

Biographical Sketch Taoufik

My long-standing research interest is the study of cellular mechanisms that underlie neurodegeneration and neuroinflammation in CNS pathologies. My early work focused on the interactions between the immune and the central nervous system, trying to understand how they co-operate at the molecular and cellular level to maintain brain homeostasis, under physiological as well as pathological conditions such as Multiple Sclerosis (MS) and stroke, by implementing advanced methodologies in mouse transgenesis and gene targeting, CNS and immune cell type cultures, molecular biology and cell signaling. Within this framework I established brain ischemia, trauma and epilepsy models in rodents that were employed in both basic research projects and R&D pre-clinical studies. Since 2013, I expanded my research in another neurological disease, Parkinson's, where I have focused on the in-depth understanding of disease mechanisms, by using *in vivo* and *in vitro* systems that model an inherited and familial form of the disease. By integrating omics approaches with advanced imaging and molecular biology tools, I anticipate to exploit both animal and cellular models to evaluate and identify novel disease-modifying therapeutics, allowing basic knowledge of disease molecular events to be translated into promising therapeutics for PD and other associated disorders.