



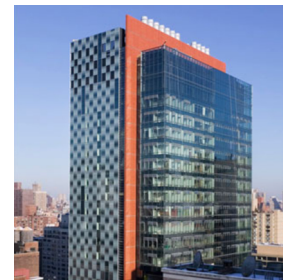
PROGRESS IN NEUROSCIENCE PINS

Seminar Series of the
Brain & Mind Research Institute
Weill Cornell Medical College (WCMC)
&

The Graduate Program in Neuroscience of
WCMC and Sloan Kettering Institute

Thursday, 9/28/17, 4 PM, coffee at 3:45 PM

Weill Auditorium



“Soma4c Mosaicism in Embryonic Erythro-myeloid Progenitors causes late onset Neurodegenera4ve Disease”

Frederic Geissmann, MD, PhD, Member, Immunology Program, Memorial Sloan
Kettering Cancer Center



Abstract

A scientific literature that covers 150 years of research indicates that macrophages, found in most tissues and conserved across metazoans, participate to the niches that support development and homeostasis of specialized tissues cells. This is the case of microglia in the brain. Our laboratory investigates the mechanisms that underlie the development, maintenance, functions and diseases of these specialized tissue-resident macrophages. Here we will present data supporting the novel hypothesis that somatic mosaicism in the resident macrophage lineage is a cause of late-onset neurodegenerative disease, driven by mutant microglial clones.

Recent Relevant Publications:

1. Schulz C, Gomez Perdiguero E, Chorro L, Szabo-Rogers H, Cagnard N, Kierdorf K, Prinz M, Wu B, Jacobsen SE, Pollard JW, Frampton J, Liu KJ, Geissmann F. A lineage of myeloid cells independent of Myb and hematopoietic stem cells. *Science*. 2012;336(6077):86-90. PMID: 22442384
2. Gomez Perdiguero E, Klapproth K, Schulz C, Busch K, Azzoni E, Crozet L, Garner H, Trouillet C, de Bruijn MF, Geissmann F*, Rodewald HR. (note F. Geissmann is the corresponding author). Tissue-resident macrophages originate from yolk-sac-derived erythro-myeloid progenitors. *Nature*. 2015 (7540):547-51. Epub 2014 Dec 3. PMID: 25470051
3. Mass E, Ballesteros I, Farlik M, Halbritter F, Günther P, Crozet L, Jacome-Galarza CE, Händler K, Klughammer J, Kobayashi Y, Gomez-Perdiguero E, Schultze JL, Beyer M, Bock C, Geissmann F. Specification of tissue-resident macrophages during organogenesis. *Science*. 2016; 353(6304). PMID: 27492475



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