

FERNANDO GARCÍA-MORENO**Ikerbasque Research Fellow**

Achucarro Basque Center for Neuroscience
 Science Park of the UPV/EHU
 Sede Building, 3rd floor
 E48940 – Leioa
 Spain
 Telephone: (+34) / 946018139

Email: fernando.garcia-moreno@achucarro.org

Webpages:

www.phylobrain.com

https://www.researchgate.net/profile/Fernando_Garcia-Moreno

ORCID: [0000-0001-9048-4237](https://orcid.org/0000-0001-9048-4237)

DEGREES

- **Ph.D. in Neurosciences** (June, 2008). Universidad Autónoma de Madrid, Spain.
- **Molecular Biology (Neurosciences) M. Sci.** (June 2005) Universidad Autónoma de Madrid, Spain
- **Bachelor's degree (B.S.) in Biological Sciences** (June 2003). Universidad Complutense de Madrid, Spain. Masters in Neurobiology.
- **Home Office Personal Licence. Modules 1-4** (October 2010). University of Oxford (UK).
- **Home Office Project Licence. Module 5 (February 2015)**. University of Oxford (UK).
- Certificate of training in animal experimentation, according to Ministerial Order ECC / 566/2015 **Function B + C (EU)** – June 2006 by the Facultad de Medicina; Universidad Autónoma de Madrid (UAM). **Function D (EU)** - July 2019) by *Animalaria*.
- “Pedagogical Skills Certificate” (June 2005). Facultad de Ciencias de la Educación. Universidad Complutense de Madrid, Spain.

ACADEMIC APPOINTMENTS

Sep 1 st 2016 – up to 31 st Aug 2021	Ikerbasque Research Fellow & Visiting professor of University of Basque Country (UPV/EHU) , Faculty of Medicine, Department of Neurosciences. Leader of Forebrain Evolution Research group (assoc. to Laboratory of Neural Stem Cells and Neurogenesis; Prof. Encinas) Achucarro Basque Centre for Neuroscience; Bilbao (Spain)
Apr 1 st 2013 – up to 31 st Aug 2016	Junior Group Leader Forebrain Evolution Laboratory Dept. of Physiology, Anatomy and Genetics University of Oxford (UK)
Sept 1 st 2011 – 31 st March 2013	Postdoctoral Fellow (Human Frontiers Science Program) Cortical Development Laboratory (Prof. Molnár) Dept. of Physiology, Anatomy and Genetics University of Oxford (UK)
July 15 th 2010 – 31 st Aug 2011	Postdoctoral Fellow (Spanish Ministerio de Educación) Cortical Development Laboratory (Prof. Molnár) Dept. of Physiology, Anatomy and Genetics University of Oxford (UK)
November 2009– July 2010	Sick leave (sorted problem; fully recovered)
September 2009- November 2009	Postdoctoral Fellow (Alicia Koplowitz Foundation) Cortical Development Laboratory (Prof. Molnár) Dept. of Physiology, Anatomy and Genetics University of Oxford (UK)

September 2008 - August 2009	Postdoctoral associate (part time) Telencephalic Development Laboratory (Prof. De Carlos) Instituto Cajal (CSIC); Madrid (Spain)
January 2004 - August 2008	Graduate student (Spanish Ministerio de Educación y Ciencia) Telencephalic Development Laboratory (Prof. De Carlos) Instituto Cajal (CSIC); Madrid (Spain)
January 2003 - December 2003	Student Fellow Telencephalic Development Laboratory (Prof. De Carlos) Instituto Cajal (CSIC); Madrid (Spain)

AWARDS AND FELLOWSHIPS

- Awarded “**EMBL Corporate Partnership Registration Fee waiver**” for the EMBL Course: *Single Cell RNA Sequencing course* (Heidelberg, Germany). 15-18 May 2018.
- Awarded “**Travel Award of the JNSS**” to attend the international Japanese Neuroscience Society conference (Yokohama – Japan). 20-22 July 2016.
- Awarded “**Ikerbasque Research Fellow 2015**” to establish an independent research group in Achucarro Basque Centre for Neuroscience (Bilbao –Spain). Supported by 7th European Framework and Basque Government. 2016-2021.
- Awarded with the postdoctoral fellowship from “**Long-Term fellowship of the Human Frontiers Science Program Organization (HFSP) 2010**”. In: Cortical Development Laboratory. Department of Physiology, Anatomy and Genetics. University of Oxford (UK) 2011-2014
- Awarded with the postdoctoral fellowship from “**National programme of postdoctoral mobility 2009**”. Supported by Spanish *Ministerio de Educación*. In: Cortical Development Laboratory. Department of Physiology, Anatomy and Genetics. University of Oxford (UK)
- Awarded with a “**Short term fellowship for specialization and research on neurosciences 2009**”. Alicia Koplowitz Foundation. In: Cortical Development Laboratory. Department of Physiology, Anatomy and Genetics. University of Oxford (UK)
- **Postdoctoral contract** (September 2008 – August 2009; part time). In: Laboratory of Telencephalic Development, Cajal Institute
- **Predoctoral Fellowship (FPI)** supported by *Ministerio de Educación y Ciencia* (2004-2008). In: Laboratory of Telencephalic Development, Cajal Institute

