CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

CV date	10/01/2023

First name	Jesús		
Family name	de la Cruz Díaz		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail			
Open Researcher and Contributor ID (ORCID) (*)			

(*) 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, *Saccharomyces*. RNA Seq, Hepatocellular carcinoma, HepG2 cell line, Sorafenib.		

A.2. Previous positions

Period	Position/Institution/Country/Interruption cause
2006-2011	Profesor Titular de Universidad/ Univ. Seville/ Spain
2004-2006	Profesor Contratado Doctor/ Univ. Seville/ Spain
2000-2004	Profesor Asociado a Tiempo Completo/ Univ. Seville/ Spain
1998-2000	Contratado de Reincorporación MEC/ Univ. Seville/ Spain
1998	Postdoctoral hired HFSP/ Univ. Seville/ 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
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

I obtained the Degree in Biology in 1989 and the PhD in Biology in 1994 from the University of Seville (USE). 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-doct stay at the University Medical Centre (Geneva, Switzerland), under the supervision of Prof P. Linder, and in the laboratory of Prof D. Tollervey at the Institute of Molecular and Cellular Biology (University of Edinburgh, UK). There, I specialised in the molecular analysis of ribosome synthesis and translation in the yeast *Saccharomyces cerevisiae*. In 1998, I moved to the laboratory of Prof A. Vioque (Institute of Plant Biochemistry and Photosynthesis, CSIC-USE) to work on 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 (USE), 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 head of the group Synthesis and Function of Ribosomes.

I have been PI in 7 research grants from the Spanish Research Plan, 1 strategical grant from the Spanish Science Ministry, 2 "Acciones Integradas" actions from the Spanish Government, 3 projects from the Andalusian Government and 1 grant from USE. I am member of a National Excellence Network and participant of 2 COST actions from the EU. I have generated ca. 2 million euros to my University as a competitive researcher since 2001. My current research is focused on the functional study of cytoplasmic ribosome assembly and translation in eukaryotes, using *S. cerevisiae* and human cell lines as models. This field has academic interest given the universal importance of these processes but also biomedical interest given the link of them to human diseases (e.g. ribosomopathies) and all cancer types. In this sense, we are involved in the understanding of the effect on translation of protein kinase inhibitors (e.g. Sorafenib) in hepatocellular carcinoma cells, which are used as chemotherapeutic drugs in hospitals. I am author on 75 publications, most of them in Q1 of the JCR ranking. These provided 450 impact points, 4300 citations, and generated an H-index of 37. I have international reputation as evidenced by the impact of two of my reviews (*Mol. Cell Biol*. and *Trends Biochem. Sci.*, 302 and 415 citations each, respectively) and the fact of having published in the prestigious *Annu. Rev. Biochem*. (219 citations since 2015). 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 in Spain, Italy, France, Austria, UK and Switzerland, among others. I have one patent that has been exploited and our work is constantly supervised by the transfer units of IBiS and USE.

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

I teach subjects related to Genetics and Human Genetics in the Degree of Biology and related to Gene Expression in the Masters of Molecular Genetics and Biomedicine of USE. I have also organised summer courses at the International University of Andalucía, scientific congresses and have chaired scientific sessions. My group always collaborates in social events such as the European Night of Researchers and accepts all invitations from science popularisation magazines and newspapers. I participate in academic commissions, doctorate programs and masters from USE 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. I have also been member of employment committees of CSIC and different universities and I actively peer-review national and international grants and manuscripts for renowned journals.

My group gives special importance to training activities for PhD students and post-docs. I always enrol grade and master students in the tasks of our group. Since 2001, I have supervised the Thesis studies of 11 alumni. Currently, there are post-docs from the Marie Sklodowska-Curie, Spanish Association against Cancer, Juan de la Cierva and María Zambrano helps in our group. Most of our graduated PhDs and post-docs are working in science related posts or are active researchers leading successfully their own teams.

More information on my research interests and CV can be consulted at *http://personal.us.es/jdlcd/ribosome/Home.html*.

Part C. RELEVANT MERITS

I have included merits only from the last 10 years. For further information, please see *https://personal.us.es/jdlcd/ribosome/Publications.html*

C.1. Publications

35 publications in the last 10 years; 775 citations in WOS; herein, 7 relevant ones: The asterisk stands for AC:

1) J. Micic, O. Rodríguez-Galán, R. Babiano, […], **J. de la Cruz*** (9/9). Ribosomal protein eL39 is important for maturation of the nascent polypeptide exit tunnel and proper folding during

translation. ***Nucleic Acids Res***. 50: 6453-6473 (2022). D.O.I.: 10.1093/nar/gkac366. Q1, IF: 19.160. Citation: 0

2) 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). D.O.I.: 10.1038/s41467-021-26207-w. Q1, IF: 17.694. Nº citas: 9. Editor's highlights.

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). D.O.I.: 10.1093/nar/gkaa1200. Q1, IF: 16.190. Citation: 2.

4) 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). D.O.I.: 10.1093/nar/gkaa315. Q1, IF: 16.971. Citation: 2. SEBBM's highlights.

5) 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). D.O.I.: 10.1093/nar/gky123. Q1, IF: 11.147. Citation: 7. Best article 2018 Fac Biology, USE.

6) 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). D.O.I.: 10.1146/annurev-biochem-060614-033917. Q1, IF: 21.047. Citation: 219.

7) 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). D.O.I.: 10.1371/journal.pgen.1004205. Q1, IF: 7.528. Citation: 40.

Three other relevant publications of my scientific career:
1) O. Deloche, **J. de la Cruz*,** D. Kressler, M. Doere, P. Linder* A membrane transport defect leads to a rapid attenuation of translation initiation in *Saccharomyces cerevisiae.* ***Mol. Cell.*** *13: 357*-366 (2004). D.O.I.: 10.1016/s1097-2765(04)00008-5. Q1, IF: 16.835. Citation: 48.

2) J. de la Cruz*, D. Kressler, D. Tollervey, P. Linder. Dob1p (Mtr4p) is a putative ATP-dependent RNA helicase required for the 3' end formation of 5.8S rRNA in *Saccharomyces cerevisiae.* ***EMBO J.*** *17: 1128-1140 (1998).* D.O.I.: 10.1093/emboj/17.4.1128. Q1, IF: 13.171. Citation: 262.

3) J. de la Cruz, I. Iost, D. Kressler, P. Linder*. The p20 and Ded1 proteins have antagonistic roles in eIF4E-dependent translation in *Saccharomyces cerevisiae.* ***Proc. Natl. Acad. Sci. USA*** 94: 5201-5206 (1997). D.O.I.: 10.1073/pnas.94.10.5201. Q1, IF: 9.040. Citation: 171.

C.2. Congress

53 presentations to meetings in the last 10 years; only 3 relevant ones are shown:

1) The 43rd FEBS Congress: Biochemistry Forever, Prague 2018. Prague (Czech Republic). 7-12 July 2018. Oral presentation.

2) XXXIX Congreso de la Sociedad Española de Bioquímica y Biología Molecular. Salamanca (Spain). 5-8 September 2016. Invited speaker and symposium co-chair.

3) FEBS-IUBMB Workshop on Biointeractomics. From bimolecular interactions to networks. Sevilla (Spain). 17-20 May 2016. Invited speaker for a plenary session.

C.3. Research projects

12 research projects in the last 10 years; 7 active ones; only 10 relevant ones are shown:

1) New strategies based on protein synthesis for an optimized fungal-based circular economy. Research Project. Ministerio de Ciencia e Innovación. TED2021-129601B-I00. 2022-2024. Conceded. 145.000 €. **PI:** David Canovas (PI), Jesús de la Cruz (co-PI).

2) 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.

3) Homeostasis of ribosome production in eukaryotes. Research Project (I+D+i). Junta de Andalucía (Spain). P20_00581. 2021-2023. 100.000 €. **PI:** Jesús de la Cruz.

4) 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. 2022-2023. 80.000 €. **PI:** Jesús de la Cruz.

5) 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.

6) Prefoldin as biomarker of recurrence in non-small cell lung cancer. Research Project (I+D+i). Junta de Andalucía (Spain). P20_01378. 2021-2023. 153.150 €. **PI:** José L. López Guerra. **Role:** Researcher.

7) 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.

8) 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.

9) 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.

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.

PI of the Research Regional Group PAIDI "Expresión génica en eucariotas". BIO-271.

Reviewer of scientific manuscripts for *EMBO J.*, *Mol. Cell. Biol., Mol. Genet. Genomics, Arch. Microbiol., BBA-Mol. Cell Research, FEBS Lett., FEBS J., RNA, Nucleic Acids Res., Plant Physiol., Curr. Genet., Mol. Microbiol., Yeast, PloS Genet., PloS One, J. Bacteriol., J. Biol. Chem.,* among others.

Editor of Microbial Cell (http:// microbialcell.com/).

External evaluator of research grants for different national and international agencies: *Agencia Nacional de Evaluación y Prospectiva* (Spain), *Agence Nationale de la Recherche* (France), *Austrian Science Fund* (Austria), *Telethon Foundation* (Italy), *Université Libre de Bruxelles* (Belgium), *Agropolis* (France), *MRC* (UK), ERC Program (EU), among others.

Patent: M. Rey, A. Soler, H. Ait-Lahsen, **J. de la Cruz,** E. Monte, A. Llobell. Protein with antifungal activity. Aplication No.: P9901746 and PCT/ES00/00292. Country and priority date: Spain, 31/07/1999. Owner entity: USE and New Biotechnic, S.A. Countries to which it has spread: USA. Company(ies) that have exploited it: New Biotechnic, S.A.