

**CURRICULUM VITAE ABREVIADO (CVA)**

**Part A. PERSONAL INFORMATION**

First name	Rubén		
Family name	Quintana-Cabrera	Date of CV	05/07/2023
Gender (*)	Male	Birth date (dd/mm/yyyy)	22/12/1983
Social Security, Passport, ID number	45*****2T	URL Web <a href="http://www.cajal.csic.es/departamentos/ruben-quintana/ruben-quintana.html">http://www.cajal.csic.es/departamentos/ruben-quintana/ruben-quintana.html</a>	
e-mail	rubenqc@cajal.csic.es		
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-0601-349X		

(\*) Mandatory

**A.1. Current position**

Position	Ramón y Cajal grantee		
Initial date	June 1, 2022		
Institution	CSIC		
Department/Center	Dpt. Molecular, Cellular and Developmental Neurobiol.	Cajal Institute	
Country	Spain	Teleph. number	+34 913907589
Key words	Mitochondria, glioblastoma, metabolism, redox, neurosciences.		

**A.2. Previous positions (research activity interruptions, art. 14.2.b))**

Period	Position/Institution/Country/Interruption cause
06/ 2022 –	Ramón y Cajal Fellow / Cajal Institute (CSIC) / Spain (SP)
09/2021– 06/2022	Assist. professor. Univ. Salamanca/Spain.
2019 - 2021	Postdoctoral researcher (Marie Curie MSCA-IF) / U. Salamanca / SP.
2017 - 2019	Postdoctoral researcher (Juan de la Cierva-Inc.) / U. Salamanca / SP.
2012 - 2017	Postdoctoral researcher / Univ. Padua / Italy
2007 - 2012	Postdoctoral researcher / Univ. Salamanca / Spain
2011 - 2011	Predoctoral researcher / Univ. Geneva / Switzerland
2005 - 2006	Research collaborator / Univ. Salamanca / Spain

**A.3. Education**

PhD, Licensed, Graduate	University/Country	Year
Official European PhD Program in Neurosciences ( <i>Extraordinary Award</i> )	University of Salamanca	2012
Official Master's Degree in Neuroscience (MEC quality mention)	University of Salamanca	2007
Degree in Pharmacy (BSc Pharm)	University of Salamanca	2006

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

The study of molecular determinants in mitochondrial physiology represents the core of my research. Early in my career, as a major paper (out of 4 publications) from my PhD (Summa Cum Laude, extraordinary PhD award, U. Salamanca), we described a role for  $\gamma$ -glutamylcysteine as antioxidant in neuroprotective gene therapy (Nat.Comm, 2012), worthy of several awards. At the Univ. of Padua (IT), I later contributed as a postdoc to seminal works on how mitochondrial dynamics and cristae stabilize respiratory supercomplexes (Cell, 2013), which preserve tissue homeostasis (CellMetabolism, 2015). I also contributed to unravel an autophagic sorting to axons by Opa1 (Nat.Comm., 2020). As first author, we described cristae structure to engage ATPase activity and preserve mitochondrial membrane potential (Quintana-Cabrera et al., NatComm., 2018) and redox homeostasis (RedoxBiol, 2021). In the latter, I am co-corresponding author, as in other 2 publications. I communicate to media and the broad public our results, as well as continuously participate in dissemination activities (Pint of Science, European Researcher's Night, etc.). I supervised students that have top scored in their evaluations, some even awarded by prestigious agencies (Archimedes Award by MEFP, SEBBM award). Almost all past graduate (5), Erasmus<sup>+</sup> (3) and master (5) students continued their PhD in mitochondria/neuroscience, some supervised by me (2 current). This have been paralleled by teaching duties in Degree and Master lessons for 13 and 6 years, respectively. I



have built an active network of collaborators of international prestige. My research has been competitively funded and participated to renoun international projects. I review for prestigious journals (EMBO Journal, PNAS, CDDif, up to 13) and evaluation agencies (CINECA, Italy; ZSUN OSF, Poland; ANEP, Spain; Marie Curie Fellowships, European Commission). I have participated in more than 40 conferences. Recently appointed **Ramón y Cajal** (Started June 2022) **fellow with I3 accreditation** on research excellence (2023), I aim to shed light on how intercellular mitochondrial transfer drives (patho)physiology in the nervous system.

