The potential role of microglia in neuroprotection and depression

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In my group we are interested to understand how microglia communicate with neurons in the healthy and diseased brain. Specifically we are interested about how endangered neurons inform microglia about their current status and have identified a variety of signals that threatened neurons release to ask for microglia aid. To understand how microglia respond to these signals and how these responses influence neuronal function was central to our work in the last decade. To address these questions we have been using an interdisciplinary approach ranging from molecular biological techniques, to organotypic brain slice cultures, animal disease models and the generation of cell specific, inducible transgenic mouse lines. We have mainly been working in mouse disease models for neuropathic pain, stroke, Alzheimers disease and more recently depression.

Selected Publications


