

# CURRICULUM VITAE

## Pierre Le Merre, PhD

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Date of Birth : 20/08/1987



## CURRENT POSITION

**2017 (September) - present, Post-doctoral researcher** at Karolinska Institutet, lab of Marie Carlén (KI, Stockholm, Sweden).

## PREVIOUS POSITION

**2017 (January to June), Post-doctoral researcher** at the École Polytechnique Fédérale de Lausanne, lab of Carl Petersen (EPFL, Lausanne, Switzerland).

## EDUCATION

**2012- 2016, PhD degree in Neurosciences** : Thesis title: *Cortical dynamics and sensory processing in the awake mouse - impact of the behavioral context..* Thesis co-directed between the University of Lyon by Paul Salin (CRNL, Lyon, France) and the École Polytechnique Fédérale de Lausanne by Carl Petersen (EPFL, Lausanne, Switzerland) and Sylvain Crochet (EPFL, Lausanne, Switzerland). Defended the 16th of December 2016.

**2009-2012, Master's degree of Biosciences (MSc)** at the École Normale Supérieure of Lyon. Graduated with honors.

**2009-2010, Agrégation des Sciences de la Vie, de la Terre et de l'Univers** (french national teacher grade in Biology and Geology), ranked 5th.

**2007-2008, Bachelor's degree in Fundamental Biology (BSc)** at the École Normale Supérieure of Lyon.

**2005-2007** Two-year high of selective classes of Biology, Chemistry, Physics and Earth Sciences to prepare for the competitive exams to the Grandes Ecoles at the Lycee Camille Guerin, Poitiers (France).

**2004-2005, Scientific Baccalaureat** with a very good pass (17,6 / 20) at the Lycee Jean Giraudoux, Bellac (Haute-Vienne), France.

## SUPERVISION AND TEACHING

**2017-present** Supervision of 7 Master students during the postdoc.

**2012-2016** Supervision of 4 Master students during the PhD.

**2012-2016 - Teaching Assistant**, University of Lyon and École Normale Supérieure (64h per year).

## COURSES AND MEETINGS

**2018** Attendee - Neuropixels course, UCL, London.

**2020** Organizer - NeuroSessions: *Large-scale neuronal recordings: advances and challenges in analysis methodology*. KI, Stockholm. Speakers: Alon Rubin, Emil Wärnberg, Alex Cayco Gajic, Will Allen and Andrew Peters.

**2021** Organizer - Brain Circuit Course, KI, Stockholm. Main confirmed speakers: Nick Steinmetz, Laura Busse, Gabrielle Girardeau and Anna Beyeler.

**2022** Organizer - Brain Circuit Course, KI, Stockholm. Main confirmed speakers: Nelson Totah, Jonathan Whitlock, Gabrielle Girardeau and Anna Beyeler.

## TALKS AND POSTERS

**2022** - Talk at GDR NeuralNet, Lyon (France)

**2022** - Poster at FENS, Paris (France)

**2020** - Virtual poster at FENS, Glasgow (Scotland)

**2019** - Poster at GDR multielectrodes, Bordeaux (France)

**2018** - Talk at Computational Properties of the Prefrontal Cortex, Nashville (U.S.A)

**2017** - Poster at SFN, Washington DC (U.S.A)

**2016** - Poster at FENS, Copenhagen (Denmark)

**2015** - Poster at SFN, Chicago (U.S.A)

**2014** - Poster at GDR multielectrodes, Gif sur Yvette (France)

**2013** - Poster at GDR multielectrodes, Bordeaux (France)

**2012** - Poster at GDR multielectrodes, Marseille (France)

## GRANTS AND AWARDS

**2022-2023** Karolinska Institutet fonder - 110 900 SEK

**2020** StratNeuro Postdoc Grant 1 yr, 750 000SEK

**2019-2021** NARSAD Young Investigator Award (2019) 2 yrs, 35 000 \$ / year (1\$ 9,4 SEK)

**2019**, NVIDIA GPU Grant program.

**2018-2019**, Karolinska Institutet fonder - 93 400 SEK.

**2015**, Fellowship, International Mobility Fellowship Lyon-St Etienne (PALSE).

## PUBLICATIONS

**2022** Calvignoni D.\* , Fuzik J.\* , **Le Merre P.\*** , Slashcheva M., Jung F., Ortiz C., Lentini A., Csillag V., Graziano M., Nikolakopoulou I., Weglage M., Lazaridis I., Kim H., Lenzi I., Park H., Reinius B., Carlén, M., Meletis, K. *Esr1+ hypothalamic-habenula neurons shape aversive states*. BioRxiv.

**2021 Le Merre, P.**, Ährlund-Richter S., and Carlén, M. *The mouse prefrontal cortex: Unity in diversity*. Neuron, 109.

**2020** Llorens-Bobadilla, E., Chell, J. M., **Le Merre, P.**, Wu, Y., Zamboni,M., Bergenstråhle, J., Stenudd, M., Sopova, E., Lundeberg, J., Shupliakov, O., Carlén, M., Frisén, J. *A latent lineage potential in resident neural stem cells enables spinal cord repair*. Science 370 (6512).

**2018 Le Merre, P.**, Esmaeili, V., Charriere, E., Galan, K., Salin, P.-A., Petersen, C.C.H., and Crochet, S. *Reward-Based Learning Drives Rapid Sensory Signals in Medial Prefrontal Cortex and Dorsal Hippocampus Necessary for Goal-Directed Behavior*. Neuron, 97, 83- 91.e5.

**2016** Fernandez L.M.J., Comte J.C., **Le Merre P.**, Lin J.S., Salin P.A. and Crochet S. *Highly dynamic spatiotemporal organization of low-frequency activities during behavioral states in the mouse cerebral cortex*. Cereb Cortex. 27, 5444-5462.

**2012** Enjin, A., Leao, K.E., Mikulovic, S., **Le Merre, P.**, Tourtellotte, W.G., and Kullander, K. *Sensorimotor function is modulated by the serotonin receptor 1d, a novel marker for gamma motor neurons*. Mol Cell Neurosci 49, 322-332.

\* equal contribution

## ANIMAL EXPERIMENTATION CERTIFICATES

**2017** Approval to carry out animal experimentation on rodents in Sweden granted by the LAS E & T unit.

**2016** Introductory Course in Laboratory Animal Science : Legislation and permit - Ethics - 3R methods. Organized by the Swiss Federation of Cantonal Veterinary Surgeons.

**2014** Level 1 Animal Experimentation (FELASA C) - Ethics and good practices for animal experimentation delivered by the University of Lyon.

## **INFORMATIC SKILLS**

Exploitation systems : Windows, Apple and Linux.

Softwares - Coding : Julia - Matlab (Mathworks), Python, Igor Pro (Wavemetrics), LabView (National Instruments), L<sup>A</sup>T<sub>E</sub>X, Illustrator (Adobe), HTML5, CSS3.

## **OTHER INFORMATION**

Languages : French (native speaker), English (fluent), Spanish (conversational), Swedish (notions).

Driving Licence (B)

Interests: Travelling, DJ and electronic music producer, Short movie director.

Sports : Running, Hiking, Badminton.