



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: VALLEDOR GONZÁLEZ, LUIS
Referencia: RYC-2015-17871
Área Científica: Agricultura
Correo Electrónico: luis.valledor@gmail.com

Título:

Systems Biological characterization of stress responses in plant systems. Improving stress tolerance, biomass production, and high added-value biomolecules accumulation by exploiting natural variation and metabolic switches.

Resumen de la Memoria:

My research topic has been mainly focused on the -omics characterization of stress responses related to productivity in plant systems. To achieve these goals significant methodological and data mining advances, together with novel experimental designs were employed.

During my postdoc at Weckwerth's lab (University of Vienna) I learnt the use of mass spectrometers, developing and applying state of the art approaches based on LC-MS/Orbitrap and GC-MS mass spectrometers. Among all of the discoveries that these methodologies allowed, I demonstrated that snRK family is one of the master regulators of the cold and nitrogen starvation responses in *Chlamydomonas reinhardtii* leading to the accumulation of sugars and lipids.

My previous experience working with mass spectrometers and Systems Biology analytical/data mining workflows together with my background in Pine allowed me to gain a team leader position at Czechglobe (Brno). There I set up a microalgae molecular and analytical biology lab at the same time we developed an analytic environment (protocols, databases, workflows) with the aim of using pine with the same ease than a model species. This platform allowed me to use Natural Variation in *Pinus* as a key tool for deepening our knowledge of how conifers adapt to different environments. Furthermore, I started studying UV-adaption processes in *Pinus radiata* defining new regulatory mechanisms and discovering three new kinases (including members of snRK family). Additionally, I discovered that this family of proteins is also involved in the oxygenic/nitrogen fixing transition during an ultradian rhythm modulated by temperature under constant light. To continue investigating this family of proteins, I applied for a position and a one-year exploratory project to the Portuguese calls, where I obtained personal and project funding. I fully described the snRK family in *Chlamydomonas*, its role in different stresses, and started to understand the its relation to autophagy and to gene-regulation mechanisms.

At present, I am focused on two main research lines that are settled over my previous experience, but that also aim to improve methodologies, designs, and analyses:

1. Take advantage of omics analyses and natural variation to provide a comprehensive understanding of stress adaption. Using Pine genotypes adapted to different environments allow us a quick testing of hypotheses raised after high-throughput analyses, and raise new hypotheses based on the comparison of the different profiles belonging to pines from very different origins. We have proved that this approach is effective for advancing in stress biology and also for providing new biomarkers to breeding programs.
2. System-wide characterization of the regulatory effects of the different members of the snRK family in pines and algae. To me this family is of particular interest because it is a fascinating intermediary between environment (stress sensing), response modulation (kinase of other kinases and transcription factors), and epigenetic regulation (in animals these enzymes are closely related to chromatin remodelling complexes).

The combination of these lines will be a first step to define (epi)genetic and metabolic switches that can be exploited to increase plant stress tolerance and growth or engineer the metabolism towards the production of high added-value biomolecules.

Resumen del Currículum Vitae:

During my PhD I characterized the *Pinus radiata* needle development and maturation by using proteomics, transcriptomics, and epigenetics defining new key processes involved in needle growth directly related to tree growth and biomass production. The impact of these findings was recognized high-impact publications, a Ph.D. extraordinary award and, above all, with obtaining the highly competitive Marie Curie IEF postdoctoral fellow to join Weckwerth's lab at the University of Vienna.

I have more than four years of international experience. During my postdoc I focused on the study of the metabolic rearrangements leading to the accumulation of sugars and lipids in the model green algae *Chlamydomonas reinhardtii* under cold and nitrogen starvation stresses. I developed state-of-the-art methodology to improve available workflows, obtaining a deeper proteome coverage that allowed us to re-define previous paradigms and discover new metabolic pathways involved in the accumulation of sugars and lipids. Then I move to Czechglobe-Academy of Sciences of the Czech Republic as team leader, where I started developing a state-of-the-art platform for applying LC-MS methods in *Pinus* genre (grounds of our current work) while continuing my work with microalgae. At that point my scientific background allowed me to win a postdoc grant and a one-year National Project of the Portuguese government (EXPL/AAG-TEC/2056/2013), so I moved to the University of Aveiro where I continued with my research line. In May 2014 I started a Juan de la Cierva project at the University of Oviedo to study UV-adaption processes in *Pinus radiata* by using a comprehensive high throughput approach at different cellular levels supported by the study of natural variation and the use of model organisms (*Chlamydomonas* and *Arabidopsis*). Recently, this research line has been supported by a Spanish National Project which I am CoPI (AGL- AGL2014-54995-P).

So far, I have contributed as PI in two National Projects and as a researcher in 1 European and 8 National projects. I have been cited more



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD



DIVISIÓN DE PROGRAMACIÓN
Y GESTIÓN ECONÓMICA Y
ADMINISTRATIVA
SUBDIVISIÓN DE
PLANIFICACIÓN Y GESTIÓN
ADMINISTRATIVA

AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

than 1000 times and my h-index is 19. I have 42 articles in ISI journals (13 as first and 4 as last author, with an average of 25 citations per article), 9 book chapters, and I edited a special issue in the Journal of Proteomics (Journal of which I am member of the editorial board). I have published in the most prestigious journals in their field, such as: Molecular Cell, PNAS, Molecular and Cellular Proteomics, The Plant Journal, Biotechnology for Biofuels, or Molecular Ecology. I am a usual reviewer for top journals of my research field, ANEP evaluator for panels AGR and BFS, and member of the board of the Spanish Proteomics Society.

I have 23 participations in national and international conferences (4 invited talks; 4 scientific or organizing committees). Currently I m joining the EU COST action FA1306 (The quest for tolerant varieties - Phenotyping at plant and cellular level). I have supervised 4 doctoral theses (3 in progress), and 7 master/grade theses. Currently I m teaching in Biology and Biotechnology grades (UniOvi), and in the official Master of Biotechnology of Environment and Health, being the coordinator of the subject Plant Biotechnology.



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: ZORNOZA BELMONTE, RAÚL

Referencia: RYC-2015-18758

Área Científica: Agricultura

Correo Electrónico: raul.zornoza@upct.es

Título:

SOIL QUALITY AND REHABILITATION

Resumen de la Memoria:

My PhD thesis dealt with the development and application of different techniques to assess soil quality and degradation. I hypothesized and confirmed that microbial communities were adapted to severe drought periods and the use of air-dried samples was representative of field conditions. I also tested that biochemical properties maintain their field levels in air-dried samples stored up to 9 months. I calibrated two models as soil quality indices. The selected response variable was soil organic carbon, as an integral part of soil organic matter, owing to its importance in the nutrients cycling, microbial activity support, water holding capacity and establishment of the structure. Those models were verified and validated using undisturbed forest soils and degraded soils. I designed a study with a disturbing sequence of soils to identify the microbial groups more sensitive to soil degradation, susceptible to be selected as indicators for soil quality assessments. I also used near infrared spectroscopy for soil quality assessments, developing models to estimate soil properties and to identify the degree of degradation of a soil. During my posdoc stage at University of Florence I continued working with soil quality assessment focused on biochemical properties, developing a protocol to measure the enzyme arylesterase in soils, and assessed the behaviour of this enzyme with soil heavy metal pollution and reclamation practices. During my stage in Technical University of Cartagena, I continued working in the same line, focusing on reclamation of polluted soils, and enhancing soil quality and C sequestration in agricultural soils by selection of different management practices. We have participated in different projects related to soil degradation by heavy metals pollution and soil reclamation. We have characterized the soil quality of polluted soils to assess the environmental risks, and design different strategies to reclaim polluted soils to enhance soil quality, by application of different amendments and phytostabilization. We have used different organic and industrial to decrease heavy metals mobility and promote microbial and vegetal communities. We used different physical, chemical and biochemical properties as indicators, identifying the best plant species candidates for phytoremediation of heavy metals in soils. Apart from increasing soil quality, decreasing heavy metal toxicity and increasing microbial biomass and activity, we found out that the application of marble waste together with organic wastes as amendments led to slowed down mineralization rates of the organic wastes, contributing more intensively to enhance soil quality and carbon sequestration in soil. We also reported how the amendment of soils with pig slurry, pig manure, or its biochar affected soil organic C and N dynamics and microbial structure and growth to tailor different soil management strategies. I have been the co-director of a doctoral thesis titled **Agromonic recycling of pepper crop residues: their influence on soil quality and broccoli crop**. I am the principal investigator of a project dealing with creation of technosoils for soil reclamation

Resumen del Currículum Vitae:

Grant from CSIC for students of last year of Bachelor, staying at CEBAS-CSIC for 4 months. PhD student with a Spanish Government FPU fellowship dedicated to the development of different techniques and indices to assess soil quality. Three pre-doctoral stays abroad (University of California-Davis and Hohenheim University). PhD degree in January 2007, receiving the Extraordinary Award of Doctorate. Postdoctoral fellowship from the Spanish Ministry of Science at University of Florence studying the effects of soil pollution and reclamation strategies on soil enzyme activities. In April 2009 I got a **Juan de la Cierva** contract to work at the Technical University of Cartagena, where I currently work as postdoc researcher. My research lines are soil quality assessment, soil pollution, soil reclamation, soil biochemistry and organic matter dynamics, continuing the same research lines that I started with my PhD, focusing on procedures to recover degraded soils to enhance soil quality. Two stays in Canada and Sweden. Director of a doctoral thesis based on the effect of organic amendments on agricultural soil quality and carbon dynamics. I have organized seven sessions within the Annual Congress of the European Geosciences Union (EGU) in 2012, 2013, 2014, 2015 and 2016, and three sessions in the Eurosoil Congress 2016. Author of 58 articles, 53 of them included in the Science Citation Report (JCR), many of them within the first quartile (> 752 citations). Author of 8 book chapters and 140 presentations in congresses. Participation in 16 competitive research projects, 7 being financed by the European Commission. Principal Investigator of one project. Author of two national patents of invention and one international patent. Awarded with the Outstanding Young Scientist of Soil Science Division Award by EGU. Regular reviewer of high impact journals. Member of the Editorial Board of the Journal SOIL, **Sociedad Española de Ciencia del Suelo**, **International Union of Soil Science** and EGU



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: OLIVA PALAU, JONAS
Referencia: RYC-2015-17459
Área Científica: Agricultura
Correo Electrónico: jonas.oliva@slu.se

Título:

Patología forestal

Resumen de la Memoria:

I am Associate Professor at the Swedish University of Agricultural Sciences (SLU) where I work since 2008. My research focusses on native and invasive tree pathogens. I did my post-doc at Jan Stenlid's lab (SLU), working on modelling and control of root rot pathogens. In 2012, I obtained a faculty position as Assistant Professor. Since then, I have independently build up a research group with focus on invasive forest pathogens, currently composed of a postdoc and a PhD student.

I am interested in forest pathogens as they cause major economic and ecological impacts to forest ecosystems. Forest pathogens can be classified as (i) Non-native forest pathogens migrating into new areas by means of human transport or by expanding their range due to climate change; and as (ii) Native pathogens whose capacity to damage trees has increased as a result of shifting environmental conditions (e.g. climate change, or changes in disturbance and management regimes).

For non-native forest pathogens, I have two main lines of research:

Line 1: Detection of invasive pathogens by trapping techniques in combination with high-throughput sequencing techniques. These methods allow a fast screening of large quantities of material for known and unknown pathogenic species, and can be used to facilitate the localization and eradication of emerging foci. My working hypotheses are:

- H1: Active spore traps can be used to detect invaders dispersing by airborne spores
- H2: River filtrates can be used to detect Phytophthora species present in the catchment area
- H3: Passive spore traps can be used to detect invaders dispersing by rain or splash

Line 2: On drivers and barriers of invasion for Phytophthora species. The aim is to identify hot-spots of invasion, and therefore be able to concentrate surveillance efforts to areas more likely to be invaded. Phytophthoras are a diverse genus of pathogens that are introduced and spread by the same drivers (planting of infected nursery stock, and soil movements). However, cold environments seem to pose a barrier for invasion for some species. Thus, my working hypotheses are:

- H4: Winter temperatures are limiting the spread of Phytophthora species lacking cold-resistant resting spores
- H5: Areas with human influence such as city parks and recreational areas are invasion host-spots and will have larger frequency of invasive forest Phytophthora species than natural environments.