PUBLICATIONS

RESEARCH ARTICLES

- Ratié L, Desmaris E, García-Moreno F, Hoerder-Suabedissen A, Kelman A, Theil T, Bellefroid EJ, and Molnár Z (2019) Loss of *Dmrt5* Affects the Formation of the Subplate and Early Corticogenesis. *Cerebral Cortex (In press)*
- Rueda-Alaña E, Martínez-Garay I, Encinas JM, Molnár and García-Moreno F (2018) Dbx1-derived pyramidal neurons are originated locally in the developing murine neocortex. *Front. Neurosci.*, Vol 12; Art 792. doi:10.3389/fnins.2018.00792. Corresponding author.
- Picco N, García-Moreno F, Maini PK, Woolley TE and Molnár Z (2018) Mathematical Modeling of Cortical Neurogenesis Reveals that the Founder Population does not Necessarily Scale with Neurogenic Output. *Cerebral Cortex* 28, pp. 2540-2550.
- García-Moreno F, Anderton E, Królak M, Martínez-Garay I, Begbie J, Encinas JM, Irimia M and Molnár Z (2018) Absence of Tangentially Migrating Glutamatergic Neurons in the Developing Avian Brain. *Cell Reports* 22:96-109. Corresponding author.
- Askew K, Liang Y, Olmos-Alonso A, García-Moreno F, Li K, Richardson P, Tipton T, Riecken K, Molnár Z, Cragg MS, Garaschuk O, Perry VH and Gomez-Nicola D (2017) Coupled proliferation and apoptosis maintain the rapid turnover of microglia in the adult brain. *Cell Reports* 18:391-405.

- Sacilotto N, Nikitenko L, Fischer K, Fritzsche M, Wallace MD, Payne S, Nornes S, [García-Moreno F](#), Yao Lu W, Bridges E, Liu K, Biggs D, Ratnayaka I, P Herbert SP, Molnár Z, Harris AL, Davies B, Bond GL, Schwarz JJ, Bou-Gharios G and De Val S (2016) MEF2 transcription factors are master regulators of sprouting angiogenesis **Genes Dev** 30:2297-2309.
- [García-Moreno F](#) and Molnár Z (2015) A subset of early radial glial cells selectively contribute to the development and evolution of callosal connecting neurons. **Proc Natl Acad Sci U S A**. 2015 Aug 25. pii: 201506377. [Corresponding author](#).
- Vasistha NA, [García-Moreno F](#), Arora S, Cheung A, Arnold S, Robertson E and Molnár Z (2015) Tbr2 expressing intermediate progenitors contribute to all cortical layers in the developing brain. **Cereb Cortex**. 25:3290-302
- [García-Moreno F](#), Vasistha NA, Begbie J, Molnár Z (2014) *CLoNe* is a new method to target single progenitors and study their progeny in mouse and chick. **Development** 141, 1589 – 1598. [Corresponding author](#). **Top 3 most-read articles of the journal in 2014**.
- Belgard TG, Montiel JF, Wang WZ, [García-Moreno F](#), Margulies EH, Ponting CP, Molnár Z (2013) Adult pallium transcriptomes surprise in not reflecting predicted homologies across diverse chicken and mouse pallial sectors. **Proc Natl Acad Sci U S A** 110: 13150–13155.
- [García-Moreno F](#), Vasistha NA, Trevia N, Bourne JA, Molnár Z (2012) Compartmentalization of cerebral cortical germinal zones in a lissencephalic primate and gyrencephalic rodent. **Cereb Cortex** 22:482-92
- Belgard TG, Marques AC, Oliver PL, Abaan HO, Sirey TM, Hoerder-Suabedissen A, [García-Moreno F](#), Molnár Z, Margulies EH, Ponting CP (2012) A transcriptomic atlas of mouse neocortical layers. **Neuron** 71:605-16
- Oeschger FM, Wang WZ, Lee S, [García-Moreno F](#), Goffinet AM, Arbonés ML, Rakic S, Molnár Z (2012) Gene expression analysis of the embryonic subplate. **Cereb Cortex** 22:1343-59
- Molnár Z, Vasistha NA, [García-Moreno F](#) (2012) Hanging by the tail: progenitor populations proliferate. **Nat Neurosci** 14:538-40
- Wang WZ, Oeschger F, Montiel JF, [García-Moreno F](#), Hoerder-Suabedissen A, Krubitzer L, Joakim Ek C, Saunders N, Reim K, Villalón A, Molnár Z (2011) Comparative aspects of subplate zone studied with gene expression in vertebrate pallia. **Cereb Cortex** 21:2187-203
- Hoerder-Suabedissen A, Kousha O, [García-Moreno F](#), Molnár Z (2011) GFP-expression in subplate cells in the Edg2-GFP and CTGF-GFP mouse. **J Anat** 218:353-354
- Miquelajáuregui A, Varela-Echavarría A, Ceci ML, [García-Moreno F](#), de Carlos JA, Hoang K, Ricaño I, Tamariz E, Westphal H, Zhao Y (2010) LIM-homeobox gene *Lhx5* is required for normal development of Cajal-Retzius cells in the mouse forebrain **J Neurosci** 30:10551-10562
- [García-Moreno F](#), Pedraza M, Di Giovannantonio L G, Di Salvio M, López-Mascaraque L, Simeone A and De Carlos JA (2010) A neuronal migratory pathway crossing from diencephalon to telencephalon populates amygdala nuclei. **Nat Neurosci** 13:680-689
- [García-Moreno F](#), López-Mascaraque L and De Carlos JA (2008) Early telencephalic migration topographically converging in the olfactory cortex. **Cereb Cortex** 18:1239-1252
- [García-Moreno F](#), López-Mascaraque L and De Carlos JA (2007) Origins and migratory routes of murine Cajal-Retzius cells. **J Comp Neurol** 500: 419-432

BOOKS AND REVIEWS

- [García-Moreno F](#) and Molnár Z (2019) *Variations of telencephalic development that propelled neocortical evolutionary origin. Manuscript in preparation for Trends in Neuroscience. Corresponding author.*
- [García-Moreno F](#) and Molnár Z (2019) The Impact of Different Modes of Neuronal Migration on Brain Evolution. Book chapter in: “Comprehensive Developmental Neuroscience Series, 2nd Edition”. (In press) **Elsevier**
- Martínez-Cerdeño V, [García-Moreno F](#), Tosches MA, Csillag A, Manger PR, Molnár Z (2018). Update on forebrain evolution: From neurogenesis to thermogenesis. **Seminars in Cell and Developmental Biology** 76:15-22
- Montiel JF, Vasistha NA, [García-Moreno F](#) and Molnár Z (2016) From sauropsids to mammals and back: New approaches to comparative cortical development. **J Comp Neurol** 524:630-645
- Martínez-Garay I, [García-Moreno F](#), Vasistha N, Marques-Smith A, Molnár Z (2015). In utero electroporation methods in the study of cerebral cortical development. In: “Prenatal and Postnatal Determinants of Brain Development – Recent Studies and Methodological Advances”. **Springer Book DOI: 10.1007/978-1-4939-3014-2_2**

Montiel JF, Wang WZ, Oeschger FM, Hoerder-Suabedissen A, Tung WL, García-Moreno F, Holm IE, Villalón A, Molnár Z (2010) Hypothesis on the dual origin of the mammalian subplate. Review article for **Frontiers in Neuroanatomy**. Special Issue on "Adaptive function and brain evolution" ECCN6

De Carlos JA and García-Moreno F (2009) Tangential cell movements during early telencephalic development. In: "From development to degeneration and regeneration of the nervous system". Charles E. Ribak, Carlos Aramburo de la Hoz, Edward G. Jones, Jorge A. Larriva-Sahd and Larry W. Swanson (Eds.). **Oxford University Press**.

INVITATIONS TO CONFERENCES

"Developmental divergences that promoted the evolutionary origin of the neocortex" at **CABD** (Sevilla). 20 September 2019 - Madrid - Spain.

"Developmental convergence of high order sensory circuits in the amniote pallium" at European Conference on Comparative Neurobiology (**9ECCN**). 24-26 Apr 2019 - Murcia, Spain (International).

"Developmental divergences that promoted the evolutionary origin of the neocortex" at **BCBL** (San Sebastián). 28 February 2019 - Madrid - Spain.

"Changes in Brain Development that Promoted the Evolutionary Origin of the Neocortex" at Facultad de Medicina, **Universidad Autónoma de Madrid**. 19 November 2018 - Madrid - Spain.

"Changes in brain development that propelled the evolution of the neocortex" at **FENS Brain Conference** on Cortex Evolution and Development, 24-27 September 2017 - Copenhagen, Denmark (International).

"Lack of tangentially migrating glutamatergic neurons in the developing avian brain" at **Cortical Development meeting**, 17-20 May 2017 - Chania Greece (International).

"Changes in brain development that propelled the evolution of the neocortex" at **Kyoto Prefectural University** of Medicine. 25 Jul 2016 - Kyoto, Japan.

"Substantial lack of pallial tangential migration during avian brain development" at European Conference on Comparative Neurobiology (**8ECCN**). 7-9 Apr 2016 - Munich, Germany (International).

"Development and evolution of the corpus callosum" at Cortical Evolution Conference. 18-20 May 2015 - Toledo, Spain (International).

"Divergent neurogenesis and neuronal migration during the evolution of the neocortex" at Neural Circuits symposium, Sussex Neuroscience. 6 May 2015 - Brighton, United Kingdom (National).

"Evolution of cortical development" at *Development, Functions and Disorders of the Nervous System* - 20th International Society of Developmental Neuroscience (**ISDN**). 19-24 July 2014 - Montreal, Canada (International).

"CLoNe is a new method to target single progenitors and study their progeny in mouse and chick" at 14th Human Frontiers Science Program (**HFSP**) Awardees Meeting. 6-9 July 2014. Lugano, Switzerland (International).

"Increased diversity of neocortical stem progenitors" at Oxