TITLE: Not just corpse removal: How microglial phagocytosis maintains tissue homeostasis

AUTHORS: Amanda Sierra

AFFILIATION: Achucarro Basque Center for Neuroscience, Leioa, Spain

Microglia are the brain professional macrophages and they efficiently remove dead cells and other forms of cell debris, both during development and in pathological conditions. But what happens to microglia after engulfing and degrading apoptotic cells? In this talk, I will argue that phagocytosis is not a dead-end process but rather the begging of a new life for microglia. I will discuss that the events triggered in microglia by phagocytosis have an impact on the surrounding tissue, using as a model the adult neurogenic cascade, where microglia engulfs the excess of newborn cells. We are currently learning how phagocytosis affects microglial metabolism, transcription, and cell function, with the goal of developing pharmacological approaches to harness microglial phagocytosis in the diseased brain.