NURIA VENDRELL LLOPIS

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EDUCATION:

2015   **PhD in Biomedical Science**. Cognitive and molecular neuroscience.
KU Leuven**,** Leuven, Belgium (present)

2010   **Master in Telecommunications Engineering.** Specialty: Electronics.
Universitat Politecnica de Valencia, Valencia, Spain

RESEARCH EXPERIENCE

PhD student; *Advisor: Emre Yaksi*   2011 – Present
NERF (KU Leuven),   Leuven, Belgium
Representation of taste in the zebrafish brainstem.
− Development of an automatic neuron-detection algorithm to extract calcium traces of individual neurons.
− Experimental work and analysis on the effect of different taste categories and their interactions on the gustatory lobe of the brainstem using customized Matlab software.
− Experimental work and analysis on the behaviour of zebrafish to different taste categories and their interactions using customized Matlab software.

Master student; *Advisor: Werner Hemmert*   2009-2010
BAI-IMETUM (TU Munchen),   Munich, Germany
A Comparative Study of Computational Models of Peripheral Auditory System.
− Development of a platform to run all different models (written on C, Java, Matlab and Python) under same parameters.
− Analysis of the different computational-neuroscience models of the peripheral auditory system.

PEER REVIEW PUBLICATIONS

Elena Dreosti, **Nuria Vendrell Llopis**, Matthias Carl, Emre Yaksi and Stephen W. Wilson *"Left-right asymmetry is required for the habenulae to respond to both visual and olfactory stimuli". Current biology (2014).*

Suresh Kumar Jetti*, **Nuria-Vendrell Llopis***, Emre Yaksi "*Spontaneous activity governs olfactory representations in spatially organized habenular microcircuits". Current Biology (2014).*
*equal contributors

Nuria-Vendrell Llopis, Emre Yaksi "Evolutionary conserved brainstem circuits encode category, concentration and mixtures of taste" (*submitted*)

AWARDS:

• Best presentation award, VIB11-NERF PhD Symposium, 2013

TEACHING EXPERIENCE:

- Student supervision.

    Abigail de la Peña. BSC in Florida University, 2013.
    Almudena Pingaron. MA in Universidad Complutense de Madrid, 2014.
    Els Crijns. BSC expected in KU Leuven.

TECHNICAL SKILLS:

- Two-photon and confocal microscopy.

- Optogenetic tools.

- *In vivo* patch clamp.

- Immunohistochemistry.

- Bio – Medic signals and image processing.

- Programming: Matlab, C, Python, Java, VHDL**,** Sampler u8051, VisualBasic

- Digital Signal Processing.

- Electronic Circuit Design.

- Applications of magnetic fields, microwaves, antennas, etc.

PAST PROJECTS:

- Comparative study of computational models of the peripheral auditory system.
- Cansat: Design of the telecommunication system of a small satellite.
- QRS fetal detector through an adaptive filter in a DSP 6713.
- Remote system for nurses to control patients through a microcontroller 8051 with its own communication protocol.
- Telemedicine system for the control of the Respiratory Syncytial Virus (RSV).

CONFERENCES & EVENTS:

- 9th FENS Forum of Neuroscience, 2014 (Poster presented)
- The Brain Conferences - Controlling Neurons, Circuits and Behaviour, 2014 (Poster presented)
- 10th Christmas Meeting Instituto de Neurociencias, 2013 (Oral presentation)
- VIB11-NERF PhD Symposium, 2013 (Oral presentation)
- INCF course. Imaging the brain at different scales: how to integrate multi-scale structural information?", 2013. (Poster presented)
- NERF Neurotechnology Symposium, Leuven, 2013.
- VIB11-NERF PhD Symposium, 2012 (Poster presented)
- NERF Neurotechnology Symposium, Leuven, 2012.
- FENS-IBRO-Hertie Winter School, Obergurgl-Austria, 2012. (Poster presented)
- Imaging Structure and Function in the Zebrafish Brain, Lisbon Portugal, 2010

SCHOLARSHIPS:

- Scholarship for higher education 2007-2008. Ministry of Education.
- Scholarship for higher education 2008-2009. Ministry of Education.
- Scholarship for higher education 2009-2010. Ministry of Education.
- Scholarship to study languages abroad 2007-2008 (German). Ministry of Education.
- Scholarship to study languages abroad 2008-2009 (English). Ministry of Education.
- Erasmus scholarship 2009-2010.
- Bancaja International scholarship 2009-2010.