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Personal

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Résumé

With a strong foundation in developmental neurobiology, stem cell research, and cancer biology, I have developed a versatile career. In my current role as Project Manager for the French Reproducible Research Network, I focus on enhancing research integrity, promoting open science values, and supporting researchers' career development and the advancement of science. This position has allowed me to strenght my organizational and leadership skills, coordinating workgroups, organizing meetings, and fostering collaborations across the scientific community. Prior to this, my academic career included a PhD in developmental neurobiology and two postdoctoral positions, where I explored aspects of cell fate decisions, transcriptional networks, molecular mechanisms in neural stem cells, and oncogenic transformations in cancer. I utilized cutting-edge techniques in genomics, bioinformatics, and stem cell biology, resulting in significant contributions to the understanding of cell differentiation and pathogenesis.

Technical skills

- **Bioinformatics and Data Science**
 - Programming languages: Python, R, Bash scripting
 - Data visualization (R, Python (Matplotlib, Seaborn and Bokeh)
 - Regression, Dimensionality reduction, Clustering, Time series analysis, network analysis, Text mining
 - AI (Skit-learn, PySpark, TensorFlow, XGBoost)
 - Model interpretation (SHAP)
 - Genomics: Microarray, RNAseq, single cell RNAseq, ChIPseq and ATACseq analysis. Functional genomics
- **Experimental Biology** Histology, electron microscopy, videomicroscopy, cell culture, molecular biology.
- **Experimental models** Mouse, cell lines, chicken embryos.
 - B level: Project designer (according to the French law; July 2015)
 - Certificate of qualified staff to work with experimental animals (according to the Spanish law; July, 2006).

Scientific career and education

- **2024-**. Project manager. INRIA. French Reproducibility Network. My main missions are:
 - **Coordination and Management:** Oversee the organization of projects related to research reproducibility, ensuring smooth communication and collaboration across teams and organizations.
 - **Facilitation of Workshops and Meetings:** Organize and lead meetings, workshops, and seminars aimed at promoting best practices in reproducible research.
 - **Support and Guidance:** Provide support to researchers by offering tools, resources, and training opportunities to improve research practices.
 - **Monitor and Report:** Tracking project progress, analyzing outcomes, and preparing reports to measure the impact of initiatives on the community. This includes providing feedback and recommendations for improvement to the network steering committee.
- **2020-2024.** On parental leave.
- **2018-2022.** Training in programming and AI, including certifications in Python, data visualization, Sci-kit learn, XGBoost, PySpark, Network analysis, Text mining, Single cell RNAseq analysis, and ChIPseq analysis.
- **2015-2017.** Postdoctoral researcher. Lab. Dr. Ribes. Institute Jacques Monod, Paris. France. My project aimed to identify the molecular mechanisms and underlying transcriptional networks regulated by Pax3 and 7 transcription factors and its oncogenic counterparts PAX3FOXO1A and PAX7FOXO1A.
- **2010-2014.** Postdoctoral researcher. Lab. Dr. Spassky. Institute de Biologie de l'École Normale Supérieure, Paris. France. My project was aimed to identify molecular mechanisms responsible for ependymal cell differentiation. I did a transcriptomic analysis of neural stem cells and differentiating ependymal cells to identify potential candidates. To experimentally validate those candidates I used a combination of in vivo and in vitro techniques, including videomicroscopy.
- **2004-2010.** PhD Thesis. University of Salamanca, Spain. Instituto de Neurociencias de Castilla y León, Spain. Supervisors: José Ramón Alonso Peña and Carmela Gómez Rodríguez. I was interested in the role of the transcription factor Pax6 in adult neurogenesis towards the olfactory bulb. I analyzed in vivo and in vitro the proliferation, self-renewal, and differentiation abilities of adult progenitors as well as cell survival in Pax6 heterozygous mutants. I did my work in strong collaboration with the teams of Dr. Carlos Crespo (Universidad de Valencia, Spain), Dr. Carlos Vicario-Abejon (Cajal Institute, CSIC, Spain) and Dr. Eric Holland (Memorial Sloan Kettering Cancer Center, New York, USA).

I was awarded the doctoral *Premio Extraordinario de Doctorado* prize from University of Salamanca (Spain). This doctorate prize awards the best thesis by domain. It is based both on the CV of the candidate and the confidential comments of thesis committee after the PhD defense.
- **2004-2005.** D.E.A. Thesis. Histological characterization of retina cell populations in a mutant mouse model. Supervisors: Almudena Velasco and Juan Lara.
- **1998-2003.** Degree in Biology. University of Salamanca, Spain. During the last two years as undergraduate student, I was already collaborating in the Department of Cell Biology and Pathology and the Institute of Neurosciences.

