

EURAXESS LINKS North America

EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development. This pan-European effort is currently supported by 41 countries, of which we will profile one in each of our quarterly EURAXESS Links North America e-newsletters. In this edition, we will zoom in on Spain.

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Please email northamerica@euraxess.net with any comments, contributions you would like to make, if you think any other colleagues would be interested in receiving this document, or if you wish to unsubscribe.

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1 EURAXESS Country in Focus: SPAIN

1.1 Spain and the research, development and innovation system in figures¹

The Spanish System of Science, Technology and Innovation encompasses internationally recognised institutions where scientists and entrepreneurs are able to enjoy a variety of funding opportunities. The “Spanish strategy on science, technology and innovation (2013-2020)²” promotes the capacities of the system and enables collaboration between all the stakeholders of the system while increasing the social and economic returns from investment in R&D&I.

In 2014, Spanish institutions published 77.013 scientific publications (including articles, conference proceedings and reviews), ranking 10th in the world and making 3,19% of the total world production. In terms of excellence (share of highly cited publications (top 10%)), energy and veterinary medicine were the top research areas in Spain. Also, the international collaboration of Spanish institutions keeps growing every year: up to 44,69% of the Spanish documents in 2014 were co-authored with a foreign institution. Finally, the total number of European patents with a Spanish origin in 2014 was 467.

Spain is a very active participant in European research projects. At the moment, around 9% of Horizon 2020 funding is allocated to Spanish institutions. Some of the areas that can be highlighted as especially important for Spanish participation are: **Energy, NMBP (Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing) and the SME (small and medium-sized enterprises) instrument.**

1.2 Research Excellence in Spain

The “[Severo Ochoa Centres of Excellence](#)” programme for independent research centres and the “Maria de Maeztu Units of Excellence” programme for smaller unit recognises institutions from all areas of knowledge that perform cutting-edge research at world standards. The awarded centres and units show outstanding international scientific leadership and are open to international collaborations. The evaluation committees involved in the selection process are all foreign highly respected researchers, including Nobel laureates. Spain counts with a number of so-called “[Unique Scientific and technological infrastructures \(ICTS\)](#)” composed by facilities of different scientific areas ranging from the life sciences to astrophysics or engineering, distributed throughout the Spanish territory and areas and devoted to cutting edge and the highest quality research and technological development.

¹ Source: INE(www.ine.es) and ICONO (www.icono.fecyt.es)

²

http://www.idi.mineco.gob.es/stfls/MICINN/Investigacion/FICHEROS/Spain_h_Strategy_Science_Technology.pdf

Spain is a Member State of the European Union since 1986 and it has a population of 46.455.123 people. It's Gross Domestic Product was 1.041.160 million € in 2014. Life expectancy in Spain keeps growing every year, reaching 82,8 years in 2014. Spain welcomes every year a huge number of tourists, reaching 64.938.945 visits in 2014.





1.3 Recruitment Opportunities

Spain hosts more than 300 European Research Council (ERC) grants in more than 50 host institutions and is also very attractive for the Marie Skłodowska-Curie Actions (MSCA) fellows. At present, through 2014 and 2015 MSCA calls, more than 220 experienced researchers are carrying out their research in Spanish Institutions, which ranks Spain among the 4 top EU countries.

Information on this (meaning the ERC and MSCA in Spain explained in the text above) and on other national and regional funding opportunities can be found [HERE](#).

