



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2018

Turno de acceso general

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RYC2018-023868-I
Biociencias y biotecnología
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Título:

Cerebellar contribution to high-order cognitive disorders

Resumen de la Memoria:

One of the most challenging problems in neuroscience is to understand how in brain development billions of neurons are guided to specific target regions and how this precise wiring underlies complex behaviors.

During my career I have been working in understanding how the central nervous system develops and the molecular mechanisms driving the neural circuits assembly.

My initial interests were to study the key processes determining the early brain patterning. During my doctorate at Dr. Eduardo de Puelles laboratory at the Neuroscience Institute of Alicante I was involved in different projects focused on the role of the morphogen Sonic Hedgehog in the specification, development and wiring of the habenulo-interpeduncular circuit.

In January 2015, I joined the laboratory of Dr. Alain Chédotal at the Institut de la Vision (Paris, France). My research focused on the study of the mechanisms involved in the formation of commissural systems. During this period, we proposed a new axon guidance model to explain how the commissural axons growth during the embryonic development. Our results overturned the classical point of view about how these axons are attracted towards the ventral midline of the brain.

During the last part of my Postdoctoral period in Dr. Chédotal laboratory, I worked on molecular mechanisms responsible of the cerebellar wiring. Alterations of some axon guidance systems in this region lead to altered cognitive processes. Thus, my interests are growing in understanding how the cerebellum, through the thalamus, is related to cognitive processes.

For that reason, and through the "Severo Ochoa Excellence program", I joined to Dr. López-Bendito laboratory at the Institute for Neuroscience of Alicante. Currently, I am developing my own research line based on how dysfunctions in the cerebello-thalamic circuits are related with autism-like behaviors. I intend to develop this project using unique molecular and transgenic tools and by using state-of-art techniques such as 3D light-sheet microscopy, calcium imaging, electrophysiology and -omics.

My goal is progress in my career as an independent researcher and develop my own research line focused on cerebellar development and wiring, and how alterations in these processes generate high-order cognitive disorders.

Resumen del Currículum Vitae:

EDUCATION

2019-present: Postdoctoral fellow, Institute for Neuroscience of Alicante, Spain.

01/2015-12/2018: Postdoctoral fellow, Institut de la Vision, Paris, France.

09/2010-01/2015: PhD in Neuroscience, Institute for Neuroscience of Alicante, Spain.

09/2010- 06/2011: PhD program (MSc) in Neuroscience, Institute for Neuroscience of Alicante, Spain.

09/2003-08/2008: Biology Degree. Universidad de Valencia. Spain.

RESEARCH EXPERIENCE

2019-present: Postdoctoral fellow with Dr. Guillermina López-Bendito at the Institute for Neuroscience of Alicante (Spain). Research focus: Cerebello-thalamo-cortical dysfunctions and high-order deficits.

01/2015-12/2018: Postdoctoral fellow with Dr. Alain Chédotal at the Institut de la Vision (Paris, France). Research focus: Development, evolution and function of mammalian commissural systems.

09/2010-01/2015: PhD student under the supervision of Dr. Eduardo de Puelles at the Institute for Neuroscience of Alicante (Spain). Research focus: Development and guidance of the Habenulo-interpeduncular system.

01/2009-08/2010: Laboratory technician in Dr. Eduardo de Puelles Laboratory at the Institute for Neuroscience of Alicante (Spain). Research focus: Specification and differentiation of the mesencephalic basal populations.





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PUBLICATIONS

First author: 6 articles (Nature, Neuron, Development, Brain Structure and Function) and 1 review. Co-author: 6 articles (Neuron, Plos Biology.).

Total: 12 scientific articles (Q1:12) and 2 review articles.

QUALITY INDEXES:

Scopus H-index: 5 Citations: 110

Google Scholar H-index: 6 Citations: 155

Cumulative Impact Factor: 120,3 Average Impact Factor: 8,6 Average Impact Factor 1st Author: 11

PARTICIPATION IN NATIONAL AND INTERNATIONAL CONFERENCES 6 poster presentations, co-author in 10 additional poster presentations and 3 in oral presentations.

