Fecha del CVA	14/02/2024

Parte A. DATOS PERSONALES

Nombre	FERNANDO		
Apellidos	CALVO BALTANÁS		
Sexo	No Contesta	Fecha de Nacimiento	
DNI/NIE/Pasaporte			
URL Web			
Dirección Email			
Open Researcher and Contributor ID (ORCID)	0000-0001-8110-0991		

A.1. Situación profesional actual

Puesto	Associate Professor		
Fecha inicio	2022		
Organismo / Institución	Universidad de Sevilla		
Departamento / Centro	Fisiología Medica y Biofísica / Instituto de Biomedicina de Sevilla		
País	España	Teléfono	
Palabras clave	240300 - Bioquímica; 240701 - Cultivo celular; 240704 - Citología; 241203 - Reacción antígeno-anticuerpo; 241206 - Inmunización; 249001 - Neurofisiología; 249002 - Neuroquímica		

A.2. Situación profesional anterior (incluye interrupciones en la carrera investigadora - indicar meses totales, según texto convocatoria-)

Periodo	Puesto / Institución / País
2021 - 2022	Postdoctoral researcher / FUNDACION DE INVESTIGACION DEL CANCER
2019 - 2021	Postdoctoral researcher / Junta de Castilla y León
2017 - 2019	Postdoctoral researcher / Instituto de Salud Carlos III

A.3. Formación académica

Grado/Master/Tesis	Universidad / País	Año
PhD	Universidad de Salamanca	2009

Parte B. RESUMEN DEL CV

I started my scientific career in 2003. Since then, I have obtained several competitive fellowships including: "Collaborative fellowship" (Ministry of Education and Science; 2003), "FPU" fellowship (Ministry of Education and Science; 2005) and Postdoctoral fellowship (Alfonso Martin Escudero Foundation; 2015). In 2009, I defended and obtained my PhD degree at the Institute for Neuroscience of Castilla y Leon. Regarding my lines of research, my work was focused on the study of neurodegenerative processes occurring in the cerebellum of the Purkinje Cell Degeneration mouse. I identified the predegenerative hallmarks of both Purkinje cells and mitral cells, two neuronal types affected in these mice. During this time I also characterized two types inflammatory response under different degenerative states. During this time, I performed two short-term stays (4 months-each) in the Department of Anatomy and Cell Biology at the Univ. of Cantabria. I was awarded with the Doctorate Extraordinary and “Charo Armas” awards by the University of Salamanca and the Spanish Cell Biology Society, respectively. After getting my PhD degree, From 2010-2014 I joined to the Cancer Research Center (Salamanca, Spain) as a postdoctoral fellow under the supervision of Dr. Eugenio Santos. My research focused on the functional role of the SOS family of RasGEF activators. During those years, I generated the first available mouse model where the functional effects of full-body expression of a SOS1/2 null mutation in adult animals can be examined. In 2015, I performed a second postdoc abroad at the University of California-San Diego (USA). From 2017-2021, I obtained different competitive postdoctoral contracts (ISCIII or Univ. of Salamanca) to follow up the study of the functional relevance of SOS in health

and disease. From that point, I established national (Dr. Xose Bustelo, Dr. Jesus Paramio… international collaborations with Dr. Scita (Milan) to examine the effect of SOS depletion in bcr/abl-dependent chronic myeloid leukemia and with Dr. Suire (UK) to unveil the role of SOS in neutrophils activation upon injury or with Dra. Ambrogio (Torino). In January 2022, I obtained a permanent position as "Associate Professor" at the Department of Medical Physiology and Biophysics at the University of Seville.

I have participated in more than 20 projects (6 as PI and 1 as co-PI). I have attended to more than 60 conferences (some as invited speaker) and I have been member of PhD evaluation committees and I am also reviewer in different journals of cancer research field (IJMS, Cancers, Cells, Biomedicines, Frontiers in Oncology, J Med Chem, iScience and Molecular Oncology). Regarding my scientific production, I have published 31 scientific papers (13 as first author and 6 as corresponding author), 1 enciclopedia article and 2 book chapters. Regarding my tasks as supervisor, I have directed one PhD student, who presented her PhD thesis on July 2017. In addition, I have supervised 3 undergraduate students and I directed 3 master thesis students. I have the accreditation to design and supervise experimental approaches using animal models. I belong to different scientific organizations (SEBC, ASEICA, CIBERONC or EACR). I consider thatI have acquired skills that are necessary to be a fully independent successful researcher.

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES

C.1. Publicaciones más importantes en libros y revistas con “peer review” y conferencias

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores. Si aplica, indique el número de citaciones

1 **Artículo científico**. (1/4) Baltanas FC; Natasha Zarich; Jose Maria Rojas Cabañeros; Eugenio Santos. 2020. SOS GEFs in Health and Disease. BBA Reviews on Cancer. Elsevier. pp.188445. ISSN 0304- 419X. WOS (26)

2 **Artículo científico**. Pilar Liceras Boillos; David Jimeno; Rosula Garcia Navas; et al; Eugenio Santos; (12/13) Baltanas FC (AC). 2018. Differential role of the RasGEFs Sos1 and Sos2 in mouse skin homeostasis and carcinogenesis. Molecular Cellular Biology. ASM. 00049-18. ISSN 0270-7306. WOS (13)

3 **Artículo científico**. Silke Gerboth; Emanuela Frittoli; Andrea Palamidessi; et al; Giorgio Cita; (4/19) Baltanas Fc. 2018. Phosphorylation of SOS1 on tyrosine 1196 promotes its RAC GEF activity and contributes to BCR-ABL leukemogenesis.Leukemia. Nature publicaciones. 32-3, pp.820-827. ISSN 0887-6924. WOS (18)

4 **Artículo científico**. Pilar Liceras Boillos; Rosula Garcia Navas; Alicia Ginel Picardo; et al; Eugenio Santos; (10/11) Baltanas FC (AC). 2016. Sos1 disruption impairs cellular proliferation and viability through an increase in mitochondrial oxidative stress in primary MEFs. Oncogene. Nature Publishing Group. 35-50, pp.6389-6402. ISSN 0950-9232. SCOPUS (23)

5 **Artículo científico**. (1/10) Baltanas FC; MARTIN PEREZ ANDRES; ALICIA GINEL PICARDO; et al; EUGENIO SANTOS. 2013. Functional Redundancy of Sos1 and Sos2 for Lymphopoiesis and Organismal Homeostasis and Survival.Molecular and Cellular Biology. ASM. 33-22, pp.4562-4578. ISSN 0270-7306. WOS (33)

6 **Artículo científico**. (1/11) Baltanas FC (AC); Garcia-Navas R; Rodriguez-Ramos P; et al; Santos E. 2023. Critical requirement of SOS1 for tumor development and microenvironment modulation in KRASG12D-driven lung adenocarcinoma. Nature Communications. 14-1, pp.5856. ISSN 2041-1723.

7 **Artículo científico**. Gomez C; Garcia-Navas R; (3/7) Baltanas FC; Fuentes-Mateos R; Fernandez-Medarde A; Calzada N; Santos E. 2022. Critical Requirement of SOS1 for Development of BCR/ABL-2 Driven Chronic Myelogenous Leukemia. Cancers. ISSN 2072-6694.

8 **Artículo científico**. (1/4) Baltanas FC (AC); Berciano MT; Santos E; Lafarga M. 2021. The Childhood-Onset Neurodegeneration with Cerebellar Atrophy (CONDCA) disease caused by AGTPBP1 gene mutations: The Purkinje cell degeneration mouse as an animal model for the study of this human disease. Biomedicines. MDPI. ISSN 2227-9059.

9 **Artículo científico**. (1/3) Baltanas FC (AC); Garcia-Navas R; Santos E. 2021. SOS2 Comes to the Fore: Differential Functionalities in Physiology and Pathology. International Journal of Molecular Sciences. MDPI. 22, pp.6613. ISSN 1422-0067. WOS (5)

10 **Artículo científico**. Garcia-Navas R; Liceras-Boillos P; Gomez C; (4/8) Baltanas FC; Nuevo-Tapioles C; Cuezva J; Calzada N; Santos E. 2021. Critical requirement of SOS1 RAS-GEF function for mitochondrial dynamics, metabolism and redox homeostasis. Oncogene. Springer Nature Group. ISSN 0950-9232. WOS (6)

11 **Artículo científico**. (1/11) Baltanas FC (AC); Mucientes-Valdivieso M; Lorenzo-Martin LF; et al; Santos E. 2021. Functional Specificity of the Members of the Sos Family of Ras-GEF Activators: Novel Role of Sos2 in Control of Epidermal Stem Cell Homeostasis. Cancers. MPDI. ISSN 2072-6694. WOS (2)

12 **Artículo científico**. Castle M; (2/6) Baltanas FC; Kovacs I; Nagahara A; Barba D; Tuszynski MH. 2020. Postmortem Analysis in a Clinical Trial of AAV2-NGF Gene Therapy for Alzheimer's Disease Identifies a Need for Improved Vector Delivery. Human Gene Therapy. ISSN 1043-0342. WOS (36)

13 **Artículo científico**. (1/9) Baltanas FC; Maria T Berciano; Olga Tapia; et al; Miguel Lafarga. 2019. Nucleolin reorganization and nucleolar stress in Purkinje cells of mutant PCD mice. Neurobiology of disease. Elsevier. 127, pp.312-322. ISSN 0969-9961. SCOPUS (8)

14 **Artículo científico**. Sabine Suire; (2/7) Baltanas Fc; Anne Segonds-Pichon; Keith Davidson; Eugenio Santos; Phil Hawkins; Len Stephens. 2019. TNFalpha and GM-CSF1 priming augments the role of SOS1/2 in driving activation of Ras, PI3K? and neutrophil proinflammatory responses. Journal of Leukocyte Biology. ISSN 0741-5400. WOS (13)

C.3. Proyectos o líneas de investigación

1 **Proyecto**. LA RUTA RAS/MAPK COMO NUEVA DIANA TERAPETICA PARA EL NEUROBLASTOMA RECURRENTE. Ministerio de Ciencia e Innovación. Baltanas FC. (INSTITUTO DE BIOMEDICINA DE SEVILLA). 01/09/2023-01/09/2026. 122.500 €. Investigador principal.

2 **Proyecto**. Inhibición de la ruta de señalización RAS/MAPK como opción terapéutica en el neuroblastoma recurrente y resistente a terapia. Ministerio de Ciencia e Innovación. Baltanas FC. (Universidad de Sevilla). 01/07/2023-01/07/2025. 180.895 €. Investigador principal.

3 **Proyecto**. Inhibición farmacológica de la ruta de señalización RAS/MAPK para el tratamiento del neuroblastoma recurrente y resistente a las terapias actuales. Baltanas FC. (INSTITUTO DE BIOMEDICINA DE SEVILLA). 01/11/2022-01/11/2024. 18.000 €. Investigador principal.

4 **Proyecto**. Terapia farmacológica combinada como nueva estrategia en el tratamiento del cáncer: opción terapéutica inicial o secundaria en mecanismos de resistencia adquirida. . Fundación Eugenio Rodriguez Pascual. Baltanas FC. (INSTITUTO DE BIOMEDICINA DE SEVILLA). 02/01/2023-02/01/2024. 10.000 €. Investigador principal.

5 **Proyecto**. Single and dual SOS1/SOS2 inhibition: evaluation of therapeutic effects and toxicity. Boehringer Ingelheim. Santos E. (Centro de Investigación del Cancer de Salamanca y Universidad de Torino). 01/07/2021-01/07/2023. 200.000 €. Investigador principal.

6 **Proyecto**. Las proteinas Sos como dianas terapeuticas en el tratamiento del adenocarcinoma de pulmon causado por mutaciones en KRAS. Fundación Samuel Solorzano Barruso. Baltanas FC. (Universidad de Salamanca). 01/01/2021-01/01/2022. 1.876,23 €. Investigador principal.

7 **Contrato**. Therapeutic effect of MRTX0902 in RAS-driven tumors Mirati Therapeutics. Baltanas FC. (INSTITUTO DE BIOMEDICINA DE SEVILLA). Desde 01/09/2023.