**Part C. RELEVANT MERITS** (sorted by typology) **Total (21). Most relevant:**

**C.1. Publications. Total citations:** 1665 (WoS). **H index:** 14. (CA: Corresponding author; (# x / # y): Position of the applicant/number of authors. IF: Year publication/last IF. Q: Quartile).

- 1 Quintana-Cabrera, R.\* & Scorrano L\*. (1/2. \*co-corresponding). 2023. Determinants and outcomes of mitochondrial dynamics. **Molecular Cell**. Mar 16;83(6):857-876. IF: 19.328/19.328 (D1, Q1).
- 2 Chemello F, Pozzobon M, Tsansizi LI, (...), Scorrano L, Bean C. (5/11). 2023, *Dysfunctional mitochondria accumulate in a skeletal muscle knockout model of SMN1, the causal gene of spinal muscular atrophy*. **Cell Death&Disease**. Feb 27;14(2):162. IF: 9.696/9.696 (Q1).
- 3 López-Fabuel I, García-Macia M. Buondelmonte C (...), Bolaños JP. (10/24). 2022. *Aberrant upregulation of the glycolytic enzyme PFKFB3 in CLN7 neuronal ceroid lipofuscinosis*. **Nature Communications** IF: 14.919/17.694 (Q1, D1).
- 4 Quintana-Cabrera R\*, Manjarrés-Raza I, Vicente-Gutiérrez C, Corrado M, Bolaños JP, Scorrano L\*. (1/6. \*co-corresponding). 2021. *Opa1 relies on cristae preservation and ATP synthase to curtail reactive oxygen species accumulation in mitochondria*. **Redox Biology**. IF: 9.986/10.787 (Q1, D1)
- 5 Zaninello M, Palikaras K, Naon D (...), Scorrano L. (6/13). 2020. *Inhibition of autophagy curtails visual loss in a model of autosomal dominant optic atrophy* **Nature Comm**. 11, IF: 12.121/17.694 (Q1, D1).
- 6 Quintana-Cabrera R & Soriano ME. (1/2). 2019. *ER Stress Priming of Mitochondrial Respiratory suPERKomplex Assembly*. **Trends in Endocrinology & Metabolism**, 30, pp. 685-687. IF: 11.641/10.586. (Q1, D1).
- 7 Managò A et al. (6/14). 2015. *Early effects of the antineoplastic agent salinomycin on mitochondrial function*. **Cell Death&Disease**. 6, e1930. IF: 5.378/ 9.696. (Q1)
- 8 Costa R, Peruzzo R, Bachmann M (...), Leanza L. (9/20). 2019. *Impaired mitochondrial ATP production downregulates Wnt signaling via ER stress induction*. **Cell Reports**, 18, pp. 1949-1960. IF: 8.109/ 9.995. (Q1)
- 9 Quintana-Cabrera R, Quirin C, Glytsou C (...), Scorrano L. (1/ 13). 2018. *The cristae modulator Optic atrophy 1 requires mitochondrial ATP synthase oligomers to safeguard mitochondrial function*. **Nature Communications**, 9, 3399. IF: 11.878/17.694. (Q1, D1).
- 10 Varanita T, Soriano ME, Romanello V (...), Scorrano L. (5/16). 2015. *The OPA1-dependent mitochondrial cristae remodeling pathway controls atrophic, apoptotic, and ischemic tissue damage*. **Cell Metabolism**. 21, pp.834-844. ISSN 1550-4131. IF: 17.303/ 31.373. (Q1, D1)
- 11 Cogliati S, Frezza C, Soriano ME (...), Scorrano L. (5/15). 2013. *Mitochondrial cristae shape determines respiratory chain supercomplexes assembly and respiratory efficiency*. **Cell**. 155, pp.160-171. ISSN 0092-8674. IF: 33.116/ 66.85. (Q1, D1).
- 12 Quintana-Cabrera R, Fernández-Fernández S, Bobo-Jiménez V, Escobar J, Sastre J, Almeida A, Bolaños JP (1/7). 2012. *γ-Glutamylcysteine detoxifies reactive oxygen species by acting as glutathione peroxidase-1 cofactor*. **Nature Communications**. 3, pp.718. IF: 10.015/17.694. (Q1, D1).

