

**CV Date**

05/10/2021

## Part A. PERSONAL INFORMATION

First Name *	José Antonio		
Family Name *	Bárcena Ruiz		
Sex *	Male	Date of Birth *	
ID number Social Security, Passport *		Phone Number	(34) 957218590
URL Web			
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Researcher's identification number	Open Researcher and Contributor ID (ORCID)*	0000-0002-5626-5943	
	Researcher ID	I-2622-2015	
	Scopus Author ID		

\* Mandatory

### A.1. Current position

Job Title	Catedrático de Universidad		
Starting date	2002		
Institution	Universidad de Córdoba		
Department / Centre	Bioquímica y Biología Molecular / Facultad de Ciencias		
Country		Phone Number	
Keywords	Molecular biology; Biochemistry		

### A.2. Previous positions

Period	Job Title / Name of Employer / Country
2007 - 2010	Director del Departamento de Bioquímica y Biología Molecular / Universidad de Córdoba

### A.4. General quality indicators of scientific production

7 Six-year research periods acknowledged (last one 01/01/2021)

4 Internacional PhD Thesis supervised last 10 years, 1 Extraordinary Doctorate Award.

4 Master Thesis supervised in last 5 years.

1436 Total citations (WOS)

73 citations/year 2010-2020 (WOS)

108 citation/year 2010-2020 (Google Scholar)

41 Publications, 36 first quartile (Q1) of which 10 first decile (D1) during the last 15 years.

h Index (WoS): 21

h Index (GScholar): 25

The article Pedrajas et al. (2016) was highlighted in the cover of the journal Antioxid. Redox Sign. and reviewed in the SEBBM journal.

Guest speaker, Gordon Research Conference, on "Thiol-Based Redox Regulation & Signaling", (August 7-12, 2016, Stowe, VT, EEUU)

Guest senior speaker, Oxidative Stress Group Meeting, XXXIX Congreso de la SEBBM (Sep 5-8, 2016, Salamanca, Spain).

## Part C. RELEVANT ACCOMPLISHMENTS

### C.1. Publications.

AC: corresponding author. (n° x / n° y): position / total authors. If applicable, indicate the number of citations

- 1 **Scientific paper.** Martina, J.A.; Guerrero-Gómez, D.; Gómez-Orte, E.; Bárcena, J.A.; Cabello, J; Miranda-Vizuet, A.; Puertollano, R.2020. A conserved cysteine-based redox mechanism sustains TFEB/HLH-30 activity under persistent stress The EMBO Journal. Wiley. e105793, pp.1-23. ISSN 1460-2075.
- 2 **Scientific paper.** López-Grueso, MJ; Lagal, DJ; García-Jiménez, AF; et al; Padilla, CA. 2020. Knockout of PRDX6 induces mitochondrial dysfunction and cell cycle arrest at G2/M in HepG2 hepatocarcinoma cells Redox Biology. Elsevier. 37-101737. ISSN 2213-2317.
- 3 **Scientific paper.** González-Ojeda, R; Rodríguez-Hernández, MA; Negrete, M; et al; Muntané, J. 2020. Downregulation of thioredoxin-1-dependent CD95 S-nitrosation by Sorafenib reduces liver cancer Redox Biology. Elsevier. 34-101528. ISSN 2213-2317.
- 4 **Scientific paper.** Rodríguez-Hernández, MA; Cruz-Ojeda, P; López-Grueso, MJ; et al; Muntané, J. 2020. Integrated molecular signaling involving mitochondrial dysfunction and alteration of cell metabolism during antitumoral properties of tyrosine kinase inhibitors in cancer Redox Biology. Elsevier. ISSN 2213-2317.
- 5 **Scientific paper.** Bozón-Kulichenko, Elena; Camafeita, Emilio; López, Juan Antonio; et al; Vázquez, Jesús. 2020. Improved integrative analysis of the thiol redox proteome using filter-aided sample preparation Journal of Proteomics. 214, pp.103624.
- 6 **Scientific paper.** López-Grueso, MJ; Tarradas-Valero, RM; Carmona-Hidalgo, B; et al; Padilla, CA. 2019. Peroxiredoxin 6 Down-Regulation Induces Metabolic Remodeling and Cell Cycle Arrest in HepG2 Cells Antioxidants. MDPI. 8-11, pp.505-522.
- 7 **Scientific paper.** López-Grueso, MJ; González, R; Muntané, J; Bárcena, JA; Padilla, CA. (1/5). 2019. Thioredoxin Downregulation Enhances Sorafenib Effects in Hepatocarcinoma Cells Antioxidants. MDPI. 8-10, pp.501-519.
- 8 **Scientific paper.** Picazo, C; McDonagh, B; Peinado, J; Bárcena, JA; Matallana, E; Aranda, A. (4/6). 2019. Yeast cytosolic thioredoxins control glycolysis, lipid metabolism and protein biosynthesis under winemaking conditions.Applied and environmental microbiology. American Society for Microbiology. ISSN 0099-2240.
- 9 **Scientific paper.** Padilla, CA; Bárcena, JA; López-Grueso, MJ; Requejo-Aguilar, R. (2/4). 2018. The Regulation of TORC1 pathway by the yeast chaperones Hsp31 is mediated by SFP1 and affects proteasomal activity BBA - General Subjects. ISSN 0304-4165.
- 10 **Scientific paper.** López-Grueso, MJ; González-Ojeda, R; Requejo-Aguilar, R; McDonagh, B; Fuentes-Almagro, CA; Muntané, J; Bárcena, JA; Padilla, CA. 2018. Thioredoxin and glutaredoxin regulate metabolism through different multiplex thiol switches Redox Biology. Elsevier. ISSN 2213-2317.
- 11 **Scientific paper.** González, R; Molina-Ruiz, FJ; Bárcena, JA; Padilla, CA; Muntané, J. 2017. Regulation of cell survival, apoptosis epithelial to mesenchymal transition by nitric oxide-dependent post-translational modifications Antioxidants & Redox Signaling. Mary Anne Liebert Publ. on-line-ahead of print. ISSN 1523-0864.
- 12 **Scientific paper.** Pedrajas, JR; McDonagh, B; Hernández-Torres, F; Miranda-Vizuet, A; González, R; Martínez-Galisteo, E; Padilla, CA; Bárcena, JA. 2016. Glutathione is the resolving thiol for thioredoxin peroxidase activity of 1-Cys peroxiredoxin without being consumed during the catalytic cycle Antioxidants & Redox Signaling. Mary Anne Liebert Publ. 24-3, pp.115-128. ISSN 1523-0864.
- 13 **Scientific paper.** González-Ojeda, R; López-Grueso, MJ; Muntané, J; Bárcena, JA; Padilla, CA. 2015. Redox regulation of metabolic and signaling pathways by thioredoxin and glutaredoxin in NOS-3 overexpressing hepatoblastoma cells Redox Biology. Elsevier. 6, pp.122-134. ISSN 2213-2317.
- 14 **Scientific paper.** Rodríguez-Hernández, A; Navarro-Villarán, E; González, R; et al; Muntané, J. 2015. Regulation of cell death receptor S-nitrosylation and apoptotic signaling by Sorafenib in hepatoblastoma cells Redox Biology. Elsevier. 6, pp.174-182. ISSN 2213-2317.
- 15 **Scientific paper.** Navarro, Pedro; Trevisan-Herraz, Marco; Bozón-Kulichenko, Elena; et al; Vázquez, Jesús. 2014. General Statistical framework for quantitative proteomics by stable isotope labeling Journal of Proteome Research. 13-3, pp.1234-1247. ISSN 1535-3893.

