



CURRICULUM VITAE (CVA)

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CV date 24/12/2021

Part A. PERSONAL INFORMATION

First name	Jesús		
Family name	de la Cruz Díaz		
Gender (*)	Male	Birth date (dd/mm/yyyy)	03/10/1965
Social Security, Passport, ID number	52261521R		
e-mail	jdlcd@us.es	URL Web:	https://personal.us.es/jdlcd/ribosome/Home.html
Open Research and Contributor ID (ORCID)(*)	0000-0001-5870-659X		

(*) Mandatory

A.1. Current position

Position	Full Professor (Catedrático de Universidad)		
Initial date	10/10/2011		
Institution	University of Seville		
Department/Center	Dept. Genetics/Institute of Biomedicine of Seville (IBiS)		
Country	Spain	Teleph. number	955923126
Key words	Ribosome, Ribosome profiling, pre-rRNA processing, ribosome assembly, nucleolus, RNA helicases, <i>Saccharomyces</i> . RNA Seq, Hepatocellular carcinoma, HepG2 cell line, Sorafenib.		

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
2006-2011	Profesor Titular de Universidad/ Univ. Sevilla/ Spain
2004-2006	Profesor Contratado Doctor/ Univ. Sevilla/ Spain
2000-2004	Profesor Asociado a Tiempo Completo/ Univ. Sevilla/ Spain
1998-2000	Contratado de Reincorporación MEC/ Univ. Sevilla/ Spain
1998	Postdoctoral hired HFSP/ Univ. Sevilla/ Spain
1997	Postdoctoral visitor/ ICMB, Univ. Edinburgh/ UK
1997	Postdoctoral hired UNIGE/CMU, Univ. Geneva/ Switzerland
1995-1996	Postdoctoral fellow MEC/CMU, Univ. Geneva/ Switzerland
1992	Predoctoral visitor/ LG, Univ. Ghent/ Belgium
1990-1993	Predoctoral fellow MEC/ Univ. Sevilla/ Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Degree in Biology ("Licenciado")	Faculty of Biology, University of Seville	1989
PhD in Biology	Faculty of Biology, University of Seville	1994

Part B. CV SUMMARY (max. 5000 characters, including spaces)

I obtained the Degree in Biology in 1989 and the PhD in Biology in 1994 from the University of Seville. During my Thesis, I characterised a set of antifungal enzymes from the mycoparasitic

fungus *Trichoderma harzianum*. From 1995 to 1998, I carried out a post-doctoral stay at the University Medical Centre of Geneva, Switzerland, under the supervision of Prof P. Linder, and at the laboratory of Prof D. Tollervey at the Institute of Molecular and Cellular Biology from the University of Edinburgh, United Kingdom. During these years, I specialised in the biochemical, genetic and molecular analysis of ribosome synthesis and protein translation in the yeast *Saccharomyces cerevisiae*. I returned to the laboratory of Prof A. Vioque (Institute of Plant Biochemistry and Photosynthesis, CSIC-University of Seville) to work on the characterisation of ribonucleoprotein complexes from microalgae with a Reintegration Contract for Doctors and Technologists. In 2001, I obtained a position of Associate Professor in the Dept of Genetics of the University of Seville, in 2005 one of the first three places of the National Qualification System to access the body of university professors and from 2006 to 2011, I has been Professor ("Profesor Titular"). Since 2011, I am Full Professor ("Catedrático") at this department. In 2014, I moved to the Institute of Biomedicine of Seville (IBiS) as a research head of the group Synthesis and Function of Ribosomes.

I have been PI in 7 research grants from the Spanish Research Plan, in 2 "Acciones Integradas" actions from the Spanish Government and in 3 research projects from the Andalusian Government. I am also member of a National Excellence Network. My current research is focused on the functional study of the cytoplasmic ribosome assembly process and translation in eukaryotes, using *S. cerevisiae* and human cell lines as working models. This field has academic interest given the universal importance of the process of translation but also biomedical interest given the existence of human diseases known as ribosomopathies and the importance of this process in cancer. Another aim of our group is the understanding of the peculiarities of translation in hepatocellular carcinoma cells treated with protein kinase inhibitors (e.g. Sorafenib), which are normally used as chemotherapeutic drugs. I am the author of more than 70 publications, most of them placed in the first quartile of the JCR impact factor ranking. These add about 400 impact points, globally received about 3900 citations and generate an H-index of 35. I have international reputation as evidenced by the fact that two of my reviews published in *Mol. Cell Biol.* and in *Trends Biochem. Sci.* have received more than 300 and 400 citations each, respectively, and the fact of having published in the prestigious journal *Annu. Rev. Biochem.* (185 citations). My group has presented about 100 communications to National and International Meetings and I have been invited to give seminars at different universities and research centres not only in Spain but also in Italy, France, the United Kingdom and Switzerland, among others. I am also member of the European COST Network called ProteoCure.

