

CURRICULUM VITAE

Morgane S. Thion

Born on March 19th 1987, French Nationality

2 children born in 2019 and 2020

E-mail: thion@biologie.ens.fr

EDUCATION

- 2010-2014** PhD in cellular and molecular physiopathology, Orsay (France)
University Paris XI, Institut Curie, CNRS UMR3306, Inserm U1005
- 2007-2010** Ecole Normale Supérieure (ENS) diploma, Paris (France)
- 2008-2010** Master in cellular biology and physiology with honors, University Paris XI (France)

ADDITIONAL TRAININGS

- 2017** Animal Experimentation Training, Level I (Inserm-UPMC)
- 2019** Animal Experimentation Training, Surgical Technique

RESEARCH EXPERIENCE

- Since 2018** CNRS research fellow, IBENS, Paris (France)
- 2014-2018** Post-doctoral training with Sonia Garel, IBENS, Paris (France)
- 2010-2014** PhD with Sandrine Humbert, Institut Curie, Orsay (France)
- 2010** Internship in Sandrine Humbert's laboratory, Orsay (France)
- 2009** Internship in Marie-Françoise Chesselet's laboratory, UCLA, Los Angeles (United States)
- 2008** Internship in Fatiha Nothias's laboratory, University Paris VI, Paris (France)

TEACHING ACTIVITIES AND SCIENTIFIC ANIMATION

- 2022** Microglia Lecture, Masterclass ABC-Immunology PSL (PSL, Paris, France)
- 2022** Microglia Lecture, Master (Helsinki University, Helsinki, Finland - Virtual)
- 2018** Opération DECLICS (Lycée Jacques Decour, Paris, France)
- 2017** Opération DECLICS (Lycée Jean Lurcat, Paris, France)
- 2017** Correction of the competitive written exam of Biology for École Normale Supérieure and the École Nationale des Ponts et Chaussées
- 2011-2013** Undergraduated teaching - Paris Sud XI University (Châtenay Malabry, France)
- 2007** Instructorship - Pierre and Marie Curie University (Paris, France)

SUPERVISING ACTIVITIES

PhD co-supervision

- Since 2021** Co-supervision of Nicolas Olivié with Pr Sonia Garel (IBENS, Paris)
- Since 2020** Co-supervision of Claire Lansonneur with Dr Laura Cantini (IBENS, Paris)
- Since 2019** Co-supervision of Cécile Brildance with Pr Sonia Garel (IBENS, Paris)

Technical staff

- Since 2021** Supervision of Sarah Viguier, IE
- 2019-2020** Supervision of Seiki Achiedo, AI (1 year)
- 2015-2018** Supervision of Pauline Grisel, AI (3 years)

Undergraduates

Maria Brandão (2011), Lucie Thibault (2011), Ioana Genescu (2016), Cécile Brildance (2018), Nicolas Olivié (2020)

COLLECTIVES ACTIVITIES AND RESPONSABILITIES

- Since 2022** Member of the French Glial Cell Club – Head of Communication
- Since 2022** Member of the “GDR Microglia & Inflammation”

COLLABORATIONS

Pr Florent Ginhoux, Singapore Immunology Network, Singapore
Pr Mélanie Greter, University of Zurich, Switzerland
Dr Esther Klingler, University of Geneva, Switzerland
Dr Isabelle Ferezou, Institut NeuroPSI, France
Dr Diana Zala, IPNP, France

PRIZES AND AWARDS

2018 Price from l'Académie Française « Les grandes avancées françaises en biologie »
2013 Price for PhD work from « Association avec les femmes d'action » (Alfa)

FELLOWSHIPS

2017 ISDN Fund scholarship
2016 Merlion fellowship from Programme PHC Merlion (Partenariat Hubert Curien)
2016 Keystone Symposia Future of Science Fund scholarship
2014 PhD research fellowship from the "Association de la Recherche contre le cancer" (ARC)
2010-2013 PhD fellowship from the Ministry of National Education
2010 Student fellowship from the "Association des Anciens Elèves de l'Institut Pasteur" (AAEIP)
2008-2010 Two years merit-based scholarship from the French government

INDEPENDENT FUNDING OF RESEARCH

2020 FRC « Maternal microbiota: Microglia and Brain Development » (80k€ over 2 years)

PEER REVIEW ACTIVITY

Development, Science, Journal of Comparative Neurology, Neuron, Journal of Neuroscience, Cell, eLife

SELECTED ORAL PRESENTATION IN NATIONAL AND INTERNATIONAL MEETINGS

2021 Aviesan "Brain-Microbiota" (Paris, France)
2021 NeuroFrance 2021 (Virtual)
2020 International Symposium on Human Genetics and Medical Genomics (Montrouge, France)
2018 ISDN 22nd Biennial Meeting (selected abstract) (Nara, Japan)
2018 Fyssen Foundation "News insights into neuro-glia communication" (Paris, France)
2017 "Reverse Engineering the Developing Brain" (selected abstract) (Geneva, Switzerland)
2016 Keystone symposia "Microglia in the brain" (selected abstract) (Colorado, USA)
2013 13th symposium of the Ecole Doctorale 425 "Innovations Thérapeutiques : du fondamental à l'appliqué" (Kremlin-Bicêtre, France)
2013 Young Scientist Retreat (Cadaques, Spain)
2013 Young Researchers in Life Sciences (Paris, France)

PUBLICATIONS

publications as last author; § publications as corresponding author; *,# equal contributions; IF: Impact Factor.

ARTICLES

Lawrence A, Canzi A, Bridlance C, Olivie N, Lansonneur C, Munro D, Boido D, Oller G, Squarzone P, Candat A, Allet C, Thieffry D, Cantini L, Pridans C, Priller J, Gélot A, Giacobini P, Ciobanu L, Ginhoux F, **Thion MS***, Lokmane L* and Garel S* (*equal last authors) (2022) Microglia are required for brain integrity during embryonic morphogenesis. *In preparation*.

Shin Park D*, Kozaki T*, Kumar Tiwari S, Moreira M, Khalilnezhad A, Torta F, Liani O, Olivie N, Silvin A, Phoo WW, Gao L, Trieb A, Kong WT, Zhang XM, Dunsmore G, Dutertre CA, Lee S, Ong JM, Balachander¹, Khalilnezhad AS, Lum J, Duan K, Lim ZM, Tan L, Low I, Utami KH, Yeo XY, Di Tommaso S, Dupuy JW, Varga B, Karadottir RT, Malleret B, Binte ZY, Wei Da N, Tan Y, Wong WJ, Zhang J, Chen J, Sobot RM⁷, Howland SW, Guan Ng L, Saltel F, **Thion MS**, Pasqualini C, Sangyong J, Wenk MR, Pouladi MA, Cexus ONF and Ginhoux F (2022) iPSC-derived microglia export cholesterol to neuronal cells in human brain organoids and promote their maturation. *Nature*, *in revision* (IF: 49.9)

Silvin A, Uderhardt S, Piot C, Da Mesquita S, Yang K, Geirsdottir L, Mulder K, Eyal D, Liu Z, Bridlance C, **Thion MS**, Zhang XM, Kong WT, Deloger M, Weiner A, Ee R, Dress R, Hang JW, Balachander A, Chakarov S, Malleret B, Dunsmore G, Cexus O, Chen J, Garel S, Barron AM, Dutertre CA, Amit I, Kipnis J and Ginhoux F (2022) Dual ontogeny of disease-associated microglia and disease inflammatory macrophages in ageing and neurodegeneration. *Immunity*, in press (IF: 31.7)

§ **Thion MS**[§], Garel S[§]. (2020) Microglial ontogeny, diversity and neurodevelopmental functions. *Review. Curr Opin Genet Dev.* 65:186-194 (IF:5.6)

Utz SG, See P, Muldenberger W, **Thion MS**, Silvin A, Lutz M, Ingelfinger F, Arul Rayan N, Lelios I, Buttgerit A, Asano K, Prabhakar S, Garel S, Becher B, Ginhoux F, Greter M (2020) Early fate defines microglia and non-parenchymal brain macrophage development. *Cell.* 181(3):557-573.e18, (IF: 41.6)

§ **Thion MS**^{*,§}, Mosser CA^{*}, Férézou I, Grisel P, Baptista S, Low D, Ginhoux F, Garel S^{§,#}, Audinat E^{§,#}. (2019) Biphasic Impact of Prenatal Inflammation and Macrophage Depletion on the Wiring of Neocortical Inhibitory Circuits. *Cell Reports.* 28(5):1119-1126, (IF: 9.4)

§ **Thion MS**[§], Ginhoux F, Garel S[§]. (2018) Microglia and early brain development: An intimate journey. *Review. Science.* 362(6411):185-189, (IF: 47.7)

Post-doctoral work

Thion MS^{*}, Low D^{*}, Silvin A, Chen J, Grisel P, Schulte-Schrepping J, Blecher R, Ulas T, Squarzoni P, Hoeffel G, Couplier F, Siopi E, Sophie David F, Scholz C, Shihui F, Lum J, Amayo AA, Larbi A, Poidinger M, Buttgerit A, Lledo PM, Greter M, Chan HKY, Amit I, Beyer M, Schultze JL, Schlitzer A, Pettersson S, Ginhoux F[§], Garel S[§]. (2018) Microbiome influences prenatal and adult microglia in a sex-specific manner. *Cell.* 172(3):500-516. (IF: 41.6)

§ **Thion MS** and Garel S. (2018) Microglia under the spotlight: activity and complement-dependent engulfment of synapses. *Review. Trends Neurosci.* 41(6):332-334. (IF: 12.2)

§ **Thion MS** and Garel S. (2018) Microbiome and microglia: prenatal and postnatal interactions diverge according to sex. *Review. Med Sci.* 34(6-7):527-529. (IF: 0.8)

Takata K^{*}, Kozaki T^{*}, Lee CZW[#], **Thion MS**[#], Otsuka M, Lim S, Utami KH, Fidan K, Park DS, Malleret B, Chakarov S, See P, Low D, Low G, Garcia-Miralles M, Zeng R, Zhang J, Goh CC, Gul A, Hubert S, Lee B, Chen J, Low I, Shadan NB, Lum J, Wei TS, Mok E, Kawanishi S, Kitamura Y, Larbi A, Poidinger M, Renia L, Ng LG, Wolf Y, Jung S, Önder T, Newell E, Huber T, Ashihara E, Garel S, Pouladi MA, Ginhoux F. (2017) Induced-Pluripotent-Stem-Cell-Derived Primitive Macrophages Provide a Platform for Modeling Tissue-Resident Macrophage Differentiation and Function. *Immunity.* 47(1):183-198. (IF: 22.9)

§ **Thion MS** and Garel S. (2017) On place and time: microglia in embryonic and perinatal brain development. *Review. Current Opinion in Neurobiology.* 47:121-130. (IF: 6.8)

de Frutos CA, Bouvier G, Arai Y, **Thion MS**, Lokmane L, Keita M, Garcia-Dominguez M, Charnay P, Hirata T, Riethmacher D, Grove EA, Tissir F, Casado M, Pierani A and Garel S. (2016) Reallocation of olfactory Cajal-Retzius cells shapes neocortex architecture. *Neuron.* 92(2): 435-448. (IF: 15.8)

Squarzoni P, **Thion MS**, Garel S. (2015) Neuronal and microglial regulators of cortical wiring: usual and novel guideposts. *Review. Frontiers in Neurosciences.* 9:248. (IF: 3.6)

Doctoral work

Thion MS and Humbert S. (2018) Cancer: from wild-type to mutant huntingtin. *Review. J Huntington Disease.* 7(3):201-208. (IF:1.1)

Coarelli G, Diallo A, **Thion MS**, Rinaldi D, Calvas F, Lagha Boukbiza O, Tataru A, Charles P, Tranchant C, Marelli C, Ewencyk C, Tchikviladzé M, Monin ML, Carlander B, Anheim M, Brice A, Mochel F, Tezenas du Montcel S, Humbert S, and Durr A. (2017) Low cancer prevalence in polyglutamine expansion diseases. *Neurology.* 88(12):1114-1119. (IF: 8.3)

Thion MS, Tézenas du Montcel S, Golmard JL, Vacher S, Barjhoux L, Sornin V, Cazeneuve C, Bièche I, Sinilnikova O, Stoppa-Lyonnet D, Durr A and Humbert S. (2016) CAG repeat size in *Huntingtin* alleles is associated with cancer prognosis. *European Journal of Human Genetics.* 24(9):1310-5. (IF: 4.3)

Thion MS, Humbert S. (2016) Beyond the brain: huntingtin in breast cancers. *Review. Médecine Sciences.* 32(8-9):674-7. (IF: 0.8)

Thion MS, McGuire JR, Moreira Sousa C, Fitament J, Fuhrman L, Le Boucher S, Mehlen P, Bièche I, Vincent-Salomon A and Humbert S. (2015) Unraveling the role of huntingtin in breast cancer metastasis. *Journal of the National Cancer Institute.* 107(10). (IF: 13.5)

Elias S, **Thion MS**, Yu H, Sousa CM, Lasgi C, Morin X, Humbert S. (2014) Huntingtin regulates mammary stem cell division and differentiation. *Stem Cell Reports.* 2(4):491-506. (IF: 7.5)

Moreira Sousa C, McGuire JR, **Thion MS**, Gentien D, de la Grange P, Tezenas du Montcel S, Vincent-Salomon A, Durr A, Humbert S. (2013) The Huntington disease protein accelerates breast tumour development and metastasis through ErbB2/HER2 signaling. *EMBO Molecular Medicine.* 5(2):309-25. (IF: 9.5)