Teaching experience

- **Qualification aux fonctions de maître de conférences.** Cell Biology and Neuroscience sections.
- **Practical undergraduate teaching** in different subjects of Cell Biology, Neurobiology and Histology areas (University of Salamanca). 2006-2008. 210 hours.
 - **Animal and Plant Cytology and Histology** (1st year of Biology Degree). 40 hours teaching/semester.
 - **Cell Biology** (4th year of Biology Grade and 1st year of Biochemistry Degree). 15 hours

teaching/semester.

- **Methodology in the study of Tissue and Cell Biology** (4th year of Biology Degree). 20 hours teaching/semester.
- **Neurobiology** (5th year of Biology Degree). 15 hours teaching/semester.
- **Cell Biology** (2nd year of Biotechnology Degree). 15 hours teaching/semester.
- **Pedagogic Aptitude Diploma.** University of Salamanca, Spain. Diploma needed to become a high school teacher in Spain. 2004.

Conference organization, management, and leadership skills

- **Member of the organizing committee.** Reproducible research days. Lyon 2025. The reproducible research days is organized once a year by the french reproducibility network. As part of my missions, I contribute to the organization of the event.
- **Member of the organizing committee.** The YRLS meeting is organized once a year by the young researchers associations of the five leading life science research institutes of Paris. Apart from diverse general organization tasks, I participated in the selection of participants for oral presentations and as a poster judge for the developmental and cell biology sections.
- **Chair. VII Young Researchers meeting** (*Scientific Politics in Spain: Needs and Proposals*). Barcelona (Spain) 25-27 February 2009.
- **Coordinator of the scientific program. VI Young Researchers meeting** (*Research is future*). Granada (Spain) 13-15 February 2008.
- **2011 to 2013**, I was an **active member** of the **directive team** of the **students and postdocs association of the Institut de Biologie de l'École Normale Supérieure (SPIBens)**. As a part of my activity, I participate in the organization of the Young Researchers in Life Science meeting 2012, in Paris.
- **2004 to 2011**, I was an **active member** of the **Spanish Young Researchers Federation** (Federacion de Jovenes Investigadores; FJI).
- **2005 to 2007** I was in charge of a **national work group** dedicated to the **preparation of informative material on the activities of the association and science policy**.
- **2008 to 2009** I was part of the **directive team** of the association, the last six months as **vice-president**. I participated in the **planning and coordination** of the work of the association and represented the association in different events and negotiations.

Competitive financial support and awards

- **La ligue contre le cancer postdoctoral fellowship.** February 2011-January 2014. Cilia Biology and Neurogenesis Team. Institut de Biologie de l'École Normale Supérieure (IBENS). Paris (France). INSERM U1024.
- **Doctoral Award** *Premio Extraordinario de Doctorado* from the University of Salamanca (Spain). 2010.
- **Research internship grant.** Supported by *Ministerio de Educación y Ciencia*, Spain. 2007. Dpt. Cancer Biology & Genetics. Memorial Sloan Kettering Cancer Center, New York (USA). 2007, 5 months.
- **Research internship grant.** Supported by *Ministerio de Educación y Ciencia*, Spain. 2005. Dpto. Biología Celular y Parasitología. University of Valencia (Spain).
- **Predoctoral fellowship.** Supported by *Ministerio de Educación y Ciencia*, *FPI program*, Spanish Government. 2004-2008. Institute of Neuroscience of Castilla y León. University of Salamanca. Salamanca (Spain).
- **Undergraduate collaboration fellowship.** Supported by *Ministerio de Educación, Cultura y Deporte* Spanish Government. 2002-2003. Institute of Neuroscience of Castilla y León, Spain.
- **Popular science awards**

- Popular science poster contest. VII Young researchers meeting. Barcelona, Spain. 2009. 2nd place.
- Popular science poster contest. VI Young Researchers meeting. Granada, Spain. 2008. 2nd place.
- Popular science poster contest. IV Young Researchers meeting. Madrid, Spain. 2006. 3rd place.

Communication skills

Scientific publications I have published eleven papers in peer-reviewed journals and one invited review, five of them as the first author and three as the second author. **Popular science activities**

- Educational activities at the exhibition *Neurosciences in the XXI century*. Science week. Salamanca, 2008. Popular science awards
- *Al filo de lo posible: detectar y parar la neurodegeneración*. Second place. Popular science poster contest. VII Young researchers meeting. Barcelona, Spain. February, 2009
- *Un largo e inesperado viaje: de los huesos al cerebro*. Second place. Popular science poster contest. VI Young Researchers meeting. Granada, Spain. February, 2008
- *¿Quién dijo que el cerebro no cambia?* Third place. Popular science poster contest. IV Young Researchers meeting. Madrid, Spain. March, 2006

Languages

Very good **English** (read/written/spoken)

Very good **French** (read/written/spoken)

Native **Spanish**

Scientific peer-reviewed publications

- The PAX-FOXO1s trigger fast trans-differentiation of chick embryonic neural cells into alveolar rhabdomyosarcoma with tissue invasive properties limited by S phase entry inhibition. **Curto G.G.***, Der Vartanian A.*, Frarma Y.E.*, Manceau L.*, Baldi L.*, Prisco S., Elarouci N., Causeret F., Korenkov D., Rigolet M., Aurade F., De Reynies A., Contremoulins V., Relaix F., Faklaris O., Briscoe J., Gilardi-Hebenstreit P., Ribes V. *PLOS Genetics* (2020) 16(11): e1009164. *: Authors contributed equally to this work.

