



Gil Vantomme

Postdoctoral Scholar, Neurology and Neurological Sciences

 Curriculum Vitae available Online

Bio

BIO

Gil Vantomme, PhD

Postdoctoral Fellow, Stanford University

Dr. Vantomme is a neuroscientist specializing in electrophysiology and neural circuit dynamics. His research focuses on understanding the role of thalamocortical networks in cognition and neurological disorders, including epilepsy and autism spectrum disorders. Leveraging innovative in vitro and in vivo electrophysiological assays, Dr. Vantomme investigates the mechanisms underlying cognitive deficits and explores novel therapeutic strategies, including drug development and neuromodulation.

HONORS AND AWARDS

- Faculty Prize for an outstanding doctoral thesis work, Faculty of Biology and Medicine, University of Lausanne (September 2021)
- Early Postdoc Mobility grant, Swiss National Science Foundation (July 2021)
- Poster Prize, 7th European Synapse Meeting (September 2019)
- Travel Grant, Jean Falk-Vairant Foundation (March 2018)
- Travel Grant, Swiss Society for Neurosciences (July 2017)
- Travel Grant, Life Science Switzerland (July 2016)
- Poster Prize, Life Sciences Switzerland (February 2016)
- Poster Prize, University of Lausanne (October 2014)

PROFESSIONAL EDUCATION

- BMED, University of Mons , Medicine (2012)
- MSc, University of Lausanne , Medical Biology (2015)
- PhD, University of Lausanne , Neurosciences (2020)

STANFORD ADVISORS

- John Huguenard, Postdoctoral Faculty Sponsor

LINKS

- LinkedIn profile: <https://www.linkedin.com/in/gil-vantomme-45a9019b/>
- Huguenard lab: <https://huguenard-lab.stanford.edu/wp1/>

Research & Scholarship

LAB AFFILIATIONS

- John Huguenard, HLab (2/1/2021)

Publications

PUBLICATIONS

- **The reuniens thalamus recruits recurrent excitation in the medial prefrontal cortex.** *Proceedings of the National Academy of Sciences of the United States of America*
Vantomme, G., Devienne, G., Hull, J. M., Huguenard, J. R.
2025; 122 (11): e2500321122
- **Region-selective control of the thalamic reticular nucleus via cortical layer 5 pyramidal cells** *NATURE NEUROSCIENCE*
Hadinger, N., Bosz, E., Toth, B., Vantomme, G., Luethi, A., Acsady, L.
2023; 26 (1): 116-+
- **Noradrenergic circuit control of non-REM sleep substates** *CURRENT BIOLOGY*
Osorio-Forero, A., Cardis, R., Vantomme, G., Guillaume-Gentil, A., Katsioudi, G., Devenoges, C., Fernandez, L. J., Luthi, A.
2021; 31 (22): 5009-+
- **Genetic, cellular and structural characterization of the membrane potential-dependent cell-penetrating peptide translocation pore.** *eLife*
Trofimenko, E., Grasso, G., Heulot, M., Chevalier, N., Deriu, M. A., Dubuis, G., Arribat, Y., Serulla, M., Michel, S., Vantomme, G., Ory, F., Dam, L. C., Puyal, et al
2021; 10
- **A Thalamic Reticular Circuit for Head Direction Cell Tuning and Spatial Navigation** *CELL REPORTS*
Vantomme, G., Rovo, Z., Cardis, R., Beard, E., Katsioudi, G., Guadagno, A., Perrenoud, V., Fernandez, L. J., Luethi, A.
2020; 31 (10): 107747
- **Regulation of Local Sleep by the Thalamic Reticular Nucleus** *FRONTIERS IN NEUROSCIENCE*
Vantomme, G., Osorio-Forero, A., Luethi, A., Fernandez, L. J.
2019; 13: 576
- **Thalamic reticular control of local sleep in mouse sensory cortex** *ELIFE*
Fernandez, L. J., Vantomme, G., Osorio-Forero, A., Cardis, R., Beard, E., Luthi, A.
2018; 7
- **Cortical afferents onto the nucleus Reticularis thalami promote plasticity of low-threshold excitability through GluN2C-NMDARs** *SCIENTIFIC REPORTS*
Fernandez, L. J., Pellegrini, C., Vantomme, G., Beard, E., Luthi, A., Astori, S.
2017; 7: 12271
- **Quantifying Infra-slow Dynamics of Spectral Power and Heart Rate in Sleeping Mice** *JOVE-JOURNAL OF VISUALIZED EXPERIMENTS*
Fernandez, L. J., Lecci, S., Cardis, R., Vantomme, G., Beard, E., Luthi, A.
2017