they retain the ability to proliferate throughout life, suggesting that they may play important roles in cell regeneration and tissue repair. Over the past several years we have developed transgenic mice that have allowed us to manipulate gene expression within these progenitors, track their fate, monitor their dynamics on timescales of minutes to months *in vivo*, and selectively ablate these cells from the adult CNS. I will discuss our recent studies using these new tools, which are providing new insight into the behavior of these enigmatic glial cells in a variety of injury and disease contexts.

Lundi 3 octobre 2011 à 11H00 / Auditorium de l'ICM
Hôpital Pitié-Salpêtrière, 47 boulevard de l'hôpital - 75013 Paris