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Jéssica Winne

EDUCATION

- 2017-2022 PhD. Neuroscience Brain Institute, Federal University of Rio Grande do Norte, Brazil
Supervisor: Dra. Emelie Katarina Svahn Leao.
Thesis title: "Electrophysiological correlates of sound processing in the limbic pathways and implications for tinnitus-related anxiety"
- 2018-2020 Sandwich PhD. Uppsala University, UPPSALA, Sweden. External supervisor: Dr. Klas Kullander.
- 2014-2016 MSc. Neuroengineering, Edmond and Lily Safra International Institute of Neurosciences, IIN-ELS, Brazil. Supervisor: Dr. Mariana Ferreira Pereira de Araújo.
Thesis title: "Electrophysiological characterization of the mesolimbic circuit in mice".
- 2011 - 2013 Scientific Initiation. Supervisor: Dr. Bruno Lobão Soares. Federal university of Rio Grande do Norte, Natal-RN, Brazil
- 2013-2015 BS. Electrical engineering, Federal University of Rio Grande do Norte, Brazil (not complete)
- 2008-2012 BS. Psychology, Federal University of Rio Grande do Norte, Brazil

PUBLICATIONS

1. **Winne, Jessica**; Boerner, Barbara C. ; Malfatti, Thawann ; Brisa, Elis ; Doerl, Jhulimar ; Nogueira, Ingrid ; Leão, Katarina E. ; Leão, Richardson N. . Anxiety-like behavior induced by salicylate depends on age and can be prevented by a single dose of 5-MeO-DMT. *EXPERIMENTAL NEUROLOGY*, v. 326, p. 113175, 2020. 2.
2. Moulin, Thiago C. ; Petiz, Lyvia L. ; Rayêe, Danielle ; **Winne, Jessica** ; Maia, Roberto G. ; Lima da Cruz, Rafael; Amaral, Olavo B. ; Leão, Richardson N. Chronic in vivo optogenetic stimulation modulates neuronal excitability, spine morphology, and Hebbian plasticity in the mouse hippocampus. *HIPPOCAMPUS*, v. 2019, p. DOI: 10.1002/hi, 2019. 3.
3. **Winne, J.**, Franzon, R., de Miranda, A., Malfatti, T., Patriota, J., Mikulovic, S., ... & Leão, R. N. (2019). Salicylate induces anxiety like behavior and slow theta oscillation and abolishes the - relationship between running speed and fast theta oscillation frequency. *Hippocampus*, 29(1), 15- 25.
4. França, a.s.c.; Lobão-Soares, B.; Muratori, L.; Nascimento, G.; **Winne, J.**; Pereira, C.M.; Jeronimo, S.; Ribeiro, S. D2 dopamine receptor regulation of learning, sleep and plasticity. *European Neuropsychopharmacology.*, v.25, p.493 - 504, 2015.
5. **Winne, Jéssica**; Teixeira, Leslie; Pessoa, Jéssica; Gavioli, Elaine Cristina; Soares-Rachetti, Vanessa; André, Eunice; Lobão-Soares, Bruno. There is more to the picture than meets the rat: A study on rodent geometric shape and proportion preferences. *Behavioural Brain Research.*, v.284, p.187 - 195, 2015.

Preprint:

6. Ingrid Nogueira, **Jessica Winne**, Thiago Z Lima, Thawann E Malfatti, Richardson N Leao, Katarina E Leao. Loud noise exposure differentially affects subpopulations of auditory cortex pyramidal cells. doi: <https://doi.org/10.1101/2020.08.25.264200>, 2020.

7. **Winne, Jessica**; Nascimento, George ; Nogueira, Ingrid ; Leão, ; Leão, Richardson N.; Katarina E. Leão. Calcium imaging and analysis of the mice hippocampus or neocortex using miniature microendoscopes. Doi: <https://doi.org/10.48550/arXiv.2110.00609>

Manuscript:

8. **Winne, Jessica**; Nascimento, George ; Nogueira, Margareth ; Leão, Katarina E. ; Leão, Richardson N. (in final prep.) A non-canonical auditory pathway modulate theta oscillations and place cell activity in the hippocampus.

SCHOLARSHIPS

- Coordenadoria de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) 2017 – 2021
- Coordenadoria de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) 2014 -2016
- Scholarship National Council for Scientific Technological Development (CNPq) 2011- 2013

TECHNICAL EXPERTISE

- **In vivo Calcium Imaging:** recordings using miniaturized microscopes (Miniscope), implanted of GRIN and Prism lens in mice. (5 years)
- **In vivo electrophysiology:** Extracellular activity recordings using Open-ephys, INTAN RHA and RHD systems; Implants for acute (Silicon probes) and chronic (manufacturing arrays) recordings. (7 years).
- **Data analysis:** Processing of extracellular unit and LFP recordings using MATLAB scripts; Preprocessing of calcium imaging using Python Integrated Miniscope Pipeline Notebook (5 years).
- **Stereotaxic surgery (mice):** Local viral injections; optic cannula preparation and implantation; electrodes and optic fiber placement, lens and electrodes or lens and optic fiber (7 years).
- **Optogenetic and pharmacogenetic manipulation:** Opto-constructs: channelrhodopsins, halorhodopsin and Archaelhodopsins; Pharmaco-constructs: DREADDs; Laser and LED setup preparation for light stimulation using custom MATLAB and Arduino scripts (5 years).
- **Microscopy:** Zeiss Imager A2 (fluorescence microscopy), Zeiss Observer Z1 (inverted fluorescence microscopy) and Zeiss Examiner Z1 (confocal microscopy), using Zen and AxioVision software for acquisition and basic analysis (7 years).
- **Behavioural tests:** (Open field; Elevated plus maze; Treadmill; Forelimb reaching task; Hang wire task, Object recognition test) (9 years).
- **Immunohistochemistry:** DAB and double fluorescence (9 years);

LANGUAGE SKILLS

Native Portuguese, Intermediary English, Basic Spanish.