1.4 Important Information for Incoming Researchers

Spain is a member of the **EURAXESS** initiative that provides support to researchers and their families when arriving the country (in key issues such as visas, housing, schooling, etc.). The Spanish Foundation for Science and Technology (FECYT) is the national coordinator of the Spanish network and there are almost 100 services and local centres ready to support incoming researchers. All the information can be found at www.euraxess.es/eng

Also, **FECYT** publishes every two years a exhaustive up-to-date information about the labour situation, everyday life, and the specific characteristics of Spain, as well as the procedures necessary to become established in our country: <http://www.euraxess.es/eng/services/foreign-researchers-in-spain>

1.5 Opportunities for Research, Technology, Development and Innovation in the Region

Based on the paradigm of open innovation, CDTI manages the participation of SPAIN in HORIZON 2020 and multilateral programmes promoting Industrial R&D cooperation such as EUREKA, IBEROEKA and EUROSTARS. Similarly, CDTI has entered into agreements with several R&D funding agencies in Asia and developed Industrial R&D funding programmes with countries like Japan (NEDO), China (TORCH), and India (DST-GITA, DBT, MNRE, TDB) aiming at promoting and financing industry-driven and market-oriented R&D projects/collaborations between entities from Spain and from the respective countries. Also with third countries and regions like Algeria, Australia, Chile, China, Colombia, Egypt, UAE, **USA**, Indonesia, Malaysia, Morocco, Mexico, Singapore and Thailand manages the program for international projects with certification unilateral for funding R&D industrial projects.

R&D funding programs [information](#)

[CDTI External network](#): present in 27 countries offers support to those Spanish entities which are interested in developing technological cooperation projects with companies in other countries, facilitates the identification of technological opportunities outside the EU and promotes technology transfer.



The Centre for the Development of Industrial Technology - CDTI - Spain's National Innovation Agency, is a public entity currently under the Secretariat of State for Research, Development and Innovation, Ministry of Economy and Competitiveness, Government of Spain. CDTI is charged to promote business RDI, raise Spanish companies' technological level by funding their R&D projects, both at national and international level. CDTI is the public agency in Spain financing industry-driven R&D projects (industrial research, experimental development) developed by Spanish companies, and promoting Spanish technologies in foreign markets via innovation and technology adaptation projects.



2 European Scientific Diasporas in North America series – ECUSA

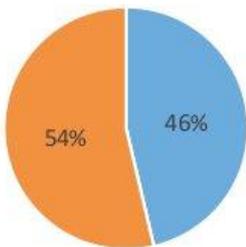
ECUSA: Association of Spanish Scientists in the USA



ECUSA was officially born in March 2014. Back then, a group of nine Spanish science professionals presented a very bold and ambitious idea that was lingering in the mind of many others: *the need to connect the scientific community of Spanish scientists in the USA*. It followed a similar network concept initiated two years earlier by a similar community in the United Kingdom that then spread quickly to other countries. It was just natural to find also a niche in the USA, one of the leading countries in science, technology and innovation. In fact, March 2014 was just the end of a brainstorming process that lasted more than nine months and served to establish the bases of what **ECUSA is today: a meeting place for science professionals (researchers, innovators, educators, science communicators...); a support network to promote professional growth; a platform to engage in an interdisciplinary dialog; and a vehicle to disseminate the importance of science and technology for society**. Everything is run by volunteer scientists. There was a need for a virtual (also physical) stage from where to develop the creative spirit that is also characteristic of the scientific thinking and innovation. March 2014 just marked the start date of the process.

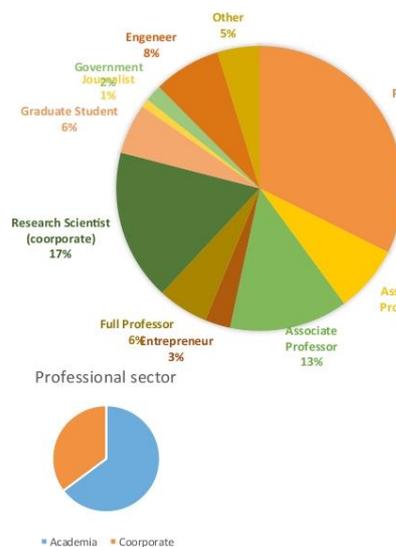
Two years later ECUSA is a registered 501 (c)(3) non-profit organization with consolidated programs. While originated in the Washington DC area, ECUSA soon became a national initiative. It has now about **800 members** spread all over the country, in more than 35 states, a very diverse community with jobs in industry, academia or administration (see statistics below).