My research group has successfully collaborated with several renowned national groups including those of Prof A. Aguilera (CABIMER, Seville) or Prof J. Ariño (UAB, Barcelona) and international ones as those of Prof D. Tollervey (WCB, Edinburgh, UK), Prof J. Woolford (Carnegie Mellon University, USA) and Prof Y. Henry (LBME, Toulouse, France).

I teach subjects related to Genetics and Human Genetics in the Degree of Biology and subjects related to Gene Expression in the Masters of Molecular Genetics and Biomedicine of the University of Seville. I have also organised summer courses for graduates at the International University of Andalucía, scientific congresses and have chaired scientific sessions. My group has always collaborated in social events such as the European Night of Researchers and accepted all invitations from science popularisation magazines and newspapers. I participate in academic commissions, doctorate programs and masters from the University of Seville and I am a member of ASEICA (Spanish Association for Cancer Research), SEG (Spanish Society for Genetics), SEBBM (Spanish Society for Biochemistry and Molecular Biology) and the RNA Society.

My group gives special importance to training activities for students. I normally enrol grade and master students in the tasks of our group. Since 2001, I have supervised the Thesis studies for 11 alumni. Most of our graduated PhDs are working in science related posts or are active researchers leading their own teams. I have been member of employment committees of CSIC

and different universities and I have peer-reviewed both national and international grants and manuscripts for renowned journals.

More information can be consulted at <http://personal.us.es/jdlcd/ribosome/Home.html>.

Part C. RELEVANT MERITS (sorted by typology)

Merits only from the last 10 years. For further information, please see <https://personal.us.es/jdlcd/ribosome/Publications.html>

C.1. Publications

36 publications in the last 10 years; 725 citations in WOS; only 10 relevant ones are shown:

- 1) M. Jaafar, J. Contreras, C. Dominique, [...], A.K. Henras*. (**J. de la Cruz: 16/17**). Association of snR190 snoRNA chaperone with early pre-60S particles is regulated by the RNA helicase Dbp7 in yeast. *Nat. Commun.* 12: 6153 (2021).
- 2) S. Martín-Villanueva, G. Gutiérrez, D. Kressler*, J. de la Cruz*. Ubiquitin and ubiquitin-like proteins and domains in ribosome production and function: chance or necessity? *Int. J. Mol. Sci.* 22: 4359 (2021).
- 3) O. Rodríguez-Galán, J.J. García-Gómez, I.V. Rosado, [...], V. Pelechano*, D. Kressler*, **J. de la Cruz***. (11/11). A functional connection between translation elongation and protein folding at the ribosome exit tunnel in *Saccharomyces cerevisiae*. *Nucleic Acids Res.* 49: 206-220 (2021).
- 4) S. Martín-Villanueva, J. Fernández-Fernández, O. Rodríguez-Galán, J. Fernández-Boraita, E. Villalobo, **J. de la Cruz***. Role of the beak ribosomal protein eS12 in ribosome biogenesis and function in *Saccharomyces cerevisiae*. *RNA Biol.* 17: 1261-1276 (2020).
- 5) M. Olombrada, C. Peña, O. Rodríguez-Galán, [...], **J. de la Cruz***, L. García-Ortega*, V.G. Panse*. (10/12). The ribotoxin alpha-sarcin can cleave the sarcin/ricin loop on late 60S pre-ribosomes. *Nucleic Acids Res.* 48: 6210-6222 (2020).
- 6) F. Espinar-Marchena, O. Rodríguez-Galán, J. Fernández-Fernández, J. Linnemann, **J. de la Cruz***. Ribosomal protein L14 contributes to the early assembly of 60S ribosomal subunits in *Saccharomyces cerevisiae*. *Nucleic Acids Res.* 46: 4715-4732 (2018).
- 7) A. Fernández-Pevida, S. Martín-Villanueva, G. Murat, T. Lacombe, D. Kressler*, **J. de la Cruz***. The eukaryote-specific N-terminal extension of ribosomal protein S31 contributes to the assembly and function of 40S ribosomal subunits. *Nucleic Acids Res.* 44: 7777-7791 (2016).
- 8) **J. de la Cruz**, K. Karbstein, J.L. Woolford Jr*. 2015. Functions of ribosomal proteins in assembly of eukaryotic ribosomes *in vivo*. *Annu. Rev. Biochem.* 84: 93-129 (2015).
- 9) J.J. García-Gómez, A. Fernández-Pevida, S. Lebaron, I.V. Rosado, D. Tollervey, D. Kressler*, **J. de la Cruz***. Final pre-40S maturation depends on the functional integrity of the 60S ribosomal subunit protein L3. *PLoS Genet.* 10: e100420 (2014).
- 10) R. Babiano, G. Badis, C. Saveanu, A. Namane, A. Doyen, A. Díaz-Quintana, A. Jacquier, [...], **J. de la Cruz***. (9/9). Yeast ribosomal protein L7 and its homologue Rlp7 are simultaneously present at distinct sites on pre-60S ribosomal particles. *Nucleic Acids Res.* 41: 9461-9470 (2013).

* stands for corresponding author.

C.2. Congress

57 presentations to meetings in the last 10 years; only 5 relevant ones are shown:

- 1) Protein Synthesis and Translation Control, EMBL. Virtual Conference. 7-10 September 2021. Oral presentation.

- 2) The 43rd FEBS Congress: Biochemistry Forever, Prague 2018. Prague (Czech Republic). 7-12 July 2018. Oral presentation.
- 3) XXXIX Congreso de la Sociedad Española de Bioquímica y Biología Molecular. Salamanca (Spain). 5-8 September 2016. Invited speaker and symposium co-chair.
- 4) FEBS-IUBMB Workshop on Biointeractomics. From bimolecular interactions to networks. Sevilla (Spain). 17-20 May 2016. Invited speaker for a plenary session.
- 5) The 9th International Conference on Ribosome Synthesis. Banff (Canada). 22-26 August 2012. Invited oral session.

C.3. Research projects

16 research projects in the last 10 years; 6 active ones; only 10 relevant ones are shown:

- 1) Insights into ribosome biogenesis and protein synthesis in eukaryotes. Research Project (I+D+i). Ministerio de Ciencia e Innovación (Spain). PID2019-103850-I00. 2020-2023. 160.000 €. **PI: Jesús de la Cruz.**
- 2) Homeostasis of ribosome production in eukaryotes. Research Project (I+D+i). Junta de Andalucía (Spain). P20_00581. 2021-2022. 100.000 €. **PI: Jesús de la Cruz.**
- 3) Action mechanism of the ribotoxin alpha.sarcin and molecular function of the orthologue proteins Pol5 and MYBBP1A in the synthesis and function of the eukaryotic ribosome. Research Project (I+D+i). Junta de Andalucía and University of Seville. US-1380394. 2022. 80.000 €. **PI: Jesús de la Cruz.**
- 4) The life of RNA from transcription to degradation. Excellent Network. Ministerio de Ciencia, Innovación y Universidades. RED2018-102467-T. 2020-2022. 22.000 €. PI: José E. Pérez-Ortín. Role: Researcher.
- 5) Prefoldin as biomarker of recurrence in non-small cell lung cancer. Research Project (I+D+i). Junta de Andalucía (Spain). P20_01378. 2021-2022. 153.150 €. PI: José L. López Guerra. Role: Researcher.
- 6) A sound proteome for a sound body: targeting proteolysis for proteome remodeling (ProteoCure). Cost Action. European Cooperation in Science and Technology. CA20113. 2021-2025. 125.000 € (first payment). PI: Rosa Farràs. Role: Researcher.
- 7) Eukaryotic ribosomal subunit assembly: analysis of assembly factors and ribosomal proteins. Research Project (I+D+i). Ministerio de Economía y Competitividad (Spain). BFU2016-75352-P. 2016-2020. 180.000 €. **PI: Jesús de la Cruz.**
- 8) Analysis of the principles governing assembly of eukaryotic ribosomes. Research Project (I+D+i). Ministerio de Economía y Competitividad (Spain). BFU2013-42958-P. 2014-2016. 180.000 €. **PI: Jesús de la Cruz.**
- 9) Study of ribosome assembly in *Saccharomyces cerevisiae*. Research Project (I+D+i). Ministerio de Ciencia e Innovación (Spain). BFU2010-15690. 2011-2014. 180.000 €. **PI: Jesús de la Cruz.**
- 10) Ribosome synthesis, cancer and inherited diseases. Role of the ribosomal proteins and assembly factors as possible regulators of cellular proliferation. Research Project (I+D+i). Junta de Andalucía (Spain). P08-CVI-03508. 2009-2013. 259.923,68 €. **PI: Jesús de la Cruz.**

C.4. Contracts, technological or transfer merits

Organization of the IV meeting for the RNALife 2 Excellence Network from the Ministerio de Ciencia, Innovación y Universidades. Sevilla. 12-13 July 2021.