**C.2. Congress (Oral presentations)** (Total: 43; oral: 21. Most relevant, LAST 5 YEARS)

**C.2.1. Invited scientific seminars/meetings (Oral presentation)**

1. The future of redox biology (June, 17-19, 2022). Siena, Italy.
2. New insights into metabolism and mitochondria. 8-9/6/22. CBM, Madrid, Spain.
3. Cajal School: Bioenergetics for Brain Function. 28/02 – 18/03/2022. Bordeaux, France.
4. 43 SEBBM Meeting (July, 2021). Barcelona, Spain.
5. Veneto Institute of Oncology (IOV). January 22, 2019. Padua, Italy.
6. NeuroCenter Megendie, INSERM, University of Bodeaux. March 7, 2019. France.
7. XXXIII Annual Meeting Chilean Soc. for Cell Biol. Nov. 25-29, 2019. Puerto Varas, Chile.
8. Radboud UMC. University of Radboud. November 7, 2019. Nijmegen, The Netherlands.



### C.2.2. Selected oral presentations to meetings

1. 20<sup>th</sup> Biennial Meeting of SFRR International (SFFRI). March, 15-18, 2021.
2. MAC'19 Meeting (Mitoc., Apoptosis & Cancer). Sept 10-17, 2019. Prague, Czech Rep.
3. MitoCHATS. Symposium on Mitochondrial Biology. July 10-12, 2019. Cologne, Germany.
4. EBEC 2018 Conference. August, 25-30. 2018. Budapest. Hungary.
5. MitoPorto Meeting. July, 13. 2018. Porto. Portugal.

### C.3. Research projects and grants (MOST RELEVANT last 10 YEARS. Total: 20 projects)

- 1 \* **Fundación Tatiana Pérez de Guzmán el Bueno** (LIVE): Intercellular signaling and dynamics of mitochondrial transfer in glioblastoma. (01-01-2023 – 31-12-2025) 32,000 € (\*PI; Principal Investigator. Line: Mitochondrial transfer in glioblastoma).
- 2 \* **Ramón y Cajal** (LIVE): Determinants of mitochondrial ultrastructure, bioenergetics and dynamics (01-06-2022 – 31-05-2027). Ref: RYC2020-029161. 40,000 € (\*PI. Mitoc. Transf).
- 3 \* **CSIC Start-up grant** (LIVE): Determinants of mitochondrial physiology and intercellular transfer in the nervous system (01-06-2022 – 31-05-2027). Funding: 50,000 € (\*PI).
- 4 **MINECO** (LIVE) Impact of metabolic reprogramming of astrocytes on neuronal function *in vivo* in health and disease (01-06-2020 – 31-05-2023) PI: Juan P. Bolaños. Funding (direct costs): 340.000 € - Ref.: PID2019-105699RB-I00. (Investigator: I).
- 5 **Fundación BBVA**. Dissecting a neuron-to-liver to modulate lipid metabolism in Batten Disease (July 2018 – Jan 2021). PI: Juan P. Bolaños. Funding: 125.000 € (I).
- 6 **Fundación Ramón Areces** (LIVE). Regulation of lipid metabolism by neuron-liver pathway in Batten disease. (April 2019 – April 2022). PI: Juan P. Bolaños. Funding: 121.500 € (I).
- 7 **CIBER on Frailty and Healthy Aging (CIBERFES; ISCIII)** (LIVE) (2017-2020) Coordinator: Leocadio Rodríguez-Mañas. PI (USAL): Juan P. Bolaños. Funding (direct costs): 29.000 €/year. Ref: CB16/10/002825. (I).
- 8 \* **MSCA-IF-ST-EF H2020** (03/2019–06/2019). Addressing MITochondrial Import by Glioblastoma cells to rewire respiratory metabolism (MITIG, #793987). (University of Salamanca). 01/03/2019- 28/01/2021. Funding: 158.121€. (\*PI. Line: Mitoc. transfer).
- 9 **European Union Horizon 2020** (H2020-PHC-2014-2015) (FINISHED). Developing new therapies for Batten disease — BATCure. Ref: 666918. (January 2016 – June 2019). Grant coordinator: Sara Mole (UCL, UK). PI (USAL): Juan P. Bolaños. Funding: 400.000€ (I).
- 10 **European Research Council** (ERC-SG-LS3; Ref: EU ERC FP7-282280) (FINISHED). ERMITO - Molecular anatomy and pathophysiology of the ER-mitochondria interface. (01/01/2012 – 31/12/2016). PI: L. Scorrano. U. of Padova. Funding: 1 499 995,20 € (I).

