

Part A. PERSONAL INFORMATION**CV date**

11-06-2018

First and Family name	Rosa Farràs Rivera		
Social Security, Passport, ID number		Age	
Researcher numbers	Researcher ID	B-5180-2014	
	Orcid code		

A.1. Current position

Name of University/Institution	Fundación Comunidad Valenciana Centro de Investigación Príncipe Felipe		
Department	Centro de Investigación Príncipe Felipe		
Address and Country	Calle de Eduardo Primo Yúfera, 3 , 46012 Valencia		
Phone number	963289680	E-mail	rfarras@cipf.es
Current position	Group Leader	From	01/03/2015
Espec. cód. UNESCO			
Key words	Intracellular proteolysis, transcription, translation, cell proliferation, cell differentiation, cáncer		

A.2. Education

Bachelor degree/ Doctorate	University	Year
PhD in Pharmacy	University of Barcelona	2001
Degree in Pharmacy	University of Barcelona	1995

A.3. JCR articles, h Index, thesis supervised...

2 Doctoral theses concluded and 3 in progress, 6 master thesis and 3 end-of-grade thesis directed.

29 publications cited 1664. 22 publications in the first quartile (11 D1, 11 Q1). Average number of citation/year for the last 5 years: 95. [Google Scholar](#)

Part B. CV SUMMARY (max. 3500 characters, including spaces)

A pharmacist by training, I have a strong biomedical focus. I have been working with protein homeostasis since my PhD, studying the ubiquitin-proteasome pathway and its connection with different biological processes such as transcriptional control of stress responses. First, during my PhD at the Max Planck Institute in Cologne (1997-2001), I have identified new ubiquitin ligase (SCF) complexes and proteins regulated by ubiquitination, and characterized the functional consequences of such modifications during glucose signaling. Later, during my postdoc at the Institute of Molecular Genetics-CNRS in Montpellier (2001-2004), I have studied the regulation of AP-1 transcription complex homeostasis in cell proliferation and transformation and discovered new post-translational modifications regulating its protein turnover and transcriptional activity. These studies have been continued at CIPF after my incorporation as a Miguel Servet researcher in 2005. Since 2010 I am an I3 SNS senior researcher at CIPF. Currently, I am Principal Investigator of the Oncogenic Signalling Laboratory at CIPF. Research in the laboratory is focused on the molecular interplay between cell signaling and protein homeostasis in cell proliferation and differentiation. The experimental approach developed in the laboratory is based on the integration of cellular and molecular biology with the generation of experimental in vitro and in vivo models. Specifically, the laboratory exploits the potential for genetic and pharmacological manipulation of 2D and 3D cellular models, and in patient-derived xenograft models (PDX). The experience in these fields has allowed my research group to participate in the European network "European network to integrate research on intracellular proteolysis pathways in health and disease (PROTEOSTASIS)" (Cost action BM1307) and in the Spanish national network of excellence "UbiRED".

