

Mojtaba Bandarabadi, PhD

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Postgraduate/Education

- Senior researcher, March 2020 - Now, Department of Biomedical Sciences, University of Lausanne, Switzerland.
 - o Role of subcortical brain structures in vigilance states regulation. Prof. Tafti's lab
- Postdoc, Feb. 2018 - Feb. 2020, Department of Biomedical Sciences, University of Lausanne, Switzerland.
 - o Developing *in vitro* models of sleep. Supervisor: Prof. Mehdi Tafti
- Postdoc, March 2015 - Jan. 2018, Center for Experimental Neurology, University Hospital of Bern, Switzerland.
 - o Neurocircuits of sleep-wake cycle and sleep oscillations. Supervisor: Prof. Antoine Adamantidis
- PhD, March 2010 - Feb. 2015, Department of Informatics Engineering, University of Coimbra, Portugal.
 - o *Thesis (summa cum laude)*: Low-complexity measures for epileptic seizure prediction and early detection based on classification. Supervisor: Prof. Antonio Dourado

Experience

- Lecturer, Sept. 2015 - June 2019, Department of Neurology, University Hospital of Bern, Switzerland.
- Visiting scholar, Sept. 2012 - Jan. 2013, Department of Biomedical Engineering, University of Minnesota, USA.
- Research assistant, March 2010 - June 2011, FP7 EPILEPSIAE project, University of Coimbra, Portugal.

Grant

- Novartis Young Investigator Grant as PI (80'000 CHF), 2021-2022, The Novartis Foundation, Switzerland.
- SNSF Spark Grant as PI (100'000 CHF), 2020-2021, Swiss National Science foundation (SNSF), Switzerland.
- PhD fellowship, 2011-2015, Portuguese Foundation for Science and Technology, Portugal.

Membership. European Sleep Research Society (ESRS); Federation of European Neuroscience Societies (FENS); European Biological Rhythms Society (EBRS); Swiss Society of Sleep Research; Swiss Society of Neuroscience.

Selected publications

1. Bandarabadi M., Li S., Aeschlimann L., Colombo G., Tzanoulinou S., Tafti M., ... Vassalli A. "Inactivation of hypocretin receptor-2 signaling in dopaminergic neurons induces hyperarousal and enhanced cognition but impaired inhibitory control", *ResearchSquare*, 10.21203/rs.3.rs-2938625/v1 (2023).
2. Holm A., Possovre M., Bandarabadi M., Moseholm K., Justinussen J., . . . Tafti M., Kornum B. "The evolutionarily conserved miRNA-137 targets the neuropeptide hypocretin/orexin and modulates the wake to sleep ratio", *PNAS*, 119, e2112225119 (2022).
3. Czekus C., Steullet P., Lopez A., Bozic I., Rusterholz T., Bandarabadi M., . . . Herrera C. "Alterations in TRN- anterodorsal thalamocortical circuits affect sleep architecture and homeostatic processes in oxidative stress vulnerable Gclm(-/-) mice", *Molecular Psychiatry*, 1-13 (2022).
4. Bandarabadi M., Herrera C., Gent T., Bassetti C., Schindler K., Adamantidis A. "A role for spindles in the onset of rapid eye movement sleep", *Nature Communications*, 11, 5247 (2020).
5. Facchin L., Schone C., Mensen A., Bandarabadi M., Pilotto F., . . . Bassetti C., Adamantidis A. "Slow waves promote sleep-dependent plasticity and functional recovery after stroke", *Journal of Neuroscience*, 40, 8637-51 (2020).
6. Bandarabadi M., Vassalli A., Tafti M. "Sleep as a default state of cortical and subcortical networks", *Current Opinion in Physiology*, 15, 60-7 (2020).
7. Oesch L., Gazea M., Gent T., Bandarabadi M., Herrera C., Adamantidis A. "REM sleep stabilizes hypothalamic representation of feeding behavior", *PNAS*, 117, 19590-8 (2020).
8. Bandarabadi M., Boyce R., Herrera C., Bassetti C., Williams S., Schindler K., Adamantidis A. "Dynamic modulation of theta-gamma coupling during rapid eye movement sleep", *SLEEP*, 42, 1-11 (2019).
9. Miladinovic D., Muheim C., Bauer S., Spinnler A., Noain D., Bandarabadi M., . . . Buhmann J. "SPINDLE: End-to-end learning from EEG/EMG to extrapolate animal sleep scoring across experimental settings, labs and species", *PLoS Computational Biology*, 15, e1006968 (2019).
10. Gent T., Bandarabadi M., Herrera C.G., Adamantidis A. "Thalamic dual control of sleep and wakefulness", *Nature Neuroscience*, 21, 974-84 (2018).