Valérie WITTAMER, Ph.D.

Group Leader (FNRS Research Associate).

BACKGROUND

I studied at Université Libre de Bruxelles (ULB) in Belgium and obtained my PhD at the IRIBHM under the supervision of Pr. Parmentier. My PhD work led to the deorphanization of ChemR23, an G protein-coupled receptor specifically expressed on mononuclear phagocytes, and to the identification of chemerin, a new immune player with chemotactic properties.

I then joined the team of Dr Traver at University of California at San Diego (UCSD) to study macrophage biology in the zebrafish. There, I generated novel zebrafish antigen-presenting cell (APC) reporter lines that target fluorescent marker proteins under the control of MHC-II and IgM promoter elements. This enabled the thorough characterization of APC identity, localization and function, thus providing new insights into zebrafish mononuclear phagocyte cell subtypes and B cell populations. Since, at the time, the zebrafish had only started to rapidly inform a great deal of mammalian immunity and blood cell development, the generation of such novel marker lines represented a much-needed advance in the field.

Since 2014, I am a Group Leader at the Interdisciplinary Research Institute (IRIBHM) at the Université Libre de Bruxelles (ULB), Belgium. The research of my team aims at providing novel insights into the development and functions of mononuclear phagocytes, with a focus on microglia, the resident macrophages of the central nervous system.

AWARDS

2020	Action de Recherche Concertée (ARC) – Intramural competitive Grant
2018	Large Equipment Grant – FNRS
2018	Incentive Grant for Scientific Research (MIS) – FNRS
2015	Starting Grant – Welbio
2013	Return Grant – Brains Back to Brussels (Innoviris)
2007	Postdoctoral fellowship – EMBO long-term fellowship
2005	Galien Prize of Pharmacology, Belgium
2005	Belgium Biotechnology Researcher Award

MEMBERSHIPS

- Belgian Society for Neuroscience (BSN) + ULB representative to the BSN Board (since 2018)
- Zebrafish Disease Models Society (ZDMS)
- International Zebrafish Society (IZFS)
- EuFishBioMed
- International Society for Experimental Hematology (ISEH)
- Belgian Society for Cell and Developmental Biology (BSCDB)
- Belgian Immunological Society (BIS)
- Belgian Society for Stem Cell Research (BeSSCR)
- Federation of European Neuroscience Societies (FENS)

SELECTED PUBLICATIONS

- **Wittamer V** & Bertrand JY. Yolk sac hematopoiesis: does it contribute to the adult hematopoietic system? *Cell Mol Life Sci*, 2020

- Kuil LE, Oosterhof N, Ferrero G, Mikulášová T, Hason M, Dekker J, Rovira M, van der Linde HC, van Strien PM, de Pater E, Schaaf G, Bindels EM, **Wittamer V*** & van Ham TJ*. Zebrafish macrophage developmental arrest underlies depletion of microglia and reveals Csf1r-independent metaphocytes. *eLife*, 2020

- Ferrero G, Gomez E, Iyer S, Rovira M, Miserocchi M, Langenau DD, Bertrand JY & **Wittamer V** The macrophage-expressed gene (mpeg) 1 identifies a subpopulation of B cells in the adult zebrafish. *J Leukoc Biol*, 2020

- Ferrero G, Mahony CB, Dupuis E, Yvernogeau L, Di Ruggiero E, Miserocchi M, Caron M, Robin C, Traver D, Bertrand JY & **Wittamer V**. Embryonic microglia derive from primitive macrophages and are replaced by *c-myb*-dependent definitive microglia in zebrafish. *Cell Reports*, 2018

- Page DW*, **Wittamer V***, Bertrand JY, Pratt DN, Delgado N, Schale SE, McGue C, Jacobsen BH, Doty A, Pao Y, Yang H, Chi NC, Magor BG, Traver D. An evolutionarily conserved program of B cell development and activation in zebrafish. *Blood*, 2013

- **Wittamer V***, Bertrand JY*, Gutschow PW, Traver D. Characterization of the mononuclear phagocyte system in zebrafish. *Blood*, 2011

- Luangsay S*, **Wittamer V***, Bondue B, De Henau O, Rouger L, Brait M, Franssen JD, de Nadai P, Huaux F, Parmentier M. Mouse ChemR23 is expressed in dendritic cell subsets and macrophages, and mediates an anti-inflammatory activity of chemerin in a lung disease model. *J Immunol*., 2009

- Guillabert A*, **Wittamer V***, Bondue B, Godot V, Imbault V, Parmentier M, Communi D. Role of neutrophil proteinase 3 and mast cell chymase in chemerin proteolytic regulation. *J Leukoc Biol*, 2008

- **Wittamer V**, Bondue B, Guillabert A, Vassart G, Parmentier M, Communi D. Neutrophil-mediated maturation of chemerin: a link between innate and adaptive immunity. *J Immunol*, 2005

- **Wittamer V**, Grégoire F, Robberecht P, Vassart G, Communi D, Parmentier M. Short peptides derived from the mature chemerin C-terminus activate the ChemR23 receptor with low nanomolar potency. *J Biol Chem*, 2004

- **Wittamer V**, Franssen JD, Vulcano M, Mirjolet JF, Le Poul E, Migeotte I, Brézillon S, Tyldesley R, Blanpain C, Detheux M, Mantovani A, Sozzani S, Vassart G, Parmentier M, Communi D. Specific recruitment of antigen-presenting cells by chemerin, a novel processed ligand from human inflammatory fluids. *J Exp Med*, 2003