Members by gender



■ Male ■ Female

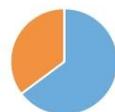
	Number	Percent
Male	367	46.4
Female	424	53.6
Total	791	100



Full Members

Job Title	Count	Percent
Postdoc	34	32.38
Assistant Professor	8	7.62
Associate Professor	14	13.33
Entrepreneur	3	2.86
Full Professor	6	5.71
Research Scientist (cooperate)	18	17.14
Graduate Student	6	5.71
Journalist	1	0.95
Government	2	1.90
Engineer	8	7.62
Other	5	4.76

Sector	Count	Percent
Academia	68	64.76
Cooperate	37	35.24
Total	105	100.00



■ Academia ■ Cooperate



The particularities of the host country and the implications of living in a globalised society shaped the evolution of the association, that eventually flourished under the philosophy: **'think globally, work locally'**. The *global thinking* resides in the strategy, the activities and programs devised by the committees to address the association's goals. The Professional Development & Networking (PDN), Education & Public Outreach (EPO), and Community committees are the soul of ECUSA and work under the solid support of the IT and Communication committees.

Current activities include the **'Welcome Package'**, a program to facilitate the integration of newcomers. **'Ciencia y un Jamón'** joins leisure and science in a networking activity to promote the exchange of ideas and experiences. The science developed by Spanish researchers in this country is promoted by the **ECUSA Seminar series** held in five different cities (Boston, Chicago, New York, San Francisco and Washington DC) and by the personal video and podcast interviews of the 'E-visibility' program. Aware of the potential impact in the latin/hispanic population in a Spanish speaking country, the association is involved in school activities with **'ECUSA en las Escuelas'**. A few other programs are ready to launch: **'Fostering Docs'** and **'Fostering Grads'**, will provide mentoring in the professional development of Spanish professionals and guidance to students; the **'Expert's Guide'** will facilitate the synergy between professionals, industry, and public and private sector; and **'ECUSA entre Culturas'** will launch a cultural and scientific exchange between bilingual schools in Spain and the USA.

The framework is completed with the critical *local work* of the team members in each chapter. **There are five official chapters: Boston, California, MidWest, New York and Washington DC** that implement the activities that promote and strengthen the local communities. About sixty high skilled professionals donate their work and expertise to develop the organisation at different levels with a spirit of collaboration, excellence, talent and generosity. They pave the way for a successful organisation.



All this momentum made possible the first **Joint meeting of Spanish Scientists in the USA** that took place last September at Georgetown University. For three days, around 150 Spanish science professionals met to

discuss relevant topics in basic science, science policy, synergies with industry, education and professional challenges in our countries (Spain and USA). The meeting was inaugurated by their majesties the **King and Queen of Spain, SS.MM. Don Felipe VI and Doña Letizia** (pictures above) in their official visit to the USA.



The work has only just begun. These are just the first few milestones. Furthermore, we want our work to be directed to the more basic education as well as to the high institutions and to provide a professional support to the community. ECUSA strives to inspire new generations of scientists and innovators, serving as an intergenerational connection. Much of the effort and motivation is about giving back to the Spanish and American societies in return for their trust and support, working in an active and committed manner to help building the societies of the future.

ECUSA understands its role not only as a support to the Spanish community in the USA, but also as a service to both countries. On one side, it builds a new bridge to transfer knowledge, expertise and promotes science and innovation in our home country, Spain. On the other, it helps to reveal on this shore that the Spanish talent and initiative resides as much on science, as in the well known culture and way of life. Of similar importance is maintaining a scientific link between USA and Europe, establishing bridges of connection, collaboration and common initiatives. For that reason, **working with EURAXESS and other European Scientific Diasporas is of critical importance for the organisation.**

On a final note, it is necessary to acknowledge that all this work is possible thanks to the trust and generosity of the sponsors, especially the *Spanish Foundation for Science and Technology* (FECYT), the *Embassy of Spain*, the private scientific *Foundation Ramón Areces* and *Pico Law* that have helped and promoted the association from the very beginning. Others such as *Instituto Cervantes* and *Cátedra Príncipe de Asturias*, within a long list of collaborators, are also making possible several exciting programs to communicate, educate, inform and share science and innovation.

Information about **ECUSA**, events, news and more can be found on the website www.ecusa.es and on social media @comunidadECUSA

Text prepared by: Teresa Nieves-Chinchilla, President; Ignacio Ugarte-Urra, Founder President; Alejandra Borjabad, Chair of Communications Committee; Tomas Aparicio, Chair of Community Committee and Aurea Simon, ECUSA-NY



Albert Quintana is a tenure-track Ramón y Cajal investigator in the Department of Cell Biology, Physiology and Immunology. He earned a Bachelor in Science in Biology (Biomedicine) in 2001 and a PhD in Neuroscience in 2007, both from the Universitat Autònoma de Barcelona. During his PhD he focused on the role of cytokines in the development of neuropathology and neuroinflammation in traumatic brain injury. As a postdoc (2008-2013), he joined Dr. Richard Palmiter lab at the University of Washington in Seattle, where he was the lead scientist developing and characterising a mouse model of mitochondrial disease (Leigh Syndrome). In 2013 he was appointed Assistant Professor in the Department of Pediatrics (University of Washington) and group leader at the Seattle Children's Research Institute. In 2015 he returned to the Universitat Autònoma de Barcelona as a Ramón y Cajal investigator and ERC grantee (Starting Grant). He has authored over 30 research articles and 2 book chapters.

3 Meet Albert Quintana – ERC Starting Grantee

Dr. Albert Quintana is a Starting Grantee at the **Institut de Neurociències, Universitat Autònoma de Barcelona in Spain**. EURAXESS Links North America conducted an interview with Dr. Quintana at the Destination Europe event in Boston, MA last February 2016.

Since EURAXESS Links is an initiative to promote researcher mobility, we are particularly interested in finding out more about the stages of your research career so far. Could you tell us a little more about your experience?

I obtained my PhD (Neurosciences) in 2007, at the Universitat Autònoma de Barcelona, Spain. I then moved to Seattle, WA (USA) for my postdoctoral research at the University of Washington (UW), under the supervision of Dr. Richard Palmiter. After 5 years, I was hired as an Assistant Professor at the UW and the Seattle Children's Research Institute in 2013. This allowed me to get my feet wet as an independent researcher, managing both funds and personnel. In 2015, I was awarded an ERC Starting Grant and that was a great incentive to move my lab back to Spain.

How did you find out about the ERC selection process, and which aspects of the ERC grants encouraged you to take part in the competition, after spending 7 years in the US?

I knew about the ERC from talking to colleagues and checking the ERC website. The fact that these grants provide competitive funding and the flexibility to carry out excellent research, combined with the possibility to fund my entire lab in Barcelona were the main reasons to apply.

Could you tell us a little bit about the research you are conducting with this grant, tell us about the composition of your team, and what you expect from it personally and professionally?

In the lab we are interested in determining why some neurons die when their mitochondria, the powerhouses of the cell, are dysfunctional. It was known that even if every single neuron has the same mutation, only some of them die and cause a fatal disease, whereas some neurons are able to cope with this deficit. However, the tools to dissect what is happening in the neurons and mitochondria that will die compared to healthy ones, were not available. In this project we are developing novel tools that allow to look at these mechanisms with unprecedented resolution. My team is composed of me, a senior scientist, 2 postdocs, 2 graduate students and 1 lab technician. I expect my team to be highly motivated, highly committed to our research and to create a good and fruitful work environment both inside and outside the lab. I am extremely happy with our team.