For native pathogens, I have three lines of research:

Line 3: The role of pathogens in drought-induced mortality. My research has focused on developing a theoretical framework to predict the contribution of pathogens to drought induced mortality. The hypothesis is:

- H6: The contribution of a pathogen to drought induced mortality can be predicted based on the type of trophic interaction established with the host tree.

Line 4: On transgenerational priming in trees, which can be exploited in commercial forestry for producing seedlings more prepared to face biotic or abiotic stressors. The hypothesis is:

- H8: Biotic damage on mother trees increases offspring resistance to pathogens

Line 5: On biological control against Heterobasidion root rot. I develop biological co-factors that can be applied together with commercial Rotstop formulations.

Resumen del Currículum Vitae:

-Education

2007 (22/11/2007). Ph. D. University of Lleida (Spain). Awarded.
2005. M. Sc. Forest Engineering. University of Lleida (Spain).
2001. B. Sc. Forest Engineering. University of Lleida (Spain).



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

-Accreditations

2015 Habilitation as Associate Professor (Docent), Swedish University of Agricultural Sciences (current position).
2012 Acreditación de Profesor Contratado Doctor, ANECA
2012 Acreditación de Profesor Ayudante Doctor, ANECA

-Research (D1, first decile / Q1, first quartile)

Scientific papers in JCR-SCI journals: 25 (14 D1, 19 Q1)
Scientific papers in JCR-SCI journals first author/senior author: 18 (10 D1, 14 Q1)
Scientific papers in JCR-SCI journals after postdoc (since 2013): 12 (8 D1, 11 Q1)
Scientific papers in JCR-SCI journals from PhD or MSc thesis students that I supervised: 6 (4 D1, 2 Q1)
Scientific papers in JCR-SCI journals without PhD supervisor: 21 (13 D1, 16 Q1)
SCI Journals where I published: New Phytologist, Tree Physiology, Forest Ecology and Management, Agricultural and Forest Meteorology, Journal of Ecology, Proceedings Royal Society series B

Peer-reviewed book chapters: 2

Scientific papers in non-SCI journals: 5 (3 first author/1 senior author)

Scientific papers in revision in JCR-SCI journals: 2

Popular science articles and books: 6

Invited talks: 3

Communications in international meetings: 12

Communications in national meetings: 12

h-index = 8 (SCOPUS, January 2015, 163 citations in 120 documents, authorID 22941197400)

-Grants

Competitive grants as PI (number/total amount): 6 / 0.65 million ♦

Competitive grants as co-applicant funded by the National Plan (AGL) of the MINECO: 2

Contracts with companies: 3 (1 as PI, 2 as co-applicant) / 18 791 ♦.

Major EU calls: 1 (FP7 BiodivERsA 2012, 10 countries, 4.3 million ♦) - I led the design and writing of the grant. I am responsible for the Swedish part of the project: 0.35 million ♦)

-Leadership and international profile

Senior researcher (leader) of research group with 1 post doc and 1 PhD student.

International grants: 4 (1 as PI, 3 as co-applicant)

Member of EU committees: 1 (European Plant Protection Organism ♦EPPO♦)

Organization of international conferences/symposiums: 3

Visiting international postdoctoral researchers in my group: 1 (Spain)

Visiting international researchers in my group: 1 (New Zealand)

Visiting international MSc students in my group: 7 (Germany, France, Spain and Turkey)

International co-authorship: 38 co-authors (Sweden, Norway, New Zealand, Australia, Lithuania, Italy, Czech Republic and Spain)

Organisation of international PhD course: 1

-Stays in public or private R&D centres

Pre-doctoral: 10 months

Post-doctoral: 3 years 7 months

Faculty position: 4 years 1 month

Guest researcher: 1 month

-Editorial work

Journal of Plant Pathology (CAB Abstracts)

Forests (JCR-SCI, IF: 1,449)



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD



DIVISIÓN DE PROGRAMACIÓN
Y GESTIÓN ECONÓMICA Y
ADMINISTRATIVA

SUBDIVISIÓN DE
PLANIFICACIÓN Y GESTIÓN
ADMINISTRATIVA

AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Teaching experience

Lecturer in MSc and post-graduate education 2009-2013: 5 courses (115 hours)

MSc thesis supervision: 8 (6 of them become later PhD students) (4 published as SCI papers)

PhD supervision: 2 (1 main supervisor, 1 external advisor)

Member of PhD committees: 2



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: PÉREZ PÉREZ, JUAN GABRIEL
Referencia: RYC-2015-17726
Área Científica: Agricultura
Correo Electrónico: juang.perez@carm.es

Título:

New agronomic practices for improving water use efficiency in semiarid regions

Resumen de la Memoria:

My research career has been focused always on the development of new irrigation strategies and technologies that can contribute to increasing the water use efficiency and minimising the salinity effects, in order to maintain the profitability of the citrus crop. In 2001 I joined the Instituto Murciano de Investigación y Desarrollo Agrario y Alimentario (IMIDA) and I became involved in several research projects evaluating the response of different citrus species and rootstocks to different water saving strategies and technologies (including deficit irrigation (DI), regulated deficit irrigation (RDI), partial root-zone drying (PRD) and subsurface drip irrigation systems) and to saline water. All these studies have been mainly carried out in field conditions and have been approached from the point of view of plant water relations, gas exchange, mineral nutrition, yield and fruit quality. During my PhD and postdoctoral work, I visited several recognised international research centres (IVIA, Spain; University of Florida, USA; ISA-CRA, Italy) to develop my specialization in plant stress physiology of hormones (ABA), secondary metabolites and gene expression; these also formed the foundation of future successful collaborations. More recently, I had three stays of 6 months each (2009-2010, 2013 and 2015) - funded by the Fundación Séneca - as a Visiting Researcher at Lancaster University (United Kingdom). The main objective of these stays was to deepen our the understanding of how the long distance root-to-shoot chemical signals (ABA and ACC/ethylene) implicated in stomatal regulation are modified by the different irrigation strategies (DI, PRD, high irrigation frequency). The new knowledge acquired in these stays helped me design more efficient irrigation strategies, which are currently being evaluated in a research project of the INIA (RTA2012-00102-00-00) in which I am the Principal Researcher. Since 2007 I have led my own research line focused on the improvement of the design of new water-saving strategies and on new ways to use saline water to reduce short and long-term water scarcity problems that affect citrus crops.

