Azahara Oliva Gonzalez, PhD

Assistant Professor, Department of Neurobiology and Behavior, Cornell University

Education

2016 - PhD in Neuroscience - School of Medicine, Szeged University, Hungary

2012 - MSc in Biomedical Physics - School of Physics, Complutense University of Madrid, Spain

2011 - BSc in Physics - School of Physics, Complutense University of Madrid, Spain

Research positions

2021 - Assistant Professor - Department of Neurobiology and Behavior, Cornell University.

2017 – 2021 Postdoctoral Fellow – Siegelbaum Lab, Columbia University

2017 - Postdoctoral Fellow – Buzsaki Lab, New York University

2013 – 2016 - PhD Student – Berenyi Lab, Szeged University

2012 – PhD Graduate Research Fellow - Cajal Institute, Spanish Research Council

2010 – 2011 - Graduate Research Fellow Department of Electromagnetism, Complutense University

Grants and fellowships

NARSAD Young Investigator Grant, 2021-2023

NIMH **K99** Pathway to Independence Award, 2020-2025

EMBO long-term postdoctoral fellowship, 2017-2019

NVIDIA Developer Grant, 2017

FPI Pre-Doctoral Fellowship, CSIC, 2011-2012

Undergraduate Research Fellowship, Spanish Ministry of Education, 2010-2011

Awards

Summa Cum Laude PhD dissertation, University of Szeged, Hungary, 2016

Hippocampal Complexities Meeting, Janelia Research Campus, 2015

SENC travel award for the SENC meeting, 2012

Publications

Fernández-Ruiz A, **Oliva A**, Soula M, Rocha-Almeida F, Nagy GA, Martin-Vazquez G, Buzsaki G. Selective gamma rhythm communication between entorhinal cortex and dentate gyrus neuronal assemblies supports learning. Science, In press.

Oliva A*, Fernández-Ruiz A, Leroy F, Siegelbaum S*. Hippocampal CA2 ripples reactivate and promote social memory. Nature, 587, 264-269 (2020), *Corresponding author

Fernández-Ruiz A*, **Oliva A***, Fermino de Oliveira E, Rocha-Almeida F, Tingley D, Buzsáki G. (2019) Long-duration Hippocampal Sharp Wave Ripples Improve Memory. Science 364(6445),1082-1086. *Cofirst author

Fernandez-Lamo I , Gomez-Dominguez D, Sanchez-Aguilera A, **Oliva A**, Morales AV, Valero M, Cid E, Berényi A and Menendez de la Prida L. (2019) Proximodistal organization of the CA2 hippocampal area. Cell Reports 26,7 1734-1746

Oliva A*, Fernandez-Ruiz A*, Oliveira EF, Buzsáki G. (2018) Origin of gamma frequency power during hippocampal sharp-wave ripples. Cell Reports 25,1693-1700

Meira T, Leroy F, Buss EW, **Oliva A**, Park J, Siegelbaum SA. (2018). A hippocampal circuit linking dorsal CA2 to ventral CA1 critical for social memory dynamics. Nature Communications 9:4163

Fernández-Ruiz A, **Oliva A**, Nagy GA, Maurer AP, Berényi A, Buzsáki G. (2017) Entorhinal-CA3 dual-input control of spike timing in the hippocampus by theta-gamma coupling. Neuron 93(5):1213-1226

Oliva A, Fernández-Ruiz A, Buzsáki G, Berényi A. (2016). Role of hippocampal CA2 region in triggering sharp-wave ripples. Neuron 91,1342-1355.

Oliva A, Fernández-Ruiz A, Buzsáki G, Berényi A. (2016). Spatial coding and physiological properties in the Cornu Ammonis subregions. Hippocampus. doi:10.1002/hipo.22659.

Fernández-Ruiz A, **Oliva A**. (2016). Distributed representation of “what” and “where” information in the parahippocampal region. Journal of Neuroscience. 36(32):8286-8288.

Oliva A, Fernández-Ruiz A. (2016). Incorporating single cell contribution into network models of ripple generation. Journal of Physiology. doi:10.1113/JP273062