

Yohann THENAISIE

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EDUCATION

2018-current

phD in neuroscience at Unil

- Defitech center for interventional neurotherapies - Neurorestore (Unil, CHUV and EPFL)
- Directed by Eduardo Martin-Moraud, Jocelyne Bloch and Grégoire Courtine
- Designed experimental protocols, submitted ethical protocols, performed EMG, kinematic, EEG and LFP recordings on patients, analysed the data on MATLAB, wrote and submitted papers

2017-2018

Predoctoral year in neuroprosthetics at EPFL

- Swiss-European Mobility Program
- Courses in signal processing, data analysis and classification, brain-machine interfaces, work on several team-projects in neuroprosthetics

2014-2017

Bachelor's Degree and Master's Degree in Biosciences

- École Normale Supérieure de Lyon – a leading institution of higher education, entrance to which is based on a competitive examination
- Specialisation in Neuroscience, Immunology and Tissue Engineering

2011-2014

Classe préparatoire BCPST – Certificate with highest honors

- Lycée Camille Guérin (Poitiers) – a three-year intensive course preparing for the entrance exam to French “Grandes Écoles”

2011

Baccalauréat scientifique SVT – High School Diploma with honors

- Lycée Grandmont (Tours)

ACADEMIC SKILLS

Languages: Advanced in English (TOEIC and CLES2); Fluent in French, Basic in Spanish

Computer skills: MATLAB, Illustrator, Autocad

Biology practical skills: successfully performed PCR, ADN and protein purification, microbiology manipulations, cell culture and transfection, FACs, UAS-Gal4 system on Drosophila, immunostainings, confocal microscopy, immunology and virology standard manipulations, behavioral tests on mice and rats, optogenetics, intracortical microstimulation, IonTorrent sequencing and metagenomic analysis

Supervised personal research projects: conceived three one-year research projects,

devised the protocols, led the 3-student teams, delivered the final presentations. Topics: seed lipid extraction and characterization, influence of physiological conditions on saliva pH buffer, heavy metal retention by banana peel

INTERNSHIPS

Importance of the noradrenergic system in olfactory discrimination

CRNL, Neuropop team – Cornell University, CPL – May to August 2015 (10 weeks)

Performed optogenetics, behavioural tests on mice, brain slicing and histoimmunostaining, confocal microscopy and pharmacological brain injections.

Results were presented at the SFN

Perceiving invisible light through a visuocortical neuroprosthetics

Duke University, Nicolelis Lab – February to May 2016 (14 weeks)

Performed close-loop intra-cortical microstimulation, spike-sorting of microwire recordings, behavioural tests on rats, implantation surgeries, MATLAB, data analysis.

Article submitted to eNeuro

Microfabrication of soft electrodes for biocompatible implants

EPFL, LBSI – January to July 2017 (26 weeks)

Performed clean room microfabrication (spin-coating, sputtering, interferometer, plasma etching, Scanning Electron Microscopy), electromechanical characterisation

PUBLICATIONS AND PRESENTATIONS

Linster, C., Midroit, M., Forest, J., Thenaisie, Y., Cho, C., Richard, M., Didier, A., and Mandairon, N. (2020). Noradrenergic Activity in the Olfactory Bulb Is a Key Element for the Stability of Olfactory Memory. *J. Neurosci. Off. J. Soc. Neurosci.* 40, 9260–9271.

Thenaisie, Y., Palmisano, C., Canessa, A., Keulen, B.J., Capetian, P., Jiménez, M.C., Bally, J.F., Manferlotti, E., Beccaria, L., Zutt, R., et al. (2021). Towards adaptive deep brain stimulation: clinical and technical notes on a novel commercial device for chronic brain sensing. *MedRxiv* 2021.03.10.21251638.

Thomson, E.E., Zea, I., Windham, W., Thenaisie, Y., Walker, C., Pedowitz, J., França, W., Graneiro, A.L., and Nicolelis, M.A.L. (2017). Cortical Neuroprosthesis Merges Visible and Invisible Light Without Impairing Native Sensory Function. *ENeuro* 4.

Vachicouras, N., Tarabichi, O., Kanumuri, V.V., Tringides, C.M., Macron, J., Fallegger, F., Thenaisie, Y., Epprecht, L., McInturff, S., Qureshi, A.A., et al. (2019). Microstructured thin-film electrode technology enables proof of concept of scalable, soft auditory brainstem implants. *Sci. Transl. Med.* 11.

OptoDBS 2019 (poster), CHUV Neuroscience research center annual symposium 2019 (presentation and poster), Lemanic neuroscience annual meeting 2021 (oral presentation), International IEEE EMBS Conference on Neural Engineering (oral presentation), International Association of Parkinsonism and Related Disorders (poster), Movement Disorder Society 2021 (poster), ESSFN congress (oral presentation), Society for neuroscience 2021 (abstract submitted)

AWARDS

First prize of *Ma thèse en 180 secondes* (2021), a science popularization contest, national scale