### C.4. Contracts

01/01/2017 - 31/05/2017: Venetian Institute of Molecular Medicine (VIMM). Padova (IT)  
01/04/2012 - 31/12/2013: Telethon Italy Contract. VIMM. Padova (IT)

### C.5. Fellowships

06/ 2022 – Ramón y Cajal Fellow. Cajal Institute, CSIC. Madrid.  
09/2021 – 05/2022 Assistant professor. University of Salamanca (Dpt. Biochem & Mol. Biol.)  
06/2017 – 03/2021 Research Fellow. University of Salamanca (Dpt. Biochem & Mol. Biol.)  
03/2019 – 03/2021 **Marie Sklodowska-Curie - Individual Fellowship (MSCA-IF)**. USAL.  
09/2019 – 11/2019 **The Company of Biologists**: Internship: Khondrion SV (Nijmegen, NL)  
06/2017 – 03/2019 Postdoctoral research fellowship “**Juan de la Cierva Incorporación**”. Ministry of Industry, Competitiveness and Economy, Spain. (Univ. of Salamanca, Spain). Final score: Excellent.  
04/2012 – 05/2017 Postdoctoral research fellow. VIMM / Dpt. of Biology, U. of Padua, Italy.  
01/2016 – 12/2016 **Fondazione Veronesi Fellowship**, Italy.  
01/2014 – 12/2015 **AIRC Fellowship** (Italian Association for Cancer Research).  
04/2012 – 12/2013 Postdoctoral contract **Telethon Italy**.  
06/2007 – 01/2012 Predoctoral fellow. Institute of Neurosciences of Castilla y León (INCYL) / Dpt. of Biochemistry and Molecular Biology. University of Salamanca, Spain.  
09/2011 – 12/2011 **EMBO Short Term Fellowship** (112-2012). U. Geneva, Switzerland.  
01/2008 – 01/2012 PhD research fellowship “**Fondo de Investigación Sanitario**” (FIS). Institute of Health Carlos III. Ministry of Health. Spain.  
06/2007 – 01/2008 PhD research fellowship. **Junta de Castilla y León**, Spain (Declined)  
09/2006 – 07/2007 Official Master fellowship. **Ministry of Education&Science**, Spain.  
10/2005 – 05/2006 Collaboration research fellowship. **Min. Education&Science**, Spain.



### **C.6. Evaluation and reviewing activities**

- 2018 **Invited editor**. *Frontiers in Molecular Neuroscience*, 1 issue (2018-2019).
- 2012 – Present: **Reviewer for Scientific Journals**: *EMBOJ.*, *PNAS*, *Redox Biol.*, *Cell Death & Diff.*, *Frontiers Journal*, *Biology Open*, *Am. J. of Phys.*, *Scientific Reports*, *BBRC*, *Neuropharmacology*, *BBA-Molecular Cell Research*, *Antiox. Redox Sign.*, *ACS*.
- 2015 – Present: **Reviewer for Research Agencies**: Italian Agency Universities&Research systems (ANVUR, since 2015), Spanish Agency (ANEP, since 2017), Polish National Science Center (ZSUN OSF, since 2019). Marie Curie Postdoctoral Fellowships (MSCA-PF, European Commission (since 2022).
- 2015– Present: **PhD Thesis Evaluator**: M. Romo (2022), S. Peña (2021), F. Velarde (2021-2024), N. Bonora (2018); I. López Fabuel (2015). R. Muñoz Castañeda. (2015).

### **C.7. Chair of networks and scientific sessions**

1. MitoHub Mitochondrial network (Founder & coordinator). Madrid, Spain. Since Dec, 2022.
2. Cajal Xmas Meeting (Cajal Institute, CSIC). December 21-22, 2022 (Co-organizer; chair).
3. IBFG seminars (Salamanca, Spain): Since 2018 (2-3 seminars per year).
4. 15th Annual Retreat. Venetian Institute of Mol. Med. (VIMM). February, 2017. Treviso, Italy
5. Padova-MIT-Innsbruck. University of Padova. September 14-16, 2017. Padova, Italy.