Resumen del Currículum Vitae:

I finished my studies as an Agricultural Engineer in 2001. My scientific career started at the Centro de Investigación y Desarrollo Agrario y Alimentario (CIDA) in Murcia (training fellowship from the Fundación Séneca and pre-doctoral FPI fellowship from INIA). During my PhD studies I also worked at the Instituto Valenciano de Investigaciones Agrarias (IVIA, Valencia) (3 months) and at the University of Florida (CREC, USA) (3 months). Since I finished my PhD in Crop Production (which received the Extraordinary Doctoral Award, 2005/2006), awarded by the University Miguel Hernández (Spain), I have worked at the Instituto Murciano de Investigación y Desarrollo Agrario y Alimentario (IMIDA, Murcia) as an Agricultural Researcher. In 2006 I had two short postdoctoral stays: at the IVIA (Valencia) for 4 months and at Istituto Sperimentale per l'Agricoltura (Italy) for 3 months. Starting in 2009 I have had three stays (of 6 months each) as a Visiting Researcher at Lancaster University (United Kingdom), funded by the Fundación Séneca. Currently, I work as an Agricultural Researcher funded by a competitive INIA Doc-CC.AA. contract, at the IMIDA. In my research career, I have participated in 16 projects: 3 from the European Union, 4 from the CICYT, 3 from the INIA, one from the Fundación Séneca and 5 from the Region de Murcia-FEDER funds. I have also participated in 4 projects with private companies. I was the principal researcher of a project with a private company (K Plus S Española S.L.) and am currently the principal researcher of an INIA project (RTA2012-00102-00-00). I have published 55 peer-reviewed scientific articles, 24 of them included in the SCI (12 as first author and 7 as corresponding author), almost all of them in Q1-ranked journals in the Web of Science (WoS). The sum of citations of my publications is 345 and my H-index is 11 (WoS, January 2016). I have participated, with 48 oral and/or poster contributions and abstracts, in national and international congresses (9 national, 22 Spanish-Portuguese and 17 international), including an invited lecture at a conference at Lancaster University. I have acted as a reviewer of scientific papers for the international journals *Agricultural Water Management*, *Journal of Agricultural Science* and *Journal of Horticultural Science and Biotechnology* and as a project reviewer for the Citrus Research Board (California USA). With regard to my teaching experience, currently I am the director of a Doctoral Thesis (Polytechnic University of Cartagena, Spain), and I have also directed 4 Bachelor theses (3 in the University Miguel Hernández (Orihuela, Alicante) and 1 in the University of Almería, Spain) for the degrees of Agricultural Technical Engineer and Agricultural Engineer. Since 2007, I have collaborated with the University of Murcia and the University Miguel Hernández as Extracurricular Advisor in the degrees of Food Science and Technology, Agricultural Engineering and Biology. I am a member of the Associated Unit of I+D+i at the CSIC (IMIDA-CEBAS, Murcia) *Fertirrigation and fruit quality in horticulture* and continue my collaboration with the work group of Prof. Ian Dodd, initiated in 2008, as a *Visiting Researcher* funded by the Research Dean at Lancaster University.



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: SÁNCHEZ PÉREZ, RAQUEL

Referencia: RYC-2015-18711

Área Científica: Agricultura

Correo Electrónico: raqsp@yahoo.es

Título:

Development of new biotechnological tools to increase efficiency in fruit breeding programs

Resumen de la Memoria:

The majority of the temperate fruit tree species belongs to the Rosaceae family, which encompasses about 100 different genera with more than 2000 species. Within this family, Prunus genera is one of the most important genera, producing in 2013 more than 30 million metric tons worldwide of peaches and nectarines, apricots, almonds and cherries (faostat.fao.org).

The main difficulty to work with these species is their long juvenile period (three to four years) until they come in bearing and their sole flowering per year. Furthermore, most of traits are quite affected by environment, which obliges the breeder to record the data during several seasons. Due to these factors, the time necessary to release a new Prunus variety, e.g. almond, is approximately 10 years.

Since 2002, that I started my PhD, I have aimed my efforts in the improvement of breeding programs with new biotechnological tools that would benefit not only breeders but also growers, i.e. assisting the protection of the cultivated species to avoid frauds. In this sense, I have developed molecular markers for important agronomic traits as self-compatibility, and bitterness, two of the main objectives in almond breeding programs, together with flowering time. This last trait is a very complex character that also depends on the environment.

Subsequently, my postdoctoral studies expanded my knowledge by the biochemical and physiological studies of bitterness in almond, which is related to cyanogenic glucosides, but also by the sequencing the almond genome, coordinating an international consortium between Denmark, Australia, USA, Spain and, recently, Italy.

As previously commented, climate change is forcing not only fruit tree breeders to improve their efforts in developing new varieties, which can be adapted and be economically competent in the new climate conditions, but also scientists to develop new and natural treatments that can compensate for the loss of chilling units that plants need to make an effective and yearly even fruit production. In 2013, I was awarded by the Villum Foundation (Denmark), under the **Young Investigator Program**, to work as PI, for three years, in the discovery of new breaking dormancy agents. The study is based on HCN-related chemicals, as previously they have been successfully used in species like cherry, apple, apricot, peach, etc. to bring forward flowering and ripening in warm areas. Recently, new compounds, related to cyanogenic glucosides turnover (HCN-related natural compounds), have been discovered not only in almond but also in cassava and sorghum by one of my PhD students (Picmanová et al 2015, Biochemical Journal 469: 375-389), opening the possibility to use them as natural breaking-dormancy agents.

