Microglial lipid metabolism: a delicate balance

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List of publications

Targeting Endocannabinoid Signaling: FAAH and MAG Lipase Inhibitors
van Egmond, N.*; Straub, V.M.*; van der Stelt, M. *Annu. Rev. Pharmacol. Toxicol.* **2021**, 61, 441-463 *Authors contributed equally

Stimulus-dependent modulation of endocannabinoid metabolism in N9 microglia*
van Egmond, N.; Jalink, L.; van der Vliet, I.A.C.M.; van der Vliet, D.; Henselijn, A.; de Ridder, M.; Gagestein, B.; Stevens, A.F.; van Kasteren, S.I.; van der Stelt, M.
Manuscript in preparation. *Working title

A role for ABHD12 in microglial phagocytosis of myelin debris*
van Egmond, N.; van der Vliet, I.A.C.M.; van der Vliet, D.; van der Wel, T.; Gagestein, B.; Di, X.; Stevens, A.F.; van Kasteren, S.I.; van der Stelt, M.
Manuscript in preparation. *Working title

Foamy microglia link oxylipins to disease progression in multiple sclerosis
van der Vliet, D.; Di, X.; Shamorkina, T.M.; Pavlovic, A.; van der Vliet, I.A.C.M.; Zeng, Y.; Macnair, W.; van Egmond, N.; Chen, J.Q.A.; van den Bosch, A.M.R.; Engelenburg, H.J.; Mason, M.R.J.; Coulon-Bainier, C.; Gagestein, B.; Dusseldorp, E.; van Eijk, M.; Grether, U.; The Netherlands Brain Bank; Harms, A.C.; Hankemeier, T.; Collin, L.; Heck, A.J.R.; Huitinga, I.; van der Stelt, M. *BioRxiv*. **2024**, https://doi.org/10.1101/2024.10.18.619040

The endocannabinoid 2-arachidonoylglycerol is released and transported on demand via extracellular microvesicles
Straub, V.M.; Barti, B.; Tandar, S.T.; Stevens, A.F.; van der Wel, T.; Zhu, N.; Rüegger, J.; van Egmond, N.; van der Horst, C.; Heitman, L.H.; Li, Y.; Stella, N.; van Hasselt, J.G.C.; Katona, I.; van der Stelt, M. *PNAS*. **2025**, 122 (8), e2421717122

Curriculum vitae

Noëlle van Egmond was born on July 18th, 1995 in Rijnsburg, the Netherlands. After graduating high school at Visser 't Hooft Lyceum Leiden in 2013, she obtained a propaedeutic diploma in 2014 from Leiden University in Pedagogical Sciences. In 2014, she pursued a Bachelor in Life Science & Technology at Leiden University and Delft University of Technology. For her minor, she enjoyed an Erasmus+ exchange programme at the Chalmers University of Technology (Göteburg, Sweden) and followed courses from the Master programme Biotechnology. She completed her Bachelor in 2017 with a research project on the role of PCDHβ5 in myogenic fusion of human primary muscle cells, which was performed at the Leiden University Medical Centre in the Facioscapulohumeral muscular dystrophy (FSHD) group of Prof. dr. Silvere van der Maarel under the supervision of Dr. Amanda Mason.

The same year, she continued her academic studies at Leiden University with a Master in Life Science & Technology and specialized in Research and Development, from which she graduated in 2019. During this program, she performed her major research project in the Chemical Biology & Immunology group of Prof. dr. Sander van Kasteren on the development of a T-cell based calcium flux assay to determine on-cell epitope uncaging kinetics under the supervision of Dr. Anouk van der Gracht.

In December 2019, she started her doctoral studies in the Molecular Physiology group (Leiden University) under the guidance of Prof. dr. Mario van der Stelt and Prof. dr. Sander van Kasteren, working on microglial lipid biology. In 2020, she obtained the Article 9 certificate from Utrecht University. In her fourth year, she performed a 9-month RiSE Internship at the Pharma Research and Early Development (pRED) department of F. Hoffman-La Roche in Basel, Switzerland under the guidance of Dr. Ludovic Collin and Dr. Florian Wanke, working on lipid metabolism in human iPSC-derived microglia as described in Chapter 7 of this thesis. As part of the graduate program, she completed a course on scientific conduct. Parts of the work described in this thesis were presented in the form of posters at the International Cannabinoid Research Society Symposium (Galway, 2022), the Cannabinoid Function in the CNS Gordon Research Seminar and Conference (GRS/GRC, Barcelona, 2023) and the Microglia Meeting (Groningen, 2024). An oral presentation was given at the GliaNed (Groningen, 2024).

In April 2025, she started as Postdoc in the group of Medical Neuroscience for Neurodevelopmental Disorders (Radboud University Medical Centre, Nijmegen) under the guidance of Dr. Lot de Witte.