Project: Initial Training Network for Neurological Disorders orchestrated by cytokines (NeuroKine)

Research Topic: Characterization of the cytokine secretion profile of highly purified, activated astrocytes

Astrocytes, a population of CNS-resident cells, have been found to play multiple roles in neuroinflammation and neurodegeneration. We hypothesize that subpopulations of reactive astrocytes exist in the inflamed CNS with distinct cytokine/chemokine or growth factor secretion profile and perform different roles in disease development and recovery.

The aim of the project is first, to characterize cytokines and chemokines as well as growth factors produced by reactive astrocytes under inflammatory conditions in vitro and in vivo; and second, to identify different subpopulations of astrocytes with characteristic cytokine/chemokine or growth factor profiles and distinct surface markers. The final goal is to purify different subpopulations of astrocytes and investigate their gene expression profile and functions in neuroinflammation and neurodegeneration.

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