FELLOWSHIPS:

2019-2021 "Severo Ochoa Excellence Program" Postdoctoral fellowship from the Institute for Neuroscience of Alicante.

2010-2014 CSIC JAE- Predoctoral fellowship.

OTHERS:

-Unofficially co-supervision of two master student (2013 and 2014) and one PhD project (2015-2018).

-Training of undergraduated students on basic histological techniques and in vitro experimentation (organotypic and cell cultures), live imaging and microscopy.

-Participation in Tissue clearing and 3D Imaging course, Institut de la Vision. Paris. 2016.

-Participation in the Brain awareness week at Institute for Neuroscience of Alicante (2013 and 2014).





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Turno de acceso general

Nombre:	MUSTEANU , MONICA
Referencia:	RYC2018-025415-I
Área Temática:	Biomedicina
Correo Electrónico:	mmusteanu@cnio.es

Título:

Targeting KRAS mutant lung cancer

Resumen de la Memoria:

I studied my B.Sc. in Biology and Chemistry at the University Babes-Bolyai, Cluj-Napoca, Romania (1997-2001).

After, I moved to the University of Vienna to complete my M.Sc. studies, with specialization in Human-biology (2001-2004). During this time, I have been working on my final thesis project at the Department of Human Genetics, Medical University of Vienna, Austria. I completed my PhD thesis at the Ludwig Boltzmann Institute for Cancer Research, Vienna (2005-2009), in Dr. Robert Eferl¿s lab. During my thesis I studied the role of Stat3 in tumorigenesis and I developed a novel genetically engineered mouse model to test cooperativity between signaling pathways in tumorigenesis. I got the PhD degree from the Medical University of Vienna, Austria in November 2009. In 2010 I was awarded with the CNIO-Caja Navarra post-doctoral fellowship and I moved to work in Dr. Manuel Hidalgo¿s lab at the Clinical

Research Program of the Spanish National Cancer Research Centre (CNIO) Spain focusing my research in translational studies in pancreatic cancer in close collaboration with medical staff and the pharmaceutical industry.

Since January 2013 I am a Staff Scientist in the group of Dr. Mariano Barbacid at the CNIO, in charge of all the lung cancer projects of this group.

Special interests in:

• Development of lung adenocarcinoma in vivo models: genetically engineered mouse models (GEMM) and patient derived xenograft (PDX) models

Identification of molecular events involved in the resistance to pharmacologic treatments in lung adenocarcinomas

• Identification of combination partners for targeted therapies and design of therapeutic strategies against lung adenocarcinomas genetically as well as pharmacologically

Since 2018 I am principal investigator in a collaborative project with Pfizer funded with 1.262.967,43 € for 3 years.

I authored a total of 18 publications in international journals as Cancer Cell (senior author), Nature Methods (first author), Science Translational Medicine, Gastroenterology (first author), Hepatology, Clinical Cancer Research (corresponding author), British Journal of Cancer, etc. I have directed 1 Master Thesis. I have mentored internship technicians and I am currently directing 1 Bachelor and 3 PhD students.

Resumen del Currículum Vitae:

 $\cdot Biologist$ with 15 years of experience in oncology and molecular biology research

·MSc. degree in Human Biology and PhD degree in Molecular Signal Transduction

International experience gained at various institutions in Romania, Austria and Spain

Author of a total of 18 publications in journals as Cancer Cell , Nature Methods, Science

Translational Medicine, Gastroenterology, Hepatology, Clinical Cancer Research, British

Journal of Cancer etc. (https://orcid.org/0000-0002-1753-3765)

Competence in managing short- and long-term projects and maintain internal and external

collaborations/contracts (especially with the pharmaceutical industry)

·Experienced in teaching and supervising students and research assistants

·Trained in management fundamentals and skills at the IE Business School, Madrid