Part C. RELEVANT MERITS**C.1. Publications (including books)**



1. Pérez-Benavente B, Nasresfahani AF, Farràs R. Ubiquitin-Regulated Cell Proliferation and Cancer. *Adv Exp Med Biol.* 2020;1233:3-28.
2. Herreros-Pomares A, de-Maya-Girones JD, Calabuig-Fariñas S, Lucas R, Martínez A, Pardo-Sánchez JM, Alonso S, Blasco A, Guijarro R, Martorell M, Escorihuela E, Chiara MD, Duréndez E, Gandía C, Forteza J, Sirera R, Jantus-Lewintre E, Farràs R, Camps C. Lung tumorspheres reveal cancer stem cell-like properties and a score with prognostic impact in resected non-small-cell lung cancer. *Cell Death Dis.* 2019; 10(9):660.
3. Lafuente-Sanchis A, Olmo A, Carretero J, Alcacer Fernandez-Coronado J, Estors-Guerrero M, Martínez-Hernández NJ, Cremades A, Zúñiga A, Alcacer J, Farras R, Cuenca M, Galbis-Caravajal JM. Clinical significance of epithelial-mesenchymal transition-related markers expression in the micrometastatic sentinel lymph node of NSCLC. *Clin Transl Oncol.* 2020 Mar;22(3):381-391.
4. Sayas E, Pérez-Benavente B, Manzano C, Farràs R, Alejandro S, Del Pozo JC, Ferrando A, Serrano R. Polyamines interfere with protein ubiquitylation and cause depletion of intracellular amino acids: a possible mechanism for cell growth inhibition. *FEBS Lett.* 2019; 593(2):209-218.
5. Zabala-Letona A, Arruabarrena-Aristorena A, Martín-Martín N, Fernandez-Ruiz S, Sutherland JD, Clasquin M, Tomas-Cortazar J, Jimenez J, Torres I, Quang P, Ximenez-Embun P, Bago R, Ugalde-Olano A, Loizaga-Iriarte A, Lacasa-Viscasillas I, Unda M, Torrano V, Cabrera D, van Liempd SM, Cendon Y, Castro E, Murray S, Revandkar A, Alimonti A, Zhang Y, Barnett A, Lein G, Pirman D, Cortazar AR, Arreal L, Prudkin L, Astobiza I, Valcarcel-Jimenez L, Zuñiga-García P, Fernandez-Dominguez I, Piva M, Caro-Maldonado A, Sánchez-Mosquera P, Castillo-Martín M, Serra V, Beraza N, Gentilella A, Thomas G, Azkargorta M, Elortza F, Farràs R, Olmos D, Efeyan A, Anguita J, Muñoz J, Falcón-Pérez JM, Barrio R, Macarulla T, Mato JM, Martinez-Chantar ML, Cordon-Cardo C, Aransay AM, Marks K, Baselga J, Tabernero J, Nuciforo P, Manning BD, Marjon K, Carracedo A. mTORC1-dependent AMD1 regulation sustains polyamine metabolism in prostate cancer. *Nature* 2017;547 (7661) 109-113
6. Belda-Palazón B., Ferrando A., Farràs R. Quantitation of Protein Translation Rate In Vivo with Bioorthogonal Click-Chemistry. *Methods Mol Biol.* 2016;1449:369-82. CL.
7. Soto-Cerrato V, Manuel-Manresa P, Hernando E, Calabuig-Fariñas S, Martínez-Romero A, Fernández-Dueñas V, Sahlholm K, Knöpfel T, García-Valverde M, Rodilla AM, Jantus-Lewintre E, Farràs R, Ciruela F, Pérez-Tomás R, Quesada R. Facilitated Anion Transport Induces Hyperpolarization of the Cell Membrane That Triggers Differentiation and Cell Death in Cancer Stem Cells. *J Am Chem Soc.* 137(50):15892-8. 2015
8. Perez Benavente B., Farràs R. Cell Synchronization Techniques to Study the Action of CDK Inhibitors. *Methods Mol Biol.* 1336:85-93. 2015.
9. Perez Benavente B.; Garcia J. L.; Rodríguez M. S.; Pineda A.; Piechaczyk M.; Farràs R. GSK3-SCF^{FBXW7} targets JunB for degradation in G2 to preserve chromatid cohesion before anaphase. *Oncogene.* 32 - 17, pp. 2189 - 2199. 2013.
10. Perez Benavente B. and Farràs R.. Regulation of GSK3-FBXW7-JUNB axis: Mechanism and relevance in cancer. *Oncotarget.* 4 - 7, pp. 954 - 955. 2013.
11. Farràs R.; Baldin V.; Gallach S.; Acquaviva C.; Bossis G.; Jariel-Encontre I.; Piechaczyk M. JunB breakdown in mid-/late G2 is required for down-regulation of cyclin A2 levels and proper mitosis. *Mol Cell Biol.*28, pp. 1620 - 1627. 2008.
12. Garaude J; Farras R.; Bossis G.; Cherni S.; Piechaczyk M.; Hipskind R.A.; Villalba M. SUMOylation regulates the transcriptional activity of JunB in T lymphocytes. *J Immunol.*180 - 9, pp. 5983 - 5990. 2008.
13. Farras R.; Bossis G.; Andermarcher E.; Jariel-Encontre I.; Piechaczyk M. Mechanisms of delivery of ubiquitylated proteins to the proteasome: new target for anti-cancer therapy? *Critical Reviews in Oncology/Hematology.* 54(1), pp. 31 - 51. 2005.
14. Farràs R.; Ferrando A.; Jásik J.; Kleinow T.; Ökrész L.; Tiburcio A.; Salchert K.; del Pozo C.; Schell J. And Koncz C.SKP1-SnRK protein kinase interactions mediate proteasomal binding of a plant SCF ubiquitin ligase. *EMBO Journal.*20, pp. 2742 - 2756. 2001.

C.2. Research projects and grants



1. Red de Excelencia: Role of ubiquitin family proteins in signaling, proliferation and cancer, SAF2017-90900-REDT. Ministerio de Ciencia e Innovación. PI: Oskar Fernández Capetillo. (Centro Nacional de Investigaciones Oncológicas). 29/06/2018-31/12/2020.
2. Molecular characterization of lung cancer initiating cells as a predictive tool and for the design of personalized therapies, PI15 / 206 Instituto de Salud Carlos III. Rosa Farràs Rivera. (Centro de Investigación Príncipe Felipe). 01/01/2016-31/12/2019.
3. COST BM1307 PROTEOSTASIS, European network to integrate research on intracellular proteolysis pathways in health and disease. EU. Rosa Barrio. (CiC-Biogune). 25/04/2014-25/04/2019.
4. Molecular characterization of the oncogenic signaling pathways of non-small cell lung cancer stem cells, PI12 / 00956 Instituto de Salud Carlos III. Rosa Farràs Rivera. (Centro de Investigación Príncipe Felipe). 01/01/2013-31/12/2015.

C.3. Contracts

Title of the project / contract: Programa de Estabilización de Investigadores en el Sistema Nacional de Salud (I3SNS)

Financing agency/administration: ISCIII y GVA

Researcher in charge: Rosa Farràs Rivera

Employing entity: Centro de Investigación Príncipe Felipe

Duration: 01/03/2010-31/02/2015

Title of the project / contract: contrato Miguel Servet

Financing agency/administration: ISCIII

Researcher in charge: Rosa Farràs

Employing entity: Centro de Investigación Príncipe Felipe

Duration: 01/03/2004-31/02/2010

C.4. Patents

1. Garijo R; Chiva G; Aceña JL; Rodriguez FJ; Farràs R; Lucas R. PCTES2009/000135 AÑO: 2008. Composición farmacéutica para inhibir el factor de transcripción inducible por hipoxia. Moduladores de procesos patológicos de angiogénesis, oncogénesis, inflamación, apoptosis y terapia celular 2009. Centro de Investigación Príncipe Felipe.
2. Farràs R. y Rodríguez M.S.P200601537. Proteínas de fusión de p53 sin actividad de transcripción y sus aplicaciones N. DE REGISTRO: P200601537 AÑO: 2006 Spain. 06/2006. Centro de Investigación Príncipe Felipe y CIC bioGUNE.
3. GARIJO OLMO R; CHIVA TARREGA; ACENA BONILLA J L; RODRIGUEZ JIMENEZ F J; FARRAS RIVERA R; LUCAS DOMINGUEZ R; MULLOR SANJOSE J L; SANZ-CERVERA J F; MORENO MANZANO; FUSTERO LARDIES S; SANCHEZ-PUELLES GONZALEZ-CARVA; CHIVA TARREGA G; MORENO MANZANO V. WO2009112615-A1; ES2325724-A1; ES2325724-B1; EP2292587-A1; JP2011517664-W. New benzamide compound derivative or its salt, useful for preparing a medicament for the treatment of angiogenic diseases, cancer, tumors, and pathologies that involve inflammation FUNDACION COMUNIDAD VALENCIANA HOSPITAL; FUNDACION COMUNIDAL VALENCIANA CENT INVE; INST SALUD CARLOS III; UNIV VALENCIA.
4. FARRAS RIVERA R; RODRIGUEZ MEDINA M S. WO2007144442-A1; WO2007144442-A8; ES2321359-A1; ES2321359-B1. Novel fusion protein comprising Mdm2 binding domain and/or ubiquitylation domain and marker peptide, useful for screening compounds capable of inhibiting degradation of p53 protein CENT INVESTIGACION PRINCIPE FELIPE; CENT INVESTIGACION COOP EN BIOCENCIAS CIC BIOGUNE; CENT INVESTIGACION COOP BIOCENCIAS-CIC.

C.7. Obtained grants and scholarships

Name of the grant: Stabilization program for I3SNS researchers,

Aims: Researcher



Awarding entity: Instituto de Salud Carlos III **Conferral date:** 2010 **End date:** 2015

Name of the grant: Miguel Servet Contract

Aims: Researcher

Awarding entity: Instituto de Salud Carlos III **Conferral date:** 2004 **End date:** 2010

Name of the grant: Human Frontiers Science Program Long Term fellowship proposal N° LT00415-2002-C

Aims: Post-doctoral

Awarding entity: HFSP **Conferral date:** 2002 **End date:** 2005
Entity where activity was carried out: IGMM-CNRS

Name of the grant: EMBO Long Term Fellowship proposal N° ALTF-333-2001

Aims: Post-doctoral

Awarding entity: EMBO **Conferral date:** 2002

Name of the grant: Marie Curie Individual Fellowship proposal N° MCFI-2001-01552

Aims: Post-doctoral

Awarding entity: Comisión Europea **Conferral date:** 2002

Name of the grant: Doktorarbeit Max Planck Stipendium für Ausländer

Aims: Pre-doctoral

Awarding entity: Max Planck Institut **Conferral date:** 03/1997 **End date:** 01/2001
Entity where activity was carried out: Max Planck Institut

C.8. Awards

Extraordinary doctorate award, University of Barcelona, 2002