- 16 Scientific paper.** Gonzalez, Raul; Ferrin, Gustavo; Aguilar-Melero, Patricia; et al; Muntane, Jordi. 2013. Targeting Hepatoma Using Nitric Oxide Donor Strategies. *Antioxid Redox Signal.* 18-5, pp.491-506.
- 17 Scientific paper.** McDonagh, Brian; Pedrajas, José Rafael; Padilla, C Alicia; Bárcena, José Antonio. 2013. Thiol Redox Sensitivity of Two Key Enzymes of Heme Biosynthesis and Pentose Phosphate Pathways: Uroporphyrinogen Decarboxylase and Transketolase *Oxidative Medicine and Cellular Longevity.* 2013, pp.1-13.
- 18 Scientific paper.** McDonagh, Brian; Domínguez-Martín, Ma Agustina; Gómez-Baena, Guadalupe; López-Lozano, Antonio; Diez, Jesús; Bárcena, José A; García Fernández, Jose M. 2012. Nitrogen starvation induces extensive changes in the redox proteome of *Prochlorococcus* sp. strain SS120 *Environmental Microbiology Reports.* 4-2, pp.257-267.
- 19 Scientific paper.** McDonagh, Brian; Padilla, C Alicia; Pedrajas, José Rafael; Bárcena, José Antonio. 2011. Biosynthetic and Iron Metabolism Is Regulated by Thiol Proteome Changes Dependent on Glutaredoxin-2 and Mitochondrial Peroxiredoxin-1 in *Saccharomyces cerevisiae* *J Biol Chem.* 286-17, pp.15565-76.
- 20 Scientific paper.** McDonagh, B; Requejo, R; Fuentes-Almagro, C A; Ogueta, S; Bárcena, J A; Padilla, C A. 2011. Thiol redox proteomics identifies differential targets of cytosolic and mitochondrial glutaredoxin-2 isoforms in *Saccharomyces cerevisiae*. Reversible S-glutathionylation of DHBP synthase (RIB3) *J Proteomics.* 74, pp.2487-2497.
- 21 Scientific paper.** Mandanici, Francesca; Gómez-Gascón, Lidia; Garibaldi, Manuela; et al; Rodríguez-Ortega, Manuel J. 2010. A surface protein of *Streptococcus suis* serotype 2 identified by proteomics protects mice against infection *Journal of Proteomics.* 73-12, pp.2365-9.
- 22 Scientific paper.** Pedrajas, José Rafael; Padilla, C Alicia; McDonagh, Brian; Bárcena, José Antonio. 2010. Glutaredoxin participates in the reduction of peroxides by the mitochondrial 1-CYS peroxiredoxin in *Saccharomyces cerevisiae* *Antioxidants & Redox Signaling.* 13-3, pp.249-58.
- 23 Scientific paper.** Sheehan, D.; McDonagh, B.; Bárcena, J. A. 2010. Redox proteomics Expert review of proteomics. 7-1, pp.1-4.
- 24 Scientific paper.** Hu, Wentao; Tedesco, Sara; McDonagh, Brian; Bárcena, José Antonio; Keane, Catherine; Sheehan, David. 2010. Selection of thiol- and disulfide-containing proteins of *Escherichia coli* on activated thiol-Sepharose *Analytical Biochemistry.* 398-2, pp.245-53.
- 25 Scientific paper.** Porras, Pablo; McDonagh, Brian; Pedrajas, Jose Rafael; Bárcena, J Antonio; Padilla, C Alicia. 2010. Structure and function of yeast glutaredoxin 2 depend on postranslational processing and are related to subcellular distribution *Biochim Biophys Acta.* 1804-4, pp.839-845.
- 26 Book chapter.** Pedrajas, J. R.; Bárcena, J. A.(2/2). 2018. Peroxiredoxins: Types, Characteristics and Functions in Higher Plants *Antioxidants and Antioxidant Enzymes in Higher Plants.* Springer International Publishing AG. pp.95-121. ISBN 978-3-319-75087-3.
- 27 Book chapter.** Martínez-Ruiz, A; McDonagh, B; Bárcena, JA. 2014. Proteómica redox: análisis de modificaciones postraduccionales oxidativas *Manual de Proteómica* (Corrales, F, Calvete, JJ, eds.). SEProt. Cap. 23, pp.519-533. ISBN 9788469712818.

