The microenvironment of oligodendrocyte precursor cells in CNS regeneration
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The problem
What prompts OPCs to start repair?

Hypothesis
The local microenvironment regulates OPC function
Determining components of the OPC environment will lead to identification of new drug targets in MS
Model 2

Primary OPCs *in vitro*

Characterise effects of ECM candidates on OPC function

- Known molecules linked to MS
- New targets from ECM screen
- High throughput analysis of cell differentiation

Model 1

Focal demyelination *in vivo*

Identify candidates which influence the OPC response to demyelination

- Visualisation of the OPC microenvironment
- Isolation of OPCs by laser capture microdissection
- Expression screen for ECM receptors

Unbiased Screen

Target based assays