Lille Neuroscience & Cognition

# SEMINAIRE 2025

**19 Septembre 14h30**

**Biserte**
Meeting Room

## Invitée par le l'équipe TREND


## Dr. Cécile Delarasse
(Institut de la Vision, Paris)


## Macrophages in retinal diseases


In the healthy retina, immune privilege is maintained through tightly regulated microglial activity and efficient clearance of infiltrating inflammatory cells. Disruption of this balance triggers microglial activation and accumulation of activated mononuclear phagocytes (MPs) in the subretinal space, leading to chronic inflammation. In age-related macular degeneration (AMD) - a leading cause of irreversible central vision loss in the elderly - this persistent inflammation drives two key pathological features: photoreceptor degeneration and choroidal neovascularization. In non-infectious autoimmune uveitis (responsible for 5-10% of global blindness cases), retinal-specific T cells initiate an inflammatory cascade that recruits pro-inflammatory MPs, ultimately resulting in the characteristic retinal tissue damage.

Our research aims to define the specific contributions of these immune cells in ocular diseases. Notably, we have demonstrated that splenic monocytes are particularly pathogenic in AMD models, where their recruitment is mediated by angiotensin II signaling. In models of autoimmune uveitis, we have shown that microglia and monocyte-derived macrophages (MdM) play distinct roles. Moreover, targeting the purinergic receptor P2X7 in these cells can modulate the pathogenic activity of autoreactive T cells.

Our research has revealed promising therapeutic targets capable of regulating both the activation and recruitment of pathogenic immune cells involved in ocular diseases.


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