Localized low-level inflammation is also commonly observed in the Alzheimer’s disease (AD) brain and it was recently identified as a potentially important driving force in the pathogenesis of AD. The macrophage migration inhibitory factor (MIF) is a pleiotropic, pro-inflammatory cytokine expressed in different tissues and cells, including in the CNS, and plays a central regulatory role in the immune response. Increased MIF expression was found in microglia around cerebral amyloid plaques, and MIF has been linked to the toxicity of aggregated amyloid β, and to tau hyperphosphorylation, the hallmarks of AD pathology. Combining in vitro and animal studies with clinical research in patients with AD, we aimed at better understanding the possible role of neuroinflammation in general and MIF as a potential key player in particular, on the pathogenesis and clinical manifestation of AD.

Selected publications:

