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AYUDAS RAMÓN Y CAJAL – CONVOCATORIA 2024

Turno de personas con discapacidad

Nombre: ****** ********

Referencia: **RYC2024-051337-I**

Área Temática: **Estudios del pasado: historia y arqueología**

Correo Electrónico: **rodriguezantonandrea@gmail.com**

Título: **Cosmologías. Astronomía cultural en el Mediterraneo, Arabia y el Norte de África**

Resumen de la Memoria:

Since its beginnings, my research career has been developed in the field of Cultural Astronomy, a discipline that encompasses Astronomy and the Human Sciences, studies the links between human beings and the sky and its influence on different areas of culture, such as notions of space, time, religion and politics. Cultural Astronomy encompasses two main sub-disciplines, Archaeoastronomy and Ethnoastronomy. My research falls within the scope of both and has been developed different regions of the world, from Europe, Near East to North Africa. Furthermore, it has encompassed a wide chronology, from the Prehistory to the present. It has been mainly focused in the study of Archaeoastronomy in the Roman world, a field in which I have offered important contributions and in which I am a leading researcher. Another central merit to highlight is that I started the line of Cultural Astronomy in the Western Sahara, embracing cultures from the Prehistory to the present. In addition, I am coordinating the first archaeoastronomical research ever done in Ancient Dadan.

In the next phase, I will maintain the topics I have been working on and consolidated my trajectory, while I will incorporate others in order to complement and enrich the existing research. In particular, I will focus on Archaeoastronomy in the Roman Empire, Ethnoastronomy in the Sahara desert, with both Arab and Amazigh groups, Archaeoastronomy in the Western Sahara and I will advance the archaeoastronomical research in Northwest Arabia, specifically during the kingdoms of Dadan and Lihyan and in the Nabatean world. To continue with the work begun during the thesis and to maintain active collaborations, the study on Roman landscapes will be extended to the Danube and hopefully North Africa. Regarding the Saharan studies, the aim is to study the astronomy of nomadic or semi-nomadic populations in North Africa from prehistoric times to the present. Here, the archaeoastronomical analysis would be extended by incorporating monuments from other regions of North Africa and the Mediterranean with the aim of broadening the perspective on the networks of mobility and exchange between cultures in these regions through the observation of their ways of interpreting and interacting with the sky. As long as geopolitical circumstances allow it, fieldwork will continue in the Sahrawi refugee camps while extended to Amazigh groups in rural areas of Algeria. Studies on Saharan heritage in cultural astronomy can contribute to its inclusion in UNESCO and the International Astronomical Union's (IAU) lists of tangible and intangible astronomical heritage and astronomical heritage in danger. By highlighting the value of popular wisdom about the sky, its applications in different aspects of life and the astronomical content of archaeological heritage, it is possible to promote the creation of Starlight reserves for the conservation of dark skies. This would contribute to the reduction of light pollution, favouring the continuity of certain astronomical observation practices still present in many Saharan communities.

Resumen del Currículum Vitae:

PhD in Cultural Astronomy from the University of La Laguna, I carried out my PhD thesis at the Instituto de Astrofísica de Canarias (IAC) with a FPI grant. Since then, my research has focused on Cultural Astronomy, encompassing both Archaeoastronomy and Ethnoastronomy. My thesis was the first in this discipline defended in Spain by a woman and in an astrophysics department. During the pre-doctoral phase, I undertook a statistical analysis of the largest sample of orientations of Roman cities and camps ever studied. This study consolidated the research line of archaeoastronomy of the Roman World, broadening the scope and consideration of its results in archaeology and in Roman studies. In the following years, I have continued studying sites in different regions of the Roman Empire, both in the East and the West. During a stay at the Politecnico di Milano, I initiated a project with Prof. Giulio Magli to study the role of astronomy in Roman centuriae. Unfortunately, due to serious illness, I had to take two years of medical leave, after which I could not go on with the stay in Italy.

In 2018, I initiated a project of Cultural Astronomy in Western Sahara, from the Prehistory to the present. I coordinated the development of the archaeoastronomical study and the results were published in 2023 and presented in the EAA conference in 2022. The project is currently undergoing further development, with funding from the Cabildo Insular de Lanzarote and I am the PI.

In 2019, I started the Ethnoastronomy research in the Sahara and in 2020, I successfully create a working team in the camps, which has achieved substantial progress in the last years. The outcomes from these projects have significantly enhanced our comprehension of time, space and death in both prehistoric and contemporary Saharan peoples. In addition to previous work in the Mediterranean and the Near East, I have continued my research in Northwest Arabia, especially in Hegra and Dadan (Saudi Arabia). In February 2023, I participated in the first archaeoastronomical fieldwork campaign in the AlUla valley. This opened solid relations in this region, reinforcing the work on Nabatean astronomy started years ago in Petra while inaugurating a new line of study in ancient Dadan, which I am leading.

The work of all these years has been published in indexed journals and presented at national and international scientific and outreach conferences and events in Spain and abroad. They also appear in outreach media such as CAP Journal, Revista Astronomía or Turismo de estrellas, where I inaugurated in 2019 the first and so far only section on cultural astronomy in a Spanish media. The results have been disseminated through interviews, live broadcasts of astronomical phenomena, documentaries, talks and other events organized by different public or private entities, such as museums or universities. I am significantly involved in science communication activities in my institution (INCIPIT-CSIC), where I guide visits to the Archaeoplanetary and participate in the organization and teaching in a postgraduate course of archaeoastronomy.

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AYUDAS RAMÓN Y CAJAL – CONVOCATORIA 2024
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Nombre: ****** ********
Referencia: **RYC2024-050353-I**
Área Temática: **Psicología**
Correo Electrónico: **guidocor@gmail.com**
Título: **Advanced design and assessment tools for new ideas and phenomena**

Resumen de la Memoria:

Mi trayectoria investigadora se inició durante mis estudios de grado, cuando empecé a colaborar como ayudante de investigacion en proyectos competitivos y en actividades docentes siempre que mi salud lo permitió. Posteriormente, obtuve un contrato predoctoral "La Caixa" y participé en un proyecto de la Fundación Gargallo para desarrollar métodos más eficientes de evaluación de la discapacidad funcional, contribuyendo también al paquete estadístico catR. Estas experiencias me proporcionaron una sólida formación en técnicas psicométricas y modelado estadístico.

Uno de los hitos que más valoro míos fue el debate que inicié en la comunidad de estética empírica, a raíz de un artículo donde introduje una nueva concepción de la sensibilidad estética y un marco teórico de análisis. Este trabajo ha generado múltiples citas tempranas y nuevas discusiones en la disciplina. Paralelamente, mi tesis doctoral profundizó en la preferencia visual y en cómo propiedades como la curvatura influyen en las decisiones y gustos, tanto en contextos básicos como en aplicaciones de interiorismo. A partir de ahí, expandí la investigación hacia otras modalidades sensoriales (sonido, gusto) y usé técnicas novedosas de análisis (modelos de efectos mixtos, meta-análisis) para abordar cuestiones teóricas claves.

Mi sólida formación metodológica me permitió colaborar como analista y diseñadora de estudios en áreas tan diversas como la psicología moral, la publicidad preventiva, las terapias psicológicas innovadoras o la psicología del desarrollo, siempre con foco en aspectos sociales: reducir sesgos, promover el bienestar y mejorar la calidad de vida. Siguiendo esa línea, en 2021 lancé un proyecto pionero sobre la influencia de los baños públicos en la calidad de vida, financiado por la Universidad Camilo José Cela. De allí surgieron varias publicaciones donde exploré la vivencia de grupos "dependientes del baño" y la repercusión social y psicológica de la falta de instalaciones adecuadas.

He mantenido un compromiso constante con la divulgación y la ciencia abierta, coordinando el blog RasgoLatente.es y compartiendo datos y scripts en plataformas como OSF y GitHub, respetando siempre la confidencialidad en estudios sensibles. A pesar de mis limitaciones de movilidad, he establecido colaboraciones con 31 coautores de siete países, aprendiendo nuevas técnicas (Bayes, redes psicométricas) y perfeccionando mis prácticas de preregistro y transparencia científica.

De cara al futuro, mi línea de investigación se orienta hacia la comprensión de la Inteligencia Artificial Generativa (GenAI) y su impacto social: miedo o desconfianza hacia estas tecnologías, vulnerabilidad a la desinformación personalizada y consecuencias éticas de la producción de contenido por máquinas. En definitiva, mi trayectoria combina desde la evaluación funcional y la estética empírica hasta investigaciones sobre GenAI, siempre con el objetivo de impulsar la innovación científica y el bienestar social.