DOI: <https://doi.org/10.1371/journal.pgen.1009164>

- Pax3- and Pax7-mediated Dbx1 regulation orchestrates the patterning of intermediate spinal interneurons. Gard C.*, **Curto G.G.***, Frarma Y.E., Chollet E., Duval N., Auzié V., Auradé F., Vigier L., Relaix F., Pierani A., Causeret F., Ribes V. *Developmental Biology* (2017), 432(1):24-33. *: Both authors contributed equally to this work.

DOI: <https://doi.org/10.1016/j.ydbio.2017.06.014>

- Structures and properties of PAX linked regulatory networks architecting & pacing the emergence of neuronal diversity. **Curto G.G.**, Gard C. Ribes V. *Seminars in Cell and Developmental Biology* (2015), 44: 75-86. Invited Review.

DOI: <https://doi.org/10.1016/j.semcd.2015.09.010>

- Pax6 is essential for the maintenance and multi-lineage differentiation of neural stem cells, and for neuronal incorporation into the adult olfactory bulb. **Curto G.G.**, Nieto-Estévez V., Hurtado-Chong A., Valero J., Gómez C., Alonso J.R., Weruaga E., Vicario-Abejón C. *Stem cells and Development* (2014), 23(23):2813-30.

DOI: <https://doi.org/10.1089/scd.2014.0058>

- Tubulin glycolases and glutamylases have distinct functions in stabilization and motility of ependymal

ilia. Bosch Grau M., **González Curto G.**, Rocha C., Magiera M.M., Marques Sousa P., Giordano T., Spassky N., Janke C. *The Journal of Cell Biology* (2013), 202(3):441-51.
DOI: <https://doi.org/10.1083/jcb.201305041>

- Changes in the serotonergic system and in brain-derived neurotrophic factor distribution in the main olfactory bulb of pcd mice before and after mitral cell loss. Gómez C., **Curto G.G.**, Baltanás F.C., Valero J., O'Shea E., Colado M.I., Díaz D., Weruaga E., Alonso J.R. *Neuroscience* (2012), 201:20-33.
Pubmed DOI: <https://doi.org/10.1016/j.neuroscience.2011.11.025>

- Types of cholecystokinin-containing periglomerular cells in the mouse olfactory bulb. Baltanás F.C., **Curto G.G.**, Gómez C., Díaz D., Murias A.R., Crespo C., Erdelyi F., Szabó G., Alonso J.R., Weruaga E. *Journal of Neuroscience Research* (2011), 89(1):35-43.
DOI: <https://doi.org/10.1002/jnr.22521>

- Modelos animales en el estudio de los Trastornos del Espectro Autista. Gómez C., Díaz D., Airado Cerrato C., **González Curto G.**, Murias A. R., Sánchez Recio J., Weruaga E., Alonso J.R. Book Chapter. 2010. *Investigaciones sobre autismo en español: problemas y perspectivas, 239-248. Centro de Psicología Aplicada*. ISBN 978-84-614-1786-5.

- Chemical characterization of Pax6-immunoreactive periglomerular neurons in the mouse olfactory bulb. Baltanás F.C., Weruaga E., Murias A.R., Gómez C., **Curto G.G.**, Alonso J.R. *Cellular and Molecular Neurobiology* (2009), 29:1081-1085.
DOI: <https://doi.org/10.1007/s10571-009-9405-3>

- Modifications of the retina neuronal populations of the heterozygous mutant small eye mouse, the SeyDey. **Curto G.G.**, Lara J.M., Parrilla M., Aijon A., Velasco A. *Brain Research* (2007), 1127:163-176.
DOI: <https://doi.org/10.1016/j.brainres.2006.10.007>

- Sex differences in catechol contents in the olfactory bulb of control and unilaterally deprived rats. Gómez C., Briñón J.G., Valero J., Recio J.S., Murias A.R., **Curto G.G.**, Orio L., Colado M.I., Alonso J.R. *European Journal of Neuroscience* (2007), 25:1517-1528.
DOI: <https://doi.org/10.1111/j.1460-9568.2007.05407.x>

- Changes in cell migration and survival in the olfactory bulb of the pcd/pcd mouse. Valero J., Weruaga E., Murias A.R., Recio J.S., **Curto G.G.**, Gómez C., Alonso J.R. *Developmental Neurobiology* (2007), 67:839-859.5.
DOI: <https://doi.org/10.1002/dneu.20352>