

Part A. PERSONAL INFORMATION

CV date

November 8,
2020

First and Family name	Enrique J. de la Rosa Cano		
Social Security, Passport, ID number	00682393-Y	Age	61
Researcher codes	WoS Researcher ID (*)	N-3689-2014	
	SCOPUS Author ID(*)		
	Open Researcher and Contributor ID (ORCID) **	0000-0001-9984-9706	

(*) *At least one of these is mandatory*

(**) *Mandatory*

A.1. Current position

Name of University/Institution	Consejo Superior de Investigaciones Científicas		
Department	Centro de Investigaciones Biológicas Margarita Salas		
Address and Country	C/Ramiro de Maeztu 9, 28040 Madrid, Spain		
Phone number	34/911097375	E-mail	ejdelarosa@cib.csic.es
Current position	Scientific Researcher	From	July 2002
Key words	Nervous system development; Neurogenesis; Retina; Proliferation; Differentiation; Programmed cell death; Apoptosis; Proinsulin; Growth factors; Retinitis pigmentosa; Neurodegeneration; Neuroprotection; Inflammation; Aging; Nanotechnology.		

A.2. Education

PhD	University	Year
Biology (Biochemistry & Molecular Biology)	Autónoma de Madrid	1984

A.3. JCR articles, h Index, thesis supervised as from January 1, 2010.

24 articles, reviews and book chapters published (2010-2020) in JCR, 7 of them in D1 and other 12 in Q1. 1641 citations (2010-2020).

H-Index 34.

1 Thesis (2010-2020).

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

Scientific Objectives:

Global strategy: Characterization of the regulation of basic cellular processes under physiological conditions, embryonic development mainly, for their understanding and possible manipulation in pathological situations.

Future objectives: i) Development of neuroprotective therapies. ii) Understanding the role of innate immunity in relation to retinal dystrophy and retinal aging. iii) Nanotechnology applied to retinal function and dysfunction.

Internationalization:

13 publications in collaboration with foreign groups: S. P. Becerra (NEI, National Institutes of Health, Bethesda, MD, USA); H. U. Saragovi (McGill University, Montreal, Quebec, Canada); A. M. Cuervo (Albert Einstein College of Medicine, Bronx, NY, USA); F. Cecconi (University of Rome "Tor Vergata"; Rome, Italy); M. V. Canto-Soler (Wilmer Eye Institute, Department of Ophthalmology, Johns Hopkins University School of Medicine,



Baltimore, MD, USA); N. van Rooijen (Faculty of Medicine, Vrije Universiteit, VU University Medical Center, Amsterdam, The Netherlands); T. G. Cotter (Bioscience Research Institute, University College Cork, Cork, Ireland); F. Hallböök (Biomedical Centre, Uppsala University, Uppsala, Sweden); K. Krieglstein (University of Göttingen, Göttingen, Germany); G. E. Pollerberg (Institute of Zoology, University of Heidelberg, Germany); C. A. Bondy (NICHD, National Institutes of Health, Bethesda, MD, USA).

Visiting Scientist; National Institutes of Health (Bethesda, EE.UU., 1993); Wilmer Eye Institute de la Johns Hopkins University (Baltimore, EE.UU., 2003); Lady Davis Institute for Medical Research de la McGill University (Montreal, Quebec, Canadá; 2013).

Science dissemination:

Organization 2011-2020, of the outreach talks "Science with chocolate" and "Science in Pangea" and writing of the blog associated <http://cienciaconchocolate.blogspot.com>; Knowledge Transfer Blog: <http://www.madrimasd.org/blogs/torredemarfil/>; 6 articles in the CSIC blog: <http://blogs.20minutos.es/ciencia-para-llevar-csic/>; Numerous conferences to Associations of Retinitis Pigmentosa patients and general public.

Part C. RELEVANT MERITS as from January 1, 2010.

C.1. Selected publications (including edited books)

1) Gómez-Martínez R, Hernández-Pinto AM, Duch M, Vázquez P, Zinoviev K, **de la Rosa EJ**, Esteve J, Suárez T, Plaza JA.

Silicon chips detect intracellular pressure changes in living cells.

Ref. Nature Nanotechnology 8:e517 (2013)

2) Torras N, Aguil JP, Vázquez P, Duch M, Hernández-Pinto AM, Samitier J, **de la Rosa EJ**, Esteve J, Suárez T, Pérez-García L, Plaza JA.

Suspended Planar-Array Chips for Molecular Multiplexing at the Microscale.

Ref. Adv Mater doi:10.1002/adma.201504164 (2015)

3) Gómez-Martínez R, Vázquez P, Duch M, Muriano A, Pinacho D, Sanvicens N, Sánchez-Baeza F, Boya P, **de la Rosa EJ**, Esteve J, Suárez T, Plaza JA.

Intracellular Silicon Chips in Living Cells.

Ref. Small 6, 499-502 (2010)

4) **de la Rosa EJ**, Hernández-Sánchez C.

CNS targets for the treatment of retinal dystrophies: a win-win strategy.