## C.2. Conferences and meetings

- 1 José Antonio Bárcena Ruiz. Las redoxinas y la promiscuidad de los intercambios redox entre cisteínas. XXXIX Congreso de la SEBBM. SEBBM. 2016. Spain. Participatory - invited/keynote talk. Conference.
- 2 José Antonio Bárcena Ruiz. Redox Control of Protein Thiols by Redoxins Under Nitric Oxide Signaling. Thiol-Based Redox Regulation & Signaling. Gordon Research Conferences. 2016. United States of America. Participatory - invited/keynote talk. Conference.
- 3 José Antonio Bárcena; Brian McDonagh; Raquel Requejo; C. Alicia Padilla. New clues to metabolic regulation through changes in the thiol redox proteome. New Trends in Proteomics, 4th Congress of the Spanish Proteomics Society, 4th Congress of The spanish Proteomics Society. SEProt. 2011. Spain. Participatory - oral communication. Conference.

### C.3. R&D and innovation projects and contracts

- 1 **Project.** BFU2016-80006-P. Función de las peroxirredoxinas en la homeostasis celular como antioxidantes y en señalización. Ministerio de Ciencia e Innovación. Investigación. José Antonio Bárcena Ruiz. (Universidad de Córdoba). 30/12/2016-29/12/2020. 157.300 €.
- 2 **Project.** BFU2012-32056 Modulación del proteoma redox tiólico por redoxinas: mecanismos e implicaciones en el metabolismo del hierro, la función mitocondrial y la apoptosis. Ministerio de Ciencia e Innovación. Investigación. José Antonio Bárcena Ruiz. (Universidad de Córdoba). 01/01/2013-31/12/2015. 135.000 €.
- 3 **Project.** PF-1.1-BIO216, PF-1.1-BIO216. Sistemas Moleculares de defensa frente al estrés oxidativo y Proteómica. Universidad de Córdoba. (Universidad de Córdoba). 01/01/2015-31/05/2015. 5.811,66 €.
- 4 **Project.** UJA 2001-12-55 Caracterización Estructural y Funcional de una Peroxirredoxina Mitocondrial. Implicación en el Metabolismo del Hierro y en el promedio de vida celular. José Rafael Pedrajas Cabrera. (Universidad de Jaén). 03/2012-03/2014. 8.950 €.
- 5 **Project.** BFU2009-08004(BFI) Redoxinas mitocondriales y regulación celular por modificación tiólica postraduccion del proteoma. Implicaciones fisiológicas. Ministerio de Ciencia e Innovación. Investigación. José Antonio Bárcena Ruiz. (Universidad de Córdoba). 01/01/2010-31/12/2012. 145.000 €.
- 6 **Project.** P06-CVI-01611 El Proteoma redox comparado. Junta de Andalucía. José Antonio Bárcena Ruiz. (Universidad de Córdoba). 06/2008-05/2010. 145.000 €.
- 7 **Project.** XXPP-M4.1-BIO216. Regulación del metabolismo y señalización celulares mediante cambios en el proteoma redox. Universidad de Córdoba. (Universidad de Córdoba). From 24/06/2015. 3.000 €.
- 8 **Project.** UNCO13-1E-1642, Actualización de la Infraestructura Científico-Técnica de la Unidad de Proteómica del Scai. Ministerio de Economía y Competitividad. José Antonio Bárcena Ruiz. (Universidad de Córdoba). From 11/12/2014. 1.095.172,21 €.
- 9 **Contract.** PT13/0001/0025-Plataforma de Recursos Biomoleculares y Bioinformáticos (PRB2) Instituto de Salud Carlos III. Fernando Corrales. (UCO/FIBICO). 2014-01/01/2018. 4.102.316 €.