Mai Eva NGUYEN CHI

Dr. Mai Eva NGUYEN CHI is a Researcher at CNRS, in the laboratory of Pathogen-Host Interaction (LPHI) of Montpellier. Member of the Team of Dr Georges Lutfalla, she investigates the mechanisms underpinning macrophage polarization. Her group makes use of the Zebrafish (*Danio rerio*) model to visualize in real time the dynamics of macrophage activation and to better understand the signaling pathways linked to the infectious and inflammatory diseases. Mai began her career with a PhD in Molecular and Developmental Biology from University of Toulouse before moving in 2009 to the Australian Regenerative Medicine Institute in Melbourne where she undertook a post-doctorate investigating the genetic events that occur during muscle development in zebrafish. Then, in 2011, she moved to LPHI, Montpellier, where she studied innate immune response to bacterial infection and started to develop transgenic zebrafish lines to track polarized macrophages *in vivo*. She continued her research in IRMB, Montpellier, to study the role of Macrophages during regeneration before being appointed to her academic position in LPHI in 2016.

Role of Specialized Pro-resolving mediators in macrophage behavior and function during wound healing in zebrafish: a visual proof

Abstract

Tissue damage triggers a rapid and robust inflammatory response in order to clear and repair a wound. Remarkably, key players of wound healing are macrophages which adopt different polarization states during the inflammatory response to influence other lineages at the wound site. While transcriptional profile of individual macrophages has been intensively studied in healthy and diseased tissues, how macrophages constantly adapt to local cues, switching behaviour and shape of individual cells in highly dynamic scenarios is less understood. Here we used the zebrafish larva as a translucent and genetically tractable model to track macrophages in living vertebrates. In this study, we deciphered the role of polyunsaturated fatty acid metabolism pathways and derived metabolites, the Specialised Pro-resolving Mediators (SPM), in the control of macrophage behaviour and function during inflammation *in vivo*.