Resumen del Currículum Vitae:

Mi producción científica incluye diversas publicaciones indexadas en el ámbito de la psicología, la salud y la estética empírica. He contribuido al desarrollo de métodos y escalas de evaluación (por ejemplo, sobre baños públicos, detección de ansiedad y depresión en pacientes oncológicos o mediciones de preferencia visual), combinando métodos mixtos y enfoques estadísticos avanzados. En estética, propuse un modelo de sensibilidad estética basado en cambios hedónicos capturados a través de modelos de efectos mixtos, generando un debate relevante en la disciplina. Asimismo, en proyectos interdisciplinarios he abordado temáticas como la preferencia por la curvatura, la relación multisensorial entre sonido y gusto o los efectos emocionales en el juicio moral.

He participado en diversos proyectos competitivos: desde mi contrato predoctoral con "La Caixa" hasta colaboraciones en proyectos estatales sobre preferencia visual, neurociencia cognitiva o movilidad segura. Además, lideré como IP el proyecto "CUALIBAÑOS", financiado por la Universidad Camilo José Cela, que dio lugar a un enfoque integral sobre la repercusión de los baños públicos en la vida diaria. Mi compromiso con la ciencia abierta se manifiesta en la publicación de datos, scripts y materiales complementarios en OSF y GitHub, cumpliendo protocolos éticos para salvaguardar la privacidad en estudios sensibles.

En el ámbito docente, he impartido asignaturas de metodología y psicología básica, supervisando más de 30 trabajos fin de grado y máster en áreas como neurociencia cognitiva, psicología de la salud y gerontología. Además, coordiné durante cuatro años el Máster en Neurociencia Cognitiva y Educación en la Universidad Camilo José Cela, facilitando la formación de un nutrido grupo de estudiantes y profesores. He realizado cerca de 50 revisiones para revistas internacionales como Psychology of Aesthetics, Creativity, and the Arts (APA) y he evaluado proyectos para la Agencia Estatal de Investigación.

A pesar de mi discapacidad, he mantenido una activa colaboración internacional con investigadores de Canadá, Reino Unido, Estados Unidos, Italia, Austria, Noruega, Colombia y Chile. Dado que no pude realizar estancias prolongadas en el extranjero, aproveché al máximo las conferencias y la comunicación online para establecer redes de trabajo, perfeccionando mis habilidades de escritura académica y adoptando prácticas de preregistro. Varias de mis publicaciones han alcanzado notable repercusión mediática, tanto por su relevancia social (por ejemplo, sobre la accesibilidad a baños públicos) como por su innovación teórica (en el caso de la sensibilidad estética).

En conjunto, mi currículum se caracteriza por una sólida integración de teoría, método y aplicación social. He explorado la psicología desde múltiples perspectivas "evaluación de la discapacidad funcional, estética empírica, moral, salud o accesibilidad" y ahora encamino mi labor hacia la investigación del papel de la Inteligencia Artificial Generativa en la sociedad, con el propósito de seguir contribuyendo a la mejora de la calidad de vida y al progreso científico.

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AYUDAS RAMÓN Y CAJAL – CONVOCATORIA 2024

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Nombre: ****** ********

Referencia: **RYC2024-050318-I**

Área Temática: **Ciencias agrarias y agroalimentarias**

Correo Electrónico: **mbernabeu@iata.csic.es**

Título: **Modulation of the microbiota through bioactive compounds as a strategy against pathogens**

Resumen de la Memoria:

My research career initially focused on the molecular biology of pathogenic microorganisms and has evolved to include the microbiota, which harbours commensals and pathogens, and to extend the knowledge of how specific factors such as antibiotics, diet, bioactives and food-related compounds influence microbial dynamics, pathogenic and virulence traits, among others, and how these impact on health. My research trajectory demonstrates a strong foundation in targeted genetic studies, microbial fitness analysis, bioactive compound research, and microbiota characterization. However, most of the studies I have been involved in previously have addressed these areas individually and now, it's time to combine and integrate. This project aims to integrate these diverse fields of knowledge, allowing me to lead the research from multiple perspectives, leveraging prior experience.

The human microbiota has emerged as a pivotal field of research due to its critical role in health. Its association with the maintenance of homeostasis has been well-documented, as well as the link between dysbiosis and various disorders and diseases. Despite significant advances in microbiota research, the interactions between commensal and pathogenic bacteria, as well as the molecular mechanisms underlying these dynamics, remain incompletely understood. Studies focused on genotype-phenotype confirmation are limited yet essential to unravel the biology of microorganisms. Accordingly, the proposed research line focuses on the modulation of the microbiota through BIOactive compounds as a strategy against PATHogens (BIOPATH).