**C.8. Membership of Scientific Societies**: SEBBM (2013-Present, Spain), Italian Association Cell Biol. & Differ., ACBD (2014-2016). SENC (2019-Present), CIBERFES (CIBER for Frailty and Healthy Aging, 2017-Present, Spain). SFRR (2021 - ). Redes de investigación MICINN (Metabolismo celular y el microambiente en diferenciación y enfermedades, 2023 - ).

### **C.9. Academic institutional responsibilities**

- 07/2017 – 06/2022 Member of the Council of the Dept. Biochem&Mol. Biol. U. Salamanca.
- 01/2020 – 06/2022 Member of the Teaching Commission of the Dept. Biochem&Mol. Biol.

### **C.10. Supervising and mentoring activities**

- 03/2019 – Present PhD Supervisor: 2 students. U. Salamanca / Cajal Inst. (CI; CSIC).
- 09/2018 – Present Master Supervisor (TFM): 5 students (2 present). U. Salamanca / CI
- 09/2016 – 06/2017 Degree supervisor (TFG): 4 students. IBFG. U. of Salamanca.
- 01/2015 – 07/2015 Erasmus<sup>+</sup> supervisor: 3 students (1 present). U. of Padua (Italy)/ CI.

**C.11. Teaching**: 1 **book chapter** published (Quintana-Cabrera, R\*. Edit. Universitaria Abya-Yala, pp. 191-201; ISBN 978-9978-10-298-5,\*Corresp. Aut.); 8 innovation **courses** attended.

2017 – **Master in Neurosciences / Biomolecules** (Autonomous Univ. Madrid, UAM)

2017 – **Master in Biology & Clinics of Cancer / Cellular & Molecular Biology** (Usal)

2021 – 2022 **Biochemistry**. Faculty of Nursing and Physiotherapy. U. of Salamanca (Spain)

2018 – 2022 **Biochemistry III**. Faculty of Pharmacy. U. of Salamanca (Usal)

2009-2012; 2018-2021 **Biochemistry I**. Faculty of Pharmacy. U. of Salamanca (Spain).

### **C.12. Prizes, Awards and Mentions**

- 02/2022 **“Article of the month”** Mention. Spanish Biochem & Mol Biol Society (SEBBM).
- 03/2021 **Young Investigator Award**. 20<sup>th</sup> Biennial Meeting of SFRR International
- 11/2019 **XVIII Archimedes University Contest Prize**. Ministry. Sci. Innov.&Univ.(Supervisor).
- 07/2019 **Best Poster Award** (supervisor, to S. Yunta) 42 SEBBM Meeting. Madrid (SP).
- 05/2018 **Certificate of Outstanding Contribution in Reviewing**. *Neuropharmacology J*.
- 04/2015 **Abstract prize**. MiP Spring. University College London (UCL). London (UK)
- 05/2013 **Fisher Scientific-SEBBM Award** (Finalist). Spain.
- 01/2013 **Academy of Pharmacy of Castilla y León Award**. Castilla y León. Spain.
- 12/2012 **Outstanding Doctorate Award**. University of Salamanca, Spain
- 12/2012 **Young Investigator Research Award**. Faculty of Pharmacy. U. Salamanca, Spain.
- 06/2012 **“Article of the month”** Mention. Spanish Biochem & Mol Biol Society (SEBBM).

**C.13. Accreditations and other merits**: **I3 accreditation** (2023). **Six-year Research Accreditation “Sexenio”** (CENAI, 2010-2015). **Lecturer** (PEP - ANECA, 2018) and **Associate Professor Accreditations** (ACSUCYL, 2020). **Certificates “Function A,B,C”** (05/2009) and **“D”** (06/2018) on lab animal bioethics. >25 **dissemination oral talks** and organization (Pint of Science). Over 33 **courses** (radioprotection, high-throughput imaging, course on pedagogical aptitude **C.A.P.**). **Languages**: Spanish (Native), English, German, French, Italian.