CV date	16/01/2023

Part A. DATOS PERSONALES

Name	Carles Mª			
Last name	Suñé Negre			
Sex (*)	Male	Date of birth (dd/mm/yyyy)		08/06/1962
DNI, NIE, passport	xxx			
Email	csune@ipb.csic.es		URL Web	
Open Researcher and Contributor ID (ORCID) (*)			0000-0002-7991 0458	

* *datos obligatorios*

A.1. Current position

Name of University/Institution	Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC)		
Department/Center	Instituto de Parasitología y Biomedicina López Neyra (IPBLN)		
Address	Avda Conocimiento 17. 18016 Granada		
Phone number	958181645	E-mail	csune@ipb.csic.es
Current position	Investigador Científico CSIC	From	09/06/2009
Keywords	Transcription, splicing, alternative splicing, RNA, RNAPII		

A.2. Education

Degree/Doctor	University	Year
Degree in Pharmacy	Univ. Barcelona	1985
Doctor in Pharmacy	Univ. Barcelona	1989

Part B. CV SUMMARY

The main scientific interest of the group focuses on the study of the molecular mechanisms that regulate the transcription and processing of precursor messenger RNA (pre-mRNA) and how these two processes communicate and interact for the correct control of gene expression.

My interest in the molecular mechanisms that regulate gene expression began during the post-doctoral stage in Dr. Mariano Garcia-Blanco's laboratory at Duke University Medical Center (1992-1998). During that stage, our efforts were devoted to studying the transcriptional activation of HIV-1. Together with other laboratories we describe the presence of specific factors essential for transcriptional activation and the purification of a human cellular factor (TCERG1) that was essential for such activation.

Between my postdoctoral training at Duke and before taking possession as a Senior Scientist at the CNB, I participated in a two-year period (1999-2000) in clinical research and HIV-1 related teaching at the Institute of Medical Microbiology (IMM) in Basel, Switzerland, to complete the investment recovery requirement, which was a condition of the National Research Service Award (Research Training in AIDS. National Institute of Allergy and Infectious Diseases. NIH). My research work during that stage focused on the development of genotypic and phenotypic methods for the detection of resistant variants of HIV-1. One of the objectives of the project was to develop a new diagnostic test for anti-viral resistance (now on the market through a biotech spin off company based in Switzerland).

In 2001, I joined the CNB as a Científico Titular at the CSIC. From then on I resumed the projects derived from my previous postdoctoral stage focused on the study of the mechanisms of regulation of gene expression. My initial interest in transcription was generalized to other stages of mRNA processing, especially to alternative splicing, to study the connections between both processes. In 2006, I moved to the IPBLN of Granada where I continued developing the study of the functional coupling between transcription and alternative splicing.

Our current and future work considers that the coupling mechanisms allow the establishment of control points or quality controls that regulate the synthesis and processing of pre-mRNA. The proteins that act at the interface of these processes would serve as control point factors to regulate cotranscriptional splicing. In addition to studying the molecular events that regulate these interactions, we want to go further and provide new knowledge about the molecular mechanisms focused on the functional coupling of transcription and alternative splicing that act in pathological situations.

Part C. RELEVANT MERITS

C.1. Publications (more relevants from 2016-2022. *Corresponding author, **)

• Rodríguez-Caparrós A, Tani-ichi,S., Casal, A., López-Ros, J., Suñé, C., Ikuta, K., Hernández-Munain C*. 2022. Interleukin-7 receptor signaling is crucial for enhancer-dependent TCRd germline transcription mediated through STAT5 recruitment, *Front Immunol*. 13:943510. Doi: 10.3389/fimmu.2022.943510. Q1

• Rodríguez-Caparrós A, Álvarez-Santiago J, López-Castellanos L, Ruiz-Rodríguez C, Valle-Pastor MJ, López-Ros J, Angulo Ú, Andrés-León E, Suñé C, Hernández-Munain C*. 2022. Differently Regulated Gene-Specific Activity of Enhancers Located at the Boundary of Subtopologically Associated Domains: TCRα Enhancer. *J Immunol*. 208:910-928. doi: 10.4049/jimmunol.2000864. Q2

• Payán-Bravo L, Fontalva S, Peñate X, Cases I, Guerrero-Martínez JA, Pareja-Sánchez Y, Odriozola-Gil Y, Lara E, Jimeno-González S, Suñé C, Muñoz-Centeno MC, Reyes JC, Chávez S.* 2021. Human prefoldin modulates co-transcriptional pre-mRNA splicing. *Nucleic Acids Res*. 49:6267-6280. doi: 10.1093/nar/gkab446. Q1