The general aim of this research is to identify factors and compounds capable of modulating the microbiota and its role in combating infections caused by pathogenic bacteria. I proposed research focuses on a top-down approach, beginning with descriptive studies on the effects of factors such as diet and bioactive compounds on the human microbiota and the growth of synthetic microbial communities. This approach progresses toward investigating specific mechanisms of competition related to pathogenicity and horizontal gene transfer within the human microbiota and also, animal microbiota. The ultimate goal is to develop innovative strategies against antibiotic-resistant microorganisms, focusing on diet and biotic supplements (including prebiotics, probiotics, and postbiotics) as well as bioactive compounds from food and food-related sources considering valorisation from biowaste and also, green approaches. In addition, the Institute of Agrochemistry and Food Technology (IATA-CSIC), recognized as a Severo Ochoa Center of Excellence, provides the appropriate facilities to carry out this research, along with research groups that offer opportunities for potential collaborations. One of the key research programs (RP) is Food, Microbiota and Health where this research line fits perfectly and also, introduce a new research line complementing the on-going ones in IATA-CSIC.

Resumen del Currículum Vitae:

I, Manuel Bernabeu, completed the PhD in Biotechnology at the University of Barcelona (2017-2021), supported by the "Ayudas para la contratación de Personal Investigador en formación (FI) – Generalitat de Catalunya." From 2020 to 2022, I worked as an Associate Professor at the University of Barcelona. Then, I joined IATA-CSIC for my postdoctoral work, initially with a "Margarita Salas" fellowship, now under a "Juan de la Cierva" contract at Dept. Biotechnology, Group of Lactic Acid Bacteria and Probiotics in the MainBiotics group led by Prof. Collado. I also hold the accreditations of "Profesor Contratado Doctor" and "Private University Professor" from ANECA.

During my career, I have contributed to 9 National and European projects, including 2 as Principal Investigator. During my predoctoral period, I focused on identifying virulence-related gene products and bacterial conjugation involved in projects focused on new aspects of virulence and bacterial lifestyle. I have conducted gene modification experiments and used bioinformatic tools for gene comparison. I performed survival assays with Galleria mellonella and T84 cells to assess mutant virulence. In addition, I worked in projects related to antibiotic resistance plasmids analysing proteins with immunoglobulin-like domains, highlighting their role in bacterial conjugation and potential as antigenic targets.

In my postdoctoral period, I started my research on the maternal-infant microbiota and factors influencing its composition, such as diet and antibiotics. I am focused on the genomic and phenotypic characterization of early-life potential pathogens and the transfer of antibiotic resistance genes. Within this research, I joined a Valencian Excellence Research PROMETEO group (2 projects: NEOHEALTH 2020-2023 and MICROGLOCAL 2024-2028) and lead my "JDC2022-05069-I" project. In parallel, I am also exploring the impact of biotic compounds, including the probiotic potential of human microbiota strains and new prebiotic sources from byproducts, biowaste and algae residues and sprouts that allow me to join 2 European projects (CIRCALGAE and FEED). With this acquire expertise, I recently get the NEMAAR project (Severo Ochoa Call for Early-Career Researchers) aimed to evaluate the prebiotic potential of beta-glucans and ulvans, along with their impact on pathogenic bacteria growth and plasmid transfer.

As a result of my career, I have published 20 articles in high-impact journals (11 articles as first/second author), a book chapter, and presented my research at 23 conferences (9 international and 14 national). I also participated in 7 outreach activities, including the CODiNuCoVa Conference, Mednight, and ExpoCiencia, where I explained the role of diet, microbiota, and health, emphasizing prebiotics and probiotics in preventing non-communicable diseases. I am also involved in teaching activities, I was an Associate Professor at the University of Barcelona and taught master's classes at the European University of Valencia, delivering 561 hours of theoretical and practical teaching. I co-directed 5 master's theses, 2 degree projects, supervised PhD students and I was involved in the organization of 3 Scientific conferences, including the "37th International Conference of the European Federation of Food Science and Technology" (>2000 attendees) and the "15th World Conference on Polyphenols".

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Nombre: ****** ********

Referencia: **RYC2024-048332-I**

Área Temática: **Ciencias de la educación**

Correo Electrónico: **mistryhemendra2015@gmail.com**

Título: **MSCA Cofund Fellow**

Resumen de la Memoria:

With exploring teaching aptitude and teachers training on inclusive education in my previous postdocs in India, and institutionalization of student diversity and inclusion in higher education in my ongoing MSCA Cofund research in Spain, I plan to keep this research line active in the RyC fellowship. Considering the research focus of most of the research on institutional and educator perspectives, this is important to bridge the research gap of uncovered area of determining perceptions of students with diverse background regarding diversity and inclusion strategies. Although, an attempt was made with developing a pilot instrument, the Institutionalized Attention to Diversity and Inclusive Education scale, to assess diverse students perceptions of universities' attention to their diversity and inclusion in higher education. However, the scale needs to administer on larger sample of diverse students across the Spanish universities through an online survey and validating their perspectives by employing a phenomenological approach to comprehend their actual experiences in higher education. Based on the ideas of fairness and social justice, the study aims to fill the research gaps by focusing on the views of students from diverse backgrounds, including those who are socio-economically disadvantaged, immigrants, refugees, students of religious, cultural, or linguistic minorities, the LGBTI community, and those with disabilities. To summarize, my scientific plan has five main objectives:

O1: To ascertain diverse students' perceptions regarding demographic factors such as gender, age, educational level, socio-economic status and type of diversity.

O2: To explore the lived experiences of students with diverse backgrounds in higher education.

O3: To identify the barriers to inclusion as perceived by the students with diverse backgrounds.

O4: To identify effective practices and strategies that promote the inclusion of students with diverse backgrounds in higher education.

O5: To provide recommendations for higher education institutions to foster inclusive learning environments for the students with diverse backgrounds.

The study uses a mixed-method design to get both quantitative and qualitative data. Online survey data will help in figuring out how well the higher education institutions attempt to include all students and fill the policy-practice gaps; the seminar-structured interview and focus group discussion will help understand their lived experience. The study aims to help higher education grow and policy discussions in particular by looking into how diverse students see higher education in terms of addressing their diversity and making sure they are included. I will also conduct thematic analysis of the data to identify patterns and themes. The outcome of this research could lead to the creation of new strategies for diversity and promote effective, welcoming higher education for all. This research will contribute to the growing body of knowledge on student diversity and inclusion in higher education. By centering the voices of diverse students, the study will provide actionable insights for policymakers, educators, and administrators to design more inclusive policies and practices. The findings will serve as a foundation for creating more equitable and inclusive learning environments for the students with diverse backgrounds.

Resumen del Currículum Vitae:

My own education journey with bilateral sensorineural hearing loss led to my strong research interest in the education of students with disabilities, which I focused on since my M.Ed. research. With over 13 years of research experience in major projects, currently, I am an Excellence Researcher at the University of Salamanca, Spain, with an MSCA Cofund Fellowship for exploring the institutionalization of student diversity and inclusion in higher education in four European countries. IThe UGC and ICSSR (under the Ministry of Education, Government of India) recognized my research on inclusion by awarding me two postdoctoral fellowships in which I explored teachers' training in inclusive education in India so as to recommend to the policymakers and higher education authorities the areas that require attention to prepare teachers for inclusive education for all. During my PhD, I was also a recipient of the UGC Junior Research Fellowship. In addition, I have also successfully completed 10 minor research projects funded under the Institute of Advanced Studies in Education (IASE), The Maharaja Sayajirao University of Baroda, India, as a co-investigator with the senior teachers. My postdoctoral research resulted in the creation of three robust instruments, which earned copyrights from the Government of India. During my PhD and postdocs, I collaborated and networked with expert researchers at the international level (Australia, Austria, Belgium, Czech Republic, France, Ireland, Italy, Spain and the UK) with whom I am constantly in contact.

Besides the above independent postdoc research, I also worked on major research projects in various research capacities. I actively collaborated with the principal investigator (PI) and other researchers on instrument design, field visits, data collection, data analysis, and report writing. The outcomes of my research works have been widely disseminated to scientific audiences through about 50 publications (5 papers currently under review) and presentations in 50 academic forums (conferences, seminars, and workshops). During my doctoral study, I was the convener of the Researchers Forum and rendered active services to organize and coordinate doctoral forums. During my tenure in various research capacities at the Department of Education at the Maharaja Sayajirao University of Baroda, India, I actively participated in the organization of two international conferences and numerous national seminars and workshops.

I have achieved a certificate on the basis of qualifying for the UGC National Eligibility Test for college and university teaching. I have 4 years of teaching experience at the graduate (Bachelor of Education) and postgraduate (Master of Education) levels, where, besides teaching and evaluation, I mentored graduate teacher trainees for their practice teaching and seminars and guided 3 students for their master's thesis.

Recognizing my academic and professional achievements, I was selected as an associate member by the Sweden-based International Federation of Hard of Hearing People (IFHOH) during 2019-2022 and as an academic board member by the International Association for Scientific Studies of Intellectual and Developmental Disabilities (IASSIDD) during 2020-2023. I am also rendering my active services as a peer reviewer in three quality journals.