Book. Therapies for retinal degeneration: Targetting common processes. pp 61-75. (Ed: **de la Rosa, EJ** and Cotter, TG; Royal Society of Chemistry) (2019)

5) Sánchez-Cruz A, Villarejo-Zori B, Marchena M, Zaldivar-Díez J, Palomo V, Gil C, Lizasoain I, de la Villa P, Martínez A, **de la Rosa EJ***, Hernández-Sánchez C*.

Modulation of GSK-3 provides cellular and functional neuroprotection in the rd10 mouse model of retinitis pigmentosa.

Ref. Mol Neurodegener 13:19 (2018)

6) Platón-Corchado M, Barcelona PF, Jmaeff S, Marchena M, Hernández-Pinto AM, Hernández-Sánchez C, Saragovi HU*, **de la Rosa EJ***.

p75NTR antagonists attenuate photoreceptor cell loss in murine models of retinitis pigmentosa.

Ref. Cell Death Dis 8:e2922 (2017)

7) Corpas R, Hernández-Pinto AM, Porquet D, Hernández-Sánchez C, Bosch F, Ortega-Aznar A, Comellas F, **de la Rosa EJ***, Sanfeliu C*.



Proinsulin protects against age-related cognitive loss through anti-inflammatory convergent pathways.

Ref. *Neuropharmacology* 123:221-232. doi: 10.1016/j.neuropharm.2017.06.014 (2017)

8) Baleriola J, Álvarez-Lindo N, de la Villa P, Bernad A, Blanco L, Suárez T*, de la Rosa EJ*. Increased neuronal death and disturbed axonal growth in the Polμ-deficient mouse embryonic retina.

Ref. *Sci Report* 6:25928. doi:10.1038/srep25928 (2016)

9) Rodríguez-Muela N, Hernández-Pinto AM, Serrano-Puebla A, García-Ledo L, Latorre SH, de la Rosa EJ, Boya P.

Lysosomal membrane permeabilization and autophagy blockade contribute to photoreceptor cell death in a mouse model of retinitis pigmentosa.

Ref. *Cell Death Differ* 22, 476-487. doi: 10.1038/cdd.2014.203 (2015)

10) Rodríguez-Muela N, Koga H, García-Ledo L, de la Villa P, de la Rosa EJ, Cuervo AM, Boya P.

Balance between autophagic pathways preserves retinal homeostasis.

Ref. *Aging Cell* 12:478 (2013)

C.2. Research projects and grants

Principal Investigator of 13 projects financed by the National Plan (including a CONSOLIDER), 7 from other public agencies, 3 by private foundations and 3 co-financed by companies.

Project granted as from 2010:

1) Exploring the role of the innate immunity in retinitis pigmentosa as a key process and a potential therapeutic target. PID2019-109506RB-I00, 06/2020-04/2023, 118,580 €, Enrique J. de la Rosa @ Catalina Hernández-Sánchez (coIPs).

1) Early molecular and cellular alterations in Retinitis Pigmentosa and their value as therapeutical targets. SAF2016-75681-R, 01/2017-09/2020, 199,650 €, Enrique J. de la Rosa & Flora de Pablo (coIPs).

2) Neuroprotective strategies for Retinitis Pigmentosa based on the modulation of cell death and inflammation. SAF2013-41059-R, 01/2014-09/2017, 356.950 €, Flora de Pablo & Enrique J. de la Rosa (coIPs).

3) Brain dysfunction during aging: relevance for Alzheimer's disease. CONSOLIDER CDS2010-00045, 12/2010-06/2016, 457.000 €, Enrique J. de la Rosa, coordinator Carlos Dotti (CBM-CSIC).

4) Physiological cell death and cellular fitness in development and differentiation and their imbalance in neural degeneration. SAF2010-21879-C02-01, 01/2011-06/2014, 181.500 €, Enrique J. de la Rosa.

5) Development of adeno-associated vectors (AAVs) for neuroprotective therapy in retinal degenerative diseases. TRACE PET2008-0282, 03/2009-03-2011, 50.000 €, Enrique J. de la Rosa & Fátima Bosch (UAB).

6) Involvement of oxidative stress and endoplasmic reticle stress in retinal degenerations and possible attenuation by proinsulin and other neuroprotective factors. TRACE PET2008-0065, 03/2009-03/2011, 102.000 €, Enrique J. de la Rosa.

C.3. Contracts

C.4. Patents and technology tansfer



Promotor and scientific adviser (2007-2018) of ProRetina Therapeutics, a CSIC-spin-off company aimed to the development of clinical treatments for retinal dystrophies, based in a patent of the research group.

C.5. Leadership and management

Collaborator from May 2009 to December 2015, by appointment under the Law of Science, with equivalent category to Manager of the National Plan, of the General Subdirectorate of Training and Incorporation of Researchers (MICINN) for the area of BioPharma and the General Subdirectorate of Human Resources for Research (MINECO).

Member of the Board of Directors of the Spanish Society of Biochemistry and Molecular Biology (2010-2014). Member of the Governing Board of the Spanish Association of Scientists (2015-present). President of the AEC since July 2017. Member of the COSCE DECIDES panel.

CIB Director since April 2019.