

## **P2.16.**

### **Isolation and characterization of radial glia-like neural stem cells from different regions of adult mouse brain**

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Previously we have found that preferential adhesion to a novel synthetic peptide, AK-cyclo[RGDfC] provides a unique method for the selective isolation of neural stem cells from embryonic mouse brain. These radial glia-like neural stem/progenitor cells proliferate without any differentiation on the peptide-covered surfaces under serum-free culture conditions in the presence of EGF as the only growth factor supplement. They can give rise to all the major neural cell types, as neurons, astrocytes and oligodendrocytes if the appropriate inductive signals are applied. Recently we have found that a similar method enables the isolation of radial glia-like progenitors from the adult mouse brain. Besides the well-known neurogenic regions of the adult brain (as the subependymal zone of the lateral ventricles and the hippocampus), we were able to select multipotential cells from distinct regions of the brain (as the neocortex and the midbrain) as well. We have established one-cell derived clones from the populations derived from the different brain regions and compared their gene expression profile, regional characteristics and their differentiation potential.