European Research Council

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**Supporting top researchers
from anywhere in the world**

About [ERC](#)

Set up in 2007 by the EU, the [European Research Council](#) is the first pan-European funding organisation for frontier research. It aims to stimulate scientific excellence in Europe by encouraging competition for funding between the very best, creative researchers of any nationality and age. The ERC also strives to attract top researchers from anywhere in the world to come to Europe.

It funds young, early-career top researchers ('[ERC Starting grants](#)'), already independent excellent scientists ('[ERC Consolidator Grants](#)'), and senior research leaders ('[ERC Advanced Grants](#)').

Thank you for your time!

You were awarded an ERC Starting Grant (StG) in 2014, in which ways is the grant influencing your research career?

First of all, the funding and flexibility provided by the ERC StG allows us to perform the experiments required to carry out cutting-edge science. It also allowed me to recruit the lab members from Seattle to Barcelona. Furthermore, it has significantly increased the lab's (and my own) visibility, being invited to many seminars and talks, which has been instrumental to establish new and fruitful collaborations.

Can you share some tips with our readers to apply successfully for an ERC grant?

I believe the most important piece of advice is to believe in oneself. That is the only road to write (and defend) a successful proposal. Regarding the proposal, it is key to know the cutting-edge science in your field of research so you can identify the big open questions that need to be addressed. Then, take your time to get up to date with the bibliography, articulate the proposal and let your colleagues (especially from outside your area of expertise) read and critique it, until you have the most synthetic, yet clear, proposal. And during the interview, just remember that is the moment to show the panel the importance of the project, and last but not least, that you are the right person to carry it out.

In your opinion, how important is the mobility of international researchers between these two regions (USA and Europe)?

I really consider it essential, as it allows to experience different ways to approach research, from big fundamental questions to how to undertake and design the experiments.

Having conducted research both in the USA and in Europe, what are the main aspects of each of these countries' research landscape? If you could suggest improvements, what would you recommend?

In the USA young labs usually depend on start-up funds (which can vary quite a bit depending on the institution and the negotiation abilities of the candidate) until one is awarded with an NIH R01 grant, with a really low success rate. This

creates a great amount of pressure on young investigators. Furthermore, it is not intended to fund high risk/high gain projects. On the other hand, the ERC programs provide an incredible opportunity for your investigators to establish themselves and for high-risk/high-gain novel projects to be funded. However, if I had to improve something, I would create other funding programs aimed to both cover excellent science that does not secure ERC funding and to help consolidate ERC-awarded labs.





4 In case you missed it....

4.1 Event Outlook

Event	When	Where	Organized by	Link to the event
1 st 2016 Working Meeting of the European Scientific Diasporas	23 March 2016	Embassy of Austria, Washington DC	EURAXESS Links North America & Embassy of Austria	Link
eMerge Americas Conference	18-19 April 2016	Miami, FL, USA	eMerge Americas	Link
NatureJobs Career Expo	27 April 2016	San Francisco, CA, USA	NatureJobs	Link
Information session on European funding	28 April 2016	University of California San Francisco	EURAXESS Links North America & UCSF	Link
Information session on European funding	29 April 2016	University of California Berkeley	EURAXESS Links North America & UC Berkeley	Link
ERA-Can+ Information sessions	3-5 May 2016	West Coast, Canada	ERA-Can+ project	Link

About EURAXESS Links North America

EURAXESS Links North America is a network of thousands of European and non-European researchers, scientists, and scholars throughout North America (USA and Canada). This multidisciplinary network includes members at all stages of their careers. It allows them to connect with each other and with Europe, ensuring that they are recognized as an important resource for European research, whether they remain in North America or return to Europe.

For further information about EURAXESS Links North America, please visit: <http://northamerica.euraxess.org>.

To sign up for membership in our network, and to the virtual SINAPSE community of members, please go to our website and click on the *Login Community* hyperlink on the top right-hand side of the [page](#). Membership is free!

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