Finally, the knowledge gained by this three-year project would be useful in marker assisted breeding in e.g. other rosaceous fruit trees or crop plants such as rubber tree, sugar cane, sorghum, etc., but would also involve a high component of knowledge and technological transfer to the agricultural sector of Spain, which is one of the most important European fruit producers

Resumen del Currículum Vitae:

Since 2002, my curricular merits obtained (A) and leadership (B) are:

A1. Contributions: I have published 52 publications, out of which 25 are peer-reviewed articles (SCI index), being the first author in 14 and the corresponding author in six, having been cited 587 times in total, reaching an h-index of 13 (ISI). In addition, I have more than 24 articles in non-SCI journals, four in science magazines and three book chapters. I am also the breeder of the new almond cultivar **Tardona**, which is the latest flowering cultivar ever released, avoiding the risk of losing crops because of late frosts. I have over 46 works submitted to international conferences.

A2. International activity: In these 13 years of research, and being on maternity leave for 18 months, I have participated in 18 research projects, in which nine of them were obtained from international agencies located in Denmark, USA and Australia. I am currently a PI of a three-year project obtained by the VILLUM Foundation in Denmark, under the **Young Investigator Grant**. I have been a member of the scientific committee, organizing an international conference from the ISHS. I have collaborated with the University of Adelaide (Australia), Southern Cross University, Lismore (Australia), University of California (Davis, California, USA), Washington State University (USA), Royal Veterinary and Agricultural University (Denmark), University of Copenhagen (Denmark), INRA in Bordeaux (France) and University of Bari (Italy). In total, I have stayed more than 66 months in international research centres.

Finally, I am coordinating an international consortium to sequence the almond genome, with special focus to find the bitterness gene.



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD



DIVISIÓN DE PROGRAMACIÓN
Y GESTIÓN ECONÓMICA Y
ADMINISTRATIVA
SUBDIVISIÓN DE
PLANIFICACIÓN Y GESTIÓN
ADMINISTRATIVA

AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

A3. Rest of curricular merits: I have published four articles in popular science magazines. I am a member of the COST Action FA1104, reviewer in The Journal of Plant Physiology, Plant Cell Reports, Journal of Biotechnology, Genetics, Hortscience, BMC and PLOS One. The 25th of January, I will be a member of the board of an European PhD Thesis.

B. Leadership skills:

I have supervised in the laboratory three final projects (within Agronomy Engineer), a Master thesis and currently I supervise three PhD thesis that will be all defended in the current year.

I have been invited to chair a session in an international conference from the ISHS and as invited speaker in two different COST Actions (COST873 and COSTFA1104). Moreover, I am one of the two national representatives in the COST Action FA1104.

From 2009, I got independent funding to carry out my postdoctoral studies, being the PI in two projects from national and international agencies, which main goal was the search of biotechnological tools and natural products to improve fruit breeding programs.



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: DIAGO SANTAMARIA, MARIA PAZ
Referencia: RYC-2015-18429
Área Científica: Agricultura
Correo Electrónico: mpaz.diago.santamaria@gmail.com

Título:

Aplicación de tecnologías no invasivas para el fenotipado de la vid y la caracterización de la variabilidad espacial del viñedo

Resumen de la Memoria:

Mi trayectoria investigadora en viticultura se ha centrado principalmente en dos objetivos: a) regulación del rendimiento productivo del viñedo durante la etapa pre-doctoral, y b) Aplicación de tecnologías no invasivas para el fenotipado de la vid y la caracterización de la variabilidad espacial del viñedo, que constituye mi línea de investigación post-doctoral. La investigación doctoral profundizó en el estudio y capacidad de mecanización del deshojado precoz como técnica eficaz y económicamente competitiva para regular el rendimiento productivo del viñedo y mejorar notablemente la calidad de la uva y del vino. Los resultados de este trabajo investigador dieron lugar a 9 publicaciones SCI y varias comunicaciones a congresos internacionales. El germen de mi línea de investigación post-doctoral, surge en la etapa final de mi doctorado, al intentar cuantificar el crecimiento vegetativo y producción de una cepa mediante análisis de imágenes RGB capturadas en el viñedo. A partir de entonces toda mi labor se ha centrado en la aplicación de nuevos sensores y de las técnicas de imagen, como RGB e hiperespectral, la termografía, la fluorescencia de la clorofila y la espectroscopía como herramientas de fenotipado, para caracterizar el estado vegetativo, productivo, fisiológico (ej. estrés hídrico) y cualitativo (composición de uva y vino) del viñedo de forma no destructiva y rápida, bajo el concepto de monitorización próxima (proximal sensing) con el objeto de generar plataformas de fenotipado de alto rendimiento (HTTP), aunque también he abordado algunos ensayos de teledetección. La creciente competitividad en el sector vitícola, el escenario actual del cambio climático y la necesidad de una agricultura sostenible han estimulado nuevas estrategias de producción vegetal, entre las que destacan la apuesta por la viticultura de precisión, y la generación de nuevos genotipos, que requieren potentes herramientas de fenotipado. El fenotipado no invasivo de la vid ha ido también ligado a la caracterización de la variabilidad espacial del viñedo, para delimitar subzonas diferenciadas, susceptibles de manejo específico más eficiente. El trabajo realizado en mi etapa post-doctoral se ha desarrollado principalmente en el marco de proyectos de I+D de ámbito nacional y europeo, en los que he participado en su redacción y ejecución (mi estancia y contrato en Italia es fruto de un proyecto europeo) y ha dado lugar a más de 40 publicaciones indexadas y numerosas comunicaciones a congresos.

Resumen del Currículum Vitae:

Licenciada en Ciencias Químicas por la Universidad Ramon Llull (Barcelona) e Ingeniera Química del Instituto Químico de Sarriá (Barcelona), realicé un Master of Science in Viticulture and Enology en la Universidad de Davis, California (EEUU), gracias a una Beca de Estudios de postgrado de la Fundación La Caixa. Tras una etapa profesional como enólogo en varias bodegas, en el año 2010 obtuve el Doctorado en Ciencias Agrarias y Alimentarias por la Universidad de La Rioja, con un estudio sobre una innovadora técnica para el control del rendimiento de la vid denominada deshojado precoz. Fue durante la realización del doctorado cuando tomé contacto por primera vez con el análisis de imagen como técnica no invasiva para caracterizar la vegetación y producción de las cepas. Desde entonces, la aplicación y desarrollo de tecnologías no invasivas como herramientas de fenotipado y caracterización del viñedo y su variabilidad espacial han centrado mi labor investigadora. Mi producción científica incluye 33 artículos en revistas SCI, de los cuales 30 se sitúan en el primer cuartil, 7 artículos indexados, 10 trabajos publicados en revistas nacionales de divulgación en agricultura y 36 comunicaciones a congresos, siendo 29 de ellas internacionales y 22 en formato de comunicación oral. Asimismo soy co-inventora de 5 patentes nacionales, que describen procedimientos que permiten cuantificar el número de flores, los componentes de la producción de un racimo, así como su compacidad, la porosidad de la espaldera de la cepa e identificar el clon dentro de una variedad, a partir de visión artificial RGB e hiperespectral. Asimismo soy co-inventora de una de las primeras aplicaciones para dispositivos móviles inteligentes en viticulture, disponible en Google Play. He participado como investigadora en 15 proyectos de investigación, de los cuáles 6 son no competitivos y 9 proyectos de investigación competitivos. De estos, 5 son proyectos europeos (7th FP), 3 nacionales y 1 en colaboración con países no europeos. Vinculado a los proyectos de investigación he realizado dos estancias post-doctorales, en la Università Cattolica del Sacro Cuore (Piacenza, Italia), donde disfruté de un contrato de dos años, y en el Instituto Valenciano de Investigaciones Agrarias (Valencia), donde amplié mi formación en análisis de imagen. En el ámbito docente, he impartido docencia en programas de Grado y Másteres de la Universidad de La Rioja, sobre materias de viticultura y enología y he co-dirigido una tesis doctoral sobre la caracterización de la variabilidad espacial del estado vegetativo del viñedo mediante técnicas no invasivas, que se presentó en Julio 2015. Asimismo, he coordinado en 3 ediciones un programa de postgrado sobre análisis sensorial del vino impartido por la Fundación de la Universidad de La Rioja y organizado actividades docentes en el ámbito universitario para estudiantes de educación secundaria. En el apartado de otros méritos destacaría el Premio Salvador Gil, otorgado por la (AIQS) al mejor trabajo final de carrera.



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: LAZARO CASTILLO, AMPARO
Referencia: RYC-2015-19034
Área Científica: Agricultura
Correo Electrónico: amparo.lazaro@imedea.uib-csic.es

Título:

Pollination by wild insects as a fundamental service in managed landscapes

Resumen de la Memoria:

Pollination is an essential process for maintaining biodiversity and ecosystem functioning. It is estimated that 87.5% of the flowering plants and 1/3 of the human diet depends on pollinators. During the last decade, several studies have warned about the widening disappearance of pollinators and the serious associated consequences for global welfare and human persistence. A pollinator decline threatens agricultural pollination and produces inevitable cascading reactions that lead to biodiversity loss. My research focuses on the pollination process in managed landscapes and the human disturbances that affect it. Since my PhD studies (FPU, 2001-2005) my work has addressed the effects of human disturbances on plant reproduction, with a special focus on sustainable management. During my postdoc in Norway (2006-2010) I participated in the first community-wide experimental simulation of a pollinator loss, which allowed me to change my research focus from species to communities, and to evaluate the effects of the local context and different levels of management on pollination. I continued within my research of anthropogenic disturbances on pollinators in managed landscapes, by deepening into the effects of context on the behaviour of pollinators (Juan de la Cierva, IMEDEA, 2010-2014), and focusing on pollination as a key ecosystem service in agricultural landscapes (University of the Aegean, Greece, 2014-2015; UMB, Norway, 2015; IMEDEA, Spain, present). Along with my carrier my interest in human-managed systems has increased, and nowadays my current research mostly focuses in agro-forestry and agro-pastoral systems, combining applied with more basic science to study pollination as a key ecosystem service. I use integrative approaches to study the variability of wild pollinators, their efficiency and vulnerability to natural and anthropogenic changes, both in relevant crops and in complex managed environments that combine agricultural lands with forest fragments.

My main research line is the study of ♦Pollination by wild insects as a fundamental service in managed landscapes♦. On the basis of this main line lay three specific issues: (1) The role of wild pollinators as a natural resource for the production in agro-systems, which aims to properly assess the value of conserving and managing wild pollinators to maintain the function of agricultural systems; (2) Effects of human-induced changes on pollination in complex managed landscapes, which so far has focussed in six main human-induced changes: livestock grazing, beekeeping, habitat fragmentation, pollinator loss, climate change, and lecommunication antennas; and (3) Distinguishing the effects of landscape characteristics, local context and floral traits on the pollination process. This research line combines applied objectives, such as the establishment of management recommendations for sustainable crop production and species conservation, with research aims related to further extending current ecological theories necessary to build quality applied science. All these issues are highly relevant for the sustainable and improved management of crops, for the conservation of plant communities, and for the maintenance of pollinators as a key ecosystem service in managed landscapes.

Resumen del Currículum Vitae:

I graduated in Environmental Sciences in 2000 (University of Almeria, Spain), studies for which I received the Second National Award for Bs. Studies (Spanish Ministry of Education). After obtaining my PhD in 2005 (University of the Balearic Islands, UIB, Spain), I have worked as a postdoctoral researcher at the Norwegian University of Life Sciences, Norway (2006-2010, 2015), IMEDEA, Spain (2011- 2014, present), and University of the Aegean, Greece (2014-2015). Until now I have 38 peer-reviewed publications, plus 6 under review. Within these 38 publications, 32 are in SCI journals and three are book chapters. Twenty-seven of my 32 SCI publications (85%) are in journals of the first quartile of their specific research area (Ecol Lett, J Ecol, Ecology, Ecol Appl, Ecography, Oikos, Oecologia, Ann Bot, Am J Bot, Ecol Entom), and 16% in the first decile. I am the first author of 23 of my 32 SCI publications (73%), and first, second or last (senior) author in the 91%. In addition, I am the first author in 5 of my 6 publications currently under review, and last author in the other. I have published 27 articles without my PhD supervisors. My papers have accumulated so far 767 citations (citations/year from 2011: 119.2; citations/paper: 30.7). My h-index is 13 (i10 index is 14). Some of my articles were listed among the most cited or downloaded after their publication. Through my whole scientific carrier I was always funded by competitive fellowships/contracts and I have shown a high capability to obtaining funding to cover my salary, research projects and travel expenses (e.g. AEI, CYTED, MINECO, AEET, Balearic Government). I have participated in 17 research projects (1 European and 5 more International) being the PI of 4 of them (total 192 050 ♦). Last year, I was actively involved on a large European project with a budget of 600 000 ♦, and I was conceded an Award for Young Researchers (AEET; 3000 ♦). I have 28 presentations in conferences (13 oral), and have worked in 9 research centres in Spain, Mexico, USA, Denmark, Sweden, Norway and Greece, which has allowed me to create a large network of stable collaborators, including over 30 researchers from different countries. I have co-supervised one PhD Thesis (2014), three graduate and 22 undergraduate students. This academic year I collaborate as lecturer in Degree and Master studies at UIB. I was the main responsible for design, financial management and coordination of 11 field technicians in a large scale field experiment involving researchers from Norway, Sweden and USA (750 000 ♦). I organized monthly meetings for the 'Plant-animal interactions♦ research group at UMB, Norway (2007-2008). My scientist assessment activities include 2 PhD Thesis juries (2010, 2015), 5 project



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD



DIVISIÓN DE PROGRAMACIÓN
Y GESTIÓN ECONÓMICA Y
ADMINISTRATIVA

SUBDIVISIÓN DE
PLANIFICACIÓN Y GESTIÓN
ADMINISTRATIVA

AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

evaluations (2009-2014) for the Spanish National Agency for Evaluation and Prospective (ANEP), 1 for the AEET (2015), and 2 for foreign agencies (USA, 2011; Argentina, 2015), and reviewing in 53 occasions for 26 high SCI journals (including Am Nat, Divers Distrib, New Phytol, Methods Ecol Evol, Proc. R. Soc. Lond, J Ecol, Ecology). I am member of various national and international scientific societies (AEET, BES, ESA). Between 2008 and 2013 I was 21 months on maternity leave (three kids); my back after the intermittent work during this period was highly productive, with 19 papers produced, most of them as first author.



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: RUBIO SOMOZA, IGNACIO
Referencia: RYC-2015-19154
Área Científica: Agricultura
Correo Electrónico: ignacio.rubio@tuebingen.mpg.de

Título:

understanding regulation of developmental transitions to improve crops

Resumen de la Memoria:

My core research interest is in the molecular mechanisms underlying the transition between successive developmental programs throughout the plant life cycle. I focused in studying the role of two central components of the genetic programs orchestrating those successions; microRNAs (miRNAs) and transcription Factors (TFs). Understanding how plants time their development is of major agricultural importance. Therefore, I started my career studying different crop plant species such as grape and barley. In the latest, I studied the molecular basis behind the transition between two incompatible developmental programs: seed formation and germination. Both processes have important implications for plant performance and human and animal nutrition. During my PhD, I characterized a set of TFs responsible for the hormone-dependent replacement of seed maturation programs in barley by the ones conducting to seed germination. Anticipating the development of high throughput techniques that boost molecular studies in crop species and that were already available for the model plant *Arabidopsis thaliana*, I turned to study *Arabidopsis* development. During my postdoctoral experience I extended my research to the function of miRNAs, with special emphasis in the ones targeting TFs. I hypothesized and demonstrated that unrelated miRNA-targeted TFs are organized in regulatory circuits or networks with pivotal roles in development and its progression and their link to defense. In addition, my work has made major contributions to understand the topology of those regulatory networks. I have been able to show how two of those networks are responsible for the acquisition of reproductive competence and seed setting in *Arabidopsis* and the acquisition of age dependent traits in two Brassicaceae species, *Cardamine hirsuta* and *Arabidopsis*, respectively. During my scientific career I have engaged in student mentoring, paper review, promotion of international collaborations, successful grant application and technology transfer. I have also developed several molecular tools that are of great help to the plant research and biotechnology community. In particular, I developed the first approach that enabled the achievement of mutant backgrounds from different plant species devoid of specific miRNAs (Mimicry technology) which has been successfully used to improve grain yield in rice. Finally, I have devised a new set of hormone sensors for dynamically monitor the presence of bioactive hormones in a spatio-temporal manner. That last molecular device is the basis for a patent application and a joint research project with Bayer CropScience in which I am lead PI (budget 270000 €) and that is focused on the isolation of agrochemicals in *Arabidopsis* and directly translating results to wheat to modify traits of agronomical interest.

Resumen del Currículum Vitae:

My main research interest is the understanding of the molecular mechanisms that orchestrate the transition between successive developmental stages and the evolutionary forces shaping them. Therefore, I focused in studying the role of two central components of the genetic programs orchestrating those successions; microRNAs (miRNAs) and transcription Factors (TFs). Understanding how plants time their development is also of major agricultural importance. I started my career studying different crop plant species such as grape and barley. In the latest, I studied the molecular basis behind the transition between two incompatible developmental programs: seed formation and germination. Both processes have important implications for plant performance and human nutrition. During my PhD, I characterized a set of TFs responsible for the hormone-dependent replacement of seed maturation programs by the ones conducting to seed germination. Anticipating the development of high throughput techniques that boost molecular studies in crop species and that were already available for the model plant *Arabidopsis thaliana*, I turned to study *Arabidopsis* development. During my postdoctoral experience I have extended my research to the function of miRNAs, with special emphasis in the ones targeting TFs. I hypothesized and demonstrated that unrelated miRNA-targeted TFs are organized in regulatory circuits or networks with pivotal roles in development and its progression. In addition, my work has made major contributions to understand the topology of those regulatory networks. In short, I have found by using several approaches, including NGS, that unrelated miRNA-targeted TFs engage in common protein regulatory complexes and share downstream targets. I have also been able to show how two of those networks are responsible for the acquisition of reproductive competence and seed setting in *Arabidopsis* and the acquisition of age dependent traits in *Cardamine hirsuta* and *Arabidopsis*, respectively. Building on results and resources obtained during my postdoctoral work, I am planning to study miRNAs as the missing link between defense and development using a multidisciplinary approach and with unprecedented cellular resolution. The results from this work will unravel the evolutionary trade-offs involved in the interplay between the genetic programs devoted to regulate development and defense. Additionally, those findings will identify novel targets for improved disease resistance and crop yield under disease pressure. I have also developed several molecular tools that are of great help to the science community. I first participated in the transference to plants of a technique for dynamic studies of protein-protein interactions that was firstly developed in animal systems. Later on, I developed the first approach that enabled the achievement of mutant backgrounds from different plant species devoid of specific miRNAs (Mimicry technology). Finally, I have devised a new set of hormone sensors for dynamically monitor the presence of bioactive hormones in a spatio-temporal manner. We have already filed a UE patent application that is the basis for a collaborative grant along with Bayer CropScience Co..



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD



DIVISIÓN DE PROGRAMACIÓN
Y GESTIÓN ECONÓMICA Y
ADMINISTRATIVA
SUBDIVISIÓN DE
PLANIFICACIÓN Y GESTIÓN
ADMINISTRATIVA

AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

That project aims to isolate chemicals with the ability to regulate important agricultural traits in wheat.



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

Nombre: FERNANDEZ-APARICIO RUIZ, MONICA

Referencia: RYC-2015-18961

Área Científica: Agricultura

Correo Electrónico: monica.fernandez@dijon.inra.fr

Título:

Biology and control of plant-parasitic weeds

Resumen de la Memoria:

Orobanchaceae is the largest family of parasitic plants and includes witchweeds (*Striga* spp.) and broomrapes (*Orobanche* and *Phelipanche* spp.), the most serious parasitic weeds devastating worldwide millions of hectares of major crops. Instead of competing for resource capture at field scale, these weeds exploit another plant vascular system to fulfil their water and nutrient requirements. Living as obligated parasites, these weeds are constrained to germinate only in the presence of a susceptible crop, and to develop an invasive organ, the haustorium within days after germination. Seed germination and haustorium differentiation is promoted by host chemodetection ensuring the synchronization between parasitic development and crop cultivation. The special difficulty of parasitic weed control resides in the fact that both host and parasite are plants, synchronized ecologically and metabolically through a sophisticated parasitic strategy. This fact complicates the obtention of selective control of the parasitic plant without harmful effect in the crop. Besides the difficulty of weed control in the form of host-attached parasite, eradication of parasitic seed bank is extremely difficult due to prolific seed production, easy dispersal, longevity, and crop-induced germination.

I dedicated my career to plant-pathogens with special emphasis in parasitic weeds, their biology and control using a multi-disciplinary approach that includes agronomy, genetics, transcriptomics, proteomics, and biochemistry. My work addresses the study of broomrape traits that are the essence of its parasitism: crop-induced germination and haustorium development. The outcome of my research is the generation of knowledge regarding the metabolic and genetic basis for host recognition, discovery of sources of resistance and the mechanisms underlying, the purification and characterization of novel phytotoxins from allelopathic or microbial origin that either inhibit broomrape parasitism or initiate developmental programs in a suicidal-fashion i.e. in the host absence, the design of cropping systems to suppress broomrape parasitism, the characterization of new biocontrol agents, and the development innovative methods and model systems for parasitic plant research.

Resumen del Currículum Vitae:

My scientific career has built up in laboratories of international recognition in Europe, North America and Asia. I first performed my MSc and PhD at IAS-CSIC, Spain. During this period I performed scientific missions in five different countries (Denmark, France, The Netherland, Italy, and Portugal). Combining the training I received I created new research lines at IAS-CSIC aimed to engineer innovative strategies based on approaches that integrate environmental friendly concepts towards the control of *Orobanche*. The results of this pre-doctoral period yielded 25 SCI articles.

My postdoctoral period started in 2008 at Estación Experimental del Zaidín, CSIC, Spain. During this period I studied bio-protection strategies against *Orobanche* mediated by symbiotic microorganisms. The results are reported in 4 SCI articles. Subsequently I worked during 3.5 years at Virginia Tech, USA funded by the Spanish Ministry of Education followed by a Marie Curie postdoctoral fellowship. I performed an additional stay at the University of Virginia, USA, funded by Marie Curie postdoctoral fellowship with additional funding from Junta de Andalucía. During this period I worked for the Parasitic Plant Genomic Project (PPGP). I used techniques on molecular biology and functional genomics in order to understand mechanisms through which plants have acquired the competence for parasitism. This stay resulted in 9 SCI publications, with 2 more currently in preparation. In addition we published original annotation in Gene Database: The PPGP Database. [<http://ppgp.huck.psu.edu>]. After this period, I obtained financial support from the Japan Society for the Promotion of Science to perform a stay at Utsunomiya University, Japan. During this period I studied the mechanisms underlying host resistance based on low stimulation of parasitic germination and allelopathic interference of *Orobanche* parasitism. This research resulted in 2 SCI articles. In 2014, I enrolled at INRA-Dijon, France. The Agroecology team was interested in developing a new research line in biocontrol for *Orobanche* weeds and they offer me to join this team to develop it. One of my duties at INRA has been to acquire funding for parasitic plant research. I developed successful skills on project design, development and management. From my activity in this department two of the proposals have been funded until now: AgreenSkills contract (agreement n° PCOFUND-GA-2010-267196) and INRA SPE Department Scientific Project entitled "Amino Acid as Orobanchicides. An Innovative Approach to Biocontrol *Orobanche* Weeds" from which I am principal coordinator. As an additional activity at INRA, I am Editor in *Frontiers in Plant Science* Journal. The results obtained until now are reported in 3 SCI published articles, 6 manuscript more submitted or in preparation.

In summary, I have extended collaborations with other research groups studying various aspects of parasitic weed using biochemistry, plant physiology, molecular biology and bioinformatics approaches. My postdoctoral research has been continuously sustained since April



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD



DIVISIÓN DE PROGRAMACIÓN
Y GESTIÓN ECONÓMICA Y
ADMINISTRATIVA

SUBDIVISIÓN DE
PLANIFICACIÓN Y GESTIÓN
ADMINISTRATIVA

AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2015

Turno de acceso general

2009, by funding obtained in competitive calls, three of them at the international level. I authored 59 SCI publications, 37 of them included in Q1. I also authored 15 articles in non-SCI journals, 5 book chapters and 59 communications to international conferences. In total they sum 843 citations in 393 articles some of them published in high impact journals such as Science. My h-index=19.