

PERSONAL INFORMATION

Ana Isabel Moreno Manuel



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Date of birth 25/08/1996 | Nationality Spanish

WORK EXPERIENCE

Jul 2015–Aug 2015

Beneficiary of the 'La Dipu te Beca' program of the 'Diputación de Valencia'.

Sector Public administration of Lliria Town Hall, Valencia.

Sep 2016–May 2017

Internship in University of Valencia, in the laboratory of 'Molecular Neurobiology'.

M^a Isabel Fariñas Gómez, Faculty of Biological Sciences, Cell Biology, Functional Biology and Physical Anthropology Department.

- During this period as a collaborator I was learning to do routine laboratory tasks and to genotype mice. I also practiced brain cuts with the vibratome and made several histochemical stains of the samples.

Sector Cellular Biology and Molecular Neurobiology

Jun 2017–Sep 2017

Internship in Institute of Biomedicine of Valencia (IBV-Spanish Research Council), in the laboratory of 'Molecular Basis Units of Neurodegeneration'.

Marçal Vilar Cerveró

- The study of the role of the proteins TrkA and p75 in cancer and neurodegeneration disease using mutagenesis by PCR, transformation of *Escherichia coli*, transfection of the HeLa cell line...

Sector Molecular Biology and Neurosciences

Sep 2017–Jun 2018

Internship in Institute of Biomedicine of Valencia (IBV-Spanish Research Council), in the laboratory of 'Molecular Basis Units of Neurodegeneration'.

Marçal Vilar Cerveró

- Beneficiary of the student grant for the academic year 2017-2018 of the Spanish Association Against Cancer (AECC).

- During these months I have been analyzing the role of the TrkA neurotrophin receptor as an oncogene in colon cancer cells. Techniques: *in silico* analysis of mutations, cell transfection and assay by Western blot.

- I have generated HCT 116 stable cell lines that express different mutations in the TrkA receptor seen in patients with colon cancer.

Sector Molecular Biology and Neurosciences

In addition, during the last year of my career, I designed a research project about exosomes in the progression of pancreatic tumors. In this consisted my final year project and was supervised by Martina Kirstein.

Jul 16, 2018–Aug 24, 2018

Intership in Spanish National Center for Cardiovascular Research (CNIC), in the laboratory of 'Cardiac arrhythmia'.

José Jalife

- Beneficiary of the student grant CICERONE for the summer of 2018, with a duration of 240 hours.
- During this period of time, I learned how can I evaluate the electrophysiology of the heart. To this end, I used the following techniques: electrocardiograms, magnetic resonance and patch clamp.
- Moreover, I learned many things about the maintenance and differentiation of hiPSCs into cardiomyocytes. I also reinforced the execution of different molecular biology techniques, such as PCR, analysis of agarose gels, generation of viral constructions and immunohistochemistry.

Sector Cardiac Arrhythmia

Oct 16, 2018–Oct 15, 2019

Internship in Spanish National Center for Cardiovascular Research (CNIC), in the laboratory of 'Cardiac arrhythmia'.

José Jalife

- Beneficiary of the student MASTER GRANT for one year from October 16, 2018.
- During this period of time, I am working in the final master project: "Macromolecular complexes Nav1.5-Kir2.1 in arrhythmia experimental models".

Sector Cardiac Arrhythmia

Oct 16, 2019–Now

Spanish National Center for Cardiovascular Research (CNIC), in the laboratory of 'Cardiac arrhythmia'.

José Jalife

- I am carrying out a research project focused on the arrhythmogenic and molecular mechanisms underlying Short QT Syndrome Type 3 (SQTS3), a rare and extremely lethal channelopathy caused by gain-of-function mutations in *KCNJ2*. This gene encodes the inward rectifying potassium channel Kir2.1 responsible for the I_{K1} repolarizing current.

Sector Cardiac Arrhythmia

EDUCATION AND TRAINING

2012–2014

Pre-university studies, with Honours, in Biological Sciences

Francisco Llopis Latorre School, Lliria, Valencia.

2014–2018

Degree in Biochemistry and Biomedical Sciences with Honours

University of Valencia, Spain.

Bachelor's Degree Special Award of the promotion 2014-2018.

2018–Now

Interuniversity Master in Genetics and Cellular Biology

Autonomous University of Madrid, Complutense University of Madrid and University of Alcalá de Henares, Spain.

Jan, 2019

Course "Animal Experimentation (Functions A, B and C)" organized by Charles River.

I acquired Training for the "Humane Care and Euthanasia of Experimental Animals" (Functions A and B according to ECC 566/2015) and Training for "Performing Procedures in Experimental Animals" (Function C according to ECC 566/2015).

On December 21st 2020, I obtained the accepted certificate for the autonomous work with rodents from the Community of Madrid (CAP-604.2-20). With it, I can carry out the following functions: animals care, animals euthanasia and rodent procedures performing.

Curriculum vitae

LANGUAGES

Mother tongue(s) Spanish, Valencian.

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1.1	C1.1	C1.1	C1.1	C1.1
	Escola d'Idiomes Moderns (EIM), University of Barcelona. CEFR Level C1.1 (March 2020)				
Catalan/Valencian	C2	C2	C2	C2	C2
	Superior Certificate, Level C2				

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

ADDITIONAL INFORMATION

Courses

- Sep 2017 - Course Written Expression and Writing of the NAU of the University of Valencia.
- Sep 2017 - Course Elaborate and Write a Project of the NAU of the University of Valencia.
- Nov 2017 - Course on Strategies for Labor Insertion: Curricular Analysis and Selection Processes (16th edition). Observatory of Professional Insertion and Labor Advice (OPAL), General Foundation of the University of Valencia.
 - 15th Oct to 31st Dec 2018 - Course for "Humane Care and Euthanasia of Experimental Animals". Functions A and B according to ECC 566/2015 - Functions C and D according to Directive 53/2010/EU.
 - 15th Oct to 31st Dec 2018 - Course for "Performing Procedures in Experimental Animals". Function C according to ECC 566/2015 - Function A according to Directive 53/2010/EU.
 - 15th and 16th July 2019 - Course on "Molecular, Clinical & Population Bases of Cardiovascular Disease and Health". Imparted by Dr. Valentín Fuster, organized by the CUIMPB - Centre Ernest Lluch.
 - 13th and 14th Dec 2019 - XIII Course of "Cardiovascular Physiopathology, From the Symptom to the Genes". Organized by Dr. Borja Ibáñez and Dr. Héctor Bueno and celebrated at CNIC.

Conferences and Congress

- Attendance 2 years, february 2016 and 2017, at CIB (Biomedical Research Congress). Some speakers and titles of the seminars are:
 - Mariano Barbacid, 'From Molecular Oncology to Personalized Therapies'.
 - Álvaro Pascual Leone, 'The Brain of the Leader'.
- Attendance at scientific seminars of national and international scientists every Wednesday at the IBV-CSIC. Some speakers and titles of the seminars are:
 - Iñaki Comas, 'Evolution of Mycobacterium tuberculosis: from biology to global tuberculosis control'.
 - Juan Manuel Encinas, 'Reactive Neural Stem Cells and Hippocampal Neurogenesis in Epilepsy'.
 - Ada Yonath, 'Meet the Nobel at the IBV'.
 - Ángel R. Nebreda, 'Tumorigenesis regulation by stress kinase signaling'.
- Attendance at conference cycle of the NAU of the University of Valencia. I was in the seminary of Dr. Javier DeFelipe Oroquieta; he talked about 'The human brain: a scientific and philosophical perspective'.
- Invited to the World Day of Research in Cancer by the Spanish Association Against Cancer. Conferences by Emmanuelle Charpentier, Jennifer Doudna and Francisco Mojica, in addition to the words of Queen Letizia

- Mechanisms and Viral Entry Therapies (X Monographic Days of the Spanish Society of Virology). November 2018 at Gregorio Marañón Hospital of Madrid.
- Attendance at LI Commemorative Lesson Jiménez Díaz, Fundación Conchita Rábago de Jiménez Díaz. May 2019 at Fundación Jiménez Díaz Hospital of Madrid.
- Jan 17th 2020 - Technical Meeting of the Cellular Therapy Network, "Molecular Editing Tools", celebrated at CNIC.
- 28th to 31st Oct 2020 - Online Congress SEC 2020 for the Cardiovascular Health organized by the Spanish Society of Cardiology. I awarded 2 European CME Credits (ECMEC@s) for my attendance at this event. In addition, we presented part of our work in this congress in the form of an abstract that was selected to take part of short oral seminars. Title: La disfunción de Kir2.1 subyace a los defectos electromecánicos que conducen a arritmias en un modelo de ratón del Síndrome de Andersen Tawil tipo 1.
- Nov 27th 2020 - Day of Cardiogenetics organized by Hospital Virgen de la Arrixaca, Murcia. Continuous Training Activity (12 hours).

LIST OF PUBLICATIONS / CONGRESS PRESENTATIONS

1. Arrhythmogenic and Molecular Mechanisms of Short QT Syndrome Type 3. Ana Isabel Moreno Manuel, Álvaro Macías, Francisco Miguel Cruz Uréndez, Lilian Karina Gutiérrez Espinosa de los Monteros, Isabel Martínez Carrascoso, Francisco José Bermúdez Jiménez, María Linarejos Vera Pedrosa, Juan A. Bernal and Jose Jalife. Poster presenter at Heart Rhythm Society 2021 Congress.
2. Dual Dysfunction of Kir2.1 at the Sarcolemma and the Sarcoplasmic Reticulum Underlies Arrhythmogenesis in a Mouse Model of the Andersen-Tawil Syndrome Type 1. Álvaro Macías, Andrés González-Guerra, Ana Isabel Moreno Manuel, Francisco Miguel Cruz Uréndez, et al. *Circulation* 142 (Suppl_3), A14836-A14836.
3. Short QT Syndrome and Sudden Cardiac Death due to a Mutation in the TMEM175 Endolysosomal Potassium Channel. Juan Jiménez Jáimez, Francisco Bermúdez, Ana Isabel Moreno Manuel, Lilian Gutiérrez Espinosa de los Monteros, María Linarejos Vera-Pedrosa, Miguel Álvarez, Luis Tercedor. *Journal of the American College of Cardiology (JACC)* 75 (Suppl_1), 469-469.
4. Short QT Syndrome Report on National Organization for Rare Disorders (NORD) webpage. <https://rarediseases.org/>
5. Cardiac Arrhythmogenic Mechanisms in the Andersen-Tawil Syndrome type 1. Ana Isabel Moreno Manuel*, Lilian Karina Gutiérrez Espinosa de los Monteros*, María Linarejos Vera Pedrosa*, Álvaro Macías, Francisco Miguel Cruz Uréndez, Francisco José Bermúdez Jiménez, Isabel Martínez Carrascoso, José Jalife. (Review article pending to publish)