• Suñé-Pou M, Limeres MJ, Moreno-Castro C, Hernández-Munain C, Suñé-Negre JM, Cuestas ML, and Suñé C*. 2020. Innovative therapeutic and delivery approaches using nanotechnology to correct splicing defects underlying disease. *Front Genet.* 11:731. doi: 10.3389/fgene.2020.00731. Q1

• Prieto-Sánchez S., Moreno-Castro C., Hernández-Munain C, and Suñé C*. 2020. Drosophila Prp40 localizes to the histone locus body and regulates gene transcription and development. *J. Cell Sci.* 133:jcs239509. doi: 10.1242/jcs.239509. Q1

• Limeres MJ, Suñé-Pou M, Prieto-Sánchez S, Moreno-Castro C, Nusblat AD, Hernández-Munain C, Castro GR, Suñé C, Suñé-Negre JM, Cuestas ML*. 2019. Development and characterization of an improved formulation of cholesteryl oleate-loaded cationic solid-lipid nanoparticles as an efficient non-viral gene delivery system. *Colloids Surf B Biointerfaces* 184:110533. doi: 10.1016/j.colsurfb.2019.110533. Q1

• Moreno-Castro C., Prieto-Sánchez S, Sánchez-Hernández N., Hernández-Munain C, and Suñé C*. 2019. Role for the splicing factor TCERG1 in Cajal body integrity and snRNP assembly. *J. Cell Sci.* 132:232728. doi: 10.1242/jcs.232728. Q1

• Suñé-Pou M, Limeres M.J., Nofreiras I., Nari-Ricart A., Prieto-Sánchez S, El Yousfi Y, Pérez-Lozano P, García-Montoya E, Miñarro-Carmona M, Ticó JR, Hernández-Munain C, Suñé C*., and Suñé-Negre JM. 2019. Improved synthesis and characterization of cholesteryl oleate-loaded cationic solid nanoparticles with high transfection efficiency for gene therapy applications. *Colloids Surf B Biointerfaces* 180:159-167. doi: 10.1016/j.colsurfb.2019.04.037. Q1

• Pons M., Prieto-Sánchez S, Miguel L., Frebourg T., Campion D., Suñé C., Lecourtois M*. 2018. Identification of TCERG1 as a new genetic modulator of TDP-43 production in Drosophila. *Acta Neurophatol. Commun.* 6:138. Doi: 10.1186/s40478-018-0639-5. Q1

• Suñé Pou M., Prieto-Sánchez S, El Yousfi Y, Boyero-Corral S, Nardi-Ricart A., Nofreiras-Roig I., Pérez-Lozano P, García-Montoya E, Miñarro M., Ticó JR, Suñé-Negre JM, Hernández-Munain C., and Suñé C*. 2018. Cholesteryl oleate-loaded cationic solid lipid nanoparticles as carriers for efficient gene-silencing therapy. *Int. J. Nanomedicine. 13:3223-3233.* doi: 10.2147/IJN.S158884. Q1

• Fàbregas A., Prieto-Sánchez S., Suñé-Pou M., Boyero-Corral S., Ticó JR, García-Montoya E, Pérez-Lozano P, Miñarro M., Suñé-Negre JM, Hernández-Munain C., and Suñé C*. 2017. Improved formulation of cationic solid lipid nanoparticles displays cellular uptake and biological activity of nucleic acids. *Int. J. Pharm.* 516:39-44. doi: 10.1016/j.ijpharm.2016.11.026. Q1

• Muñoz-Cobo JP, Sánchez-Hernández N., Gutiérrez S., El Yousfi Y., Montes M., Gallego C., Hernández-Munain C., and Suñé C*. 2017. Transcriptional elongation regulator 1 affects transcription and splicing of genes associated with cellular morphology and cytoskeleton dynamics and is required for neurite outgrowth in neuroblastoma cells and primary neuronal cultures. *Mol. Neurobiol.* 54:7808-7823 doi: 10.1007/s12035-016-0284-6. Q1

• Sánchez-Hernández N., Boireau S., Schmidt U., Muñoz-Cobo J.P., Hernández-Munain, C., Bertrand E., and Suñé C*. 2016. The in vivo dynamics of TCERG1, a factor that couples transcriptional elongation with splicing. *RNA* 22:571-582, doi: 10.1261/rna.052795.115. Q1

C.2. Research projects and grants

• "Role of PRPF40B in nervous system and in Huntington Disease (nerv40B)" (PID2020-118859GB-100). Ministerio de Ciencia e Innovación. 01/09/2021 – 31/08/2024. 157.300 €
• "PRPF40B: Un regulador epigenético en la enfermedad de Huntington" (PY20_01269). Junta de Andalucía. 23/06/2021 – 08/06/2023. 84.800 €
• "Efecto de la modificación m6A del RNA del SARS-CoV-2 en su ciclo biológico e infectividad" (CV20-13423). Junta de Andalucía (Proyectos de Investigación sobre el SARS-CoV-2 y la enfermedad COVID-19). 08/09/2020 - 07/03/2022. 96.000 €
• "Defining mechanisms coupling transcription to splicing linked to neurodegenerative disorders" (BFU2017-89179-R). Ministerio de Economía, Industria y Competitividad. 01/01/2018 - 31/12/2020. 136.730 €
• "PRPF40B, disease model development and systemic phenotyping" (2017_P000154). INFRAFRONTIER-I3 (European Union). 01/06/2017 – in progress. 50.000 €
• "Acoplamiento funcional entre la transcripción y el splicing" (BFU2014-54660-R). Ministerio de Economía y Competitividad. 01/01/2015 - 31/12/2017. 169.400 €
• "Regulación del splicing co-transcripcional en genes de procesos biológicos esenciales" (BIO-2515). Junta de Andalucía (Proyectos de Excelencia 2012). 16/05/2014 - 16/02/2019. 189.894 €
• "Acoplamiento de la transcripción y el splicing alternativo de los pre-mRNAs" (BFU2011-24577). Ministerio de Economía y Competitividad. 01/01/2012 - 31/12/2014. 140.360 EUR

C.3. Patents

• C. Suñé, N. Sánchez-Hernández, C. Hernández-Munain, and M. Sánchez-Álvarez. "Secuencia de localización a la periferia de los speckles nucleares". P201131907. 25/11/2011. CSIC
• L. Enjuanes, M.P. Melgosa, G. Jiménez, I. Correa, M.J. Bullido, C. Suñé, and C. Sánchez. "Selección de hibridomas productores de anticuerpos monoclonales contra el virus de la gastroenteritis porcina transmisible y método de purificación del virus para el diagnóstico de anticuerpos contra el mismo". 8800331. 05/02/1988. CSIC and Ingenasa, Spain
• J.P. Duran, L. Enjuanes, J.M. Torres, C.M. Sánchez, C. Smerdou, and C. Suñé. "Adenovirus recombinantes que expresan antigenos del virus de la gastroenteritis porcina transmisible (VGPT) y su empleo en la formación de vacunas". 9502370. 30/11/1995. CSIC and Cyanamid Iberica, S.A. Spain.
• Garcia-Blanco, M.A. and C. Suñé. "Tat coactivator: human protein required for HIV-1 gene activation by Tat". DUMC 681-6412. EEUU. 09/10/1995.

C.4. Thesis supervised

• *Cristina Moreno Castro.* "Papel de TCERG1 en la integridad de los cuerpos de Cajal y en la biogénesis de los snRNPs". Facultad de Ciencias Biológicas. Universidad de Granada. 31/01/2020
• *Juan Pablo Muñoz-Cobo Belart.* "Análisis del silenciamiento génico de TCERG1 mediante *Exon Arrays*". Facultad de Ciencias Biológicas. Universidad de Granada. 24/04/2017
• *Anna Fàbregas Fernàndez*. "Nanopartícules lipídiques sòlides catiòniques (cSLN) com a sistema d'elecció per a transfecció cel.lular de DNA/RNA". Facultad de Farmacia. Universidad de Barcelona. 3/11/2015.
• *Soraya Becerra Ortíz.* "Caracterización bioquímica y funcional del factor de transcripción y splicing PRPF40B". Facultad de Ciencias Biológicas. Universidad de Granada. 26/02/2015.
• *Noemí Sánchez Hernández*. "Localización espacial del coactivador transcripcional CA150/TCERG1". Facultad de Ciencias Biológicas. Universidad de Granada. 13/03/2013.
• *Marta Montes Resano*. "Mecanismo molecular del acoplamiento de la transcripción y el splicing alternativo de los pre-mRNAs por TCERG1". Facultad de Ciencias Biológicas. Universidad de Granada. 15/06/2012.
• *Carolina Carrillo Sánchez*. "Desarrollo de nanopartículas catiónicas como vectores en terapia génica". Facultad de Farmacia. Universidad de Barcelona. 22/12/2011.
• *Miguel Sánchez Álvarez*. "Caracterización celular, bioquímica y funcional de TCERG1, un potencial factor de acoplamiento entre transcripción y splicing". Facultad de Ciencias Biológicas. Universidad Autónoma de Madrid. 9/05/2009.
• *Inmaculada Montanuy Sellart*. "Regulación de la elongación transcripcional en los genes del VIH-1 y c-myc". Facultad de Ciencias Biológicas. Universidad Autónoma de Madrid. 28/10/2008.

C.5. University teaching

• Course name: “Metodología en Biología Celular y Molecular”. Departamento de Bioquímica, Biología Molecular e Inmunología. Univ. de Granada. From 2005-present. Quality mention.
• Course name: “Secuenciación Automática de ADN”. Departamento de Bioquímica de la Facultad de Ciencias Biosanitarias de la Universidad Francisco de Vitoria de Madrid. From: 2003-2005

C.6. Science dissemination and knowledge promotion activities

• Organizer of the *Cycle Seminars in Biomedicine* of the IPBLN-CSIC: (http://www.ipb.csic.es/seminarios/seminarios.html), From 2006-2022
• Organizer of the *Work In Progress* of the IPBLN-CSIC: (http://www.ipb.csic.es/seminarios/congresos.html). From 2008-2022
• Scientific reviewer for “Ventanas a la Ciencia”, Parque de las ciencias de Granada. From 2009-present
• Speaker in “*Café con Ciencia”* in the framework of “Semana de la Ciencia” organized by the Descubre Foundation. From 2015-present
• Speaker in “*Jornadas de Bioquímica y Biología Molecular para estudiantes de la Facultad de Ciencias de la Universidad de Granada*” 2014/2015
• Tutor of the research work entitled “¿Las neuronas tienen esqueleto?” Proyecto PIIISA para la Iniciación en Investigación e Innovación en Secundaria en Andalucía. 2016/2017 (http://www.ipb.csic.es/noticias/PIIISA2017/
• Speaker in “*Jornada de Puertas Abiertas del Parque Tecnológico de Ciencias de la Salud de Granada*”. 2018
• Scientific advisor in “Talleres científicos de la Iª Jornada de Medioambiente y Sostenibilidad”, Facultad de Ciencias, UGR. 2019 (https://fciencias.ugr.es/34-noticias/3199-i-jornada-de-medioambiente-y-sostenibilidad)
• Live interview on Canal Sur TV (news and entertainment magazine “Hoy en día”) to talk about the Wuhan coronavirus infection. 03/02/2020 (https://www.facebook.com/LOPEZNEYRACSIC/)
• Interview on TeleCinco TV (night news) to talk about the Wuhan coronavirus infection. 15/02/2020 (https://www.telecinco.es/informativos/informativos_fin_de_semana/informativo-fin-semana_18_2899845187.html; 07:56)

C.7. Management data and other scientific activities

• Participation in the creation and advisor of the spin-off company Intronn, Inc. Durham, NC, US. 1998-2000.
• Antibodies generated against the human CA150 protein (postdoctoral stage-USA) were sold by numerous companies worldwide (Santa Cruz Biotec., BD Biosciences…)
• Participation in the creation of a new diagnostic phenotypic test of HIV-1 antiviral resistance (Basel, Switzerland).
• Coordinator of the DNA Sequencing Service of the Functional Genomics Units of the CNB-CSIC. 2001-2006.
• Organizer of the XI National Congress of Virology. Granada. 2010.
• Chairman of the Departament of Molecular Biology of IPBLN-CSIC, 2014-2018
• Reviewer for: Agencia Nacional de Evaluación y Prospectiva (ANEP), FIPSE, Agència d’Ajuts Universitaris i de Recerca (AGAUR), Wellcome Trust (UK), Agencia Nacional de Promoción Científica, Tecnológica y de Innovación (Argentina), National Science Center (NSC, Polonia); Agence Nationale de la Recherche (ANR, Francia); Israel Science Foundation (ISF, Israel); National Research Foundation (NRF,. Singapur); EU (*Marie-Sklodowska-Curie Actions*).
• Reviewer for: Molecular and Cellular Biology, Nucleic Acids Research, EMBO Reports, RNA, Scientific Reports, Journal of Molecular Biology, Oncotarget, Proteomics, Retrovirology, Virus Research, ISRN Virology, Journal of Medical Virology, Biochimie et Biophysica Acta, Molecular and Cellular Biochemistry, Biochemical Journal, and Biochimie.

C.8. Relevant Honors

2004: Corresponding Academic of the Royal Academy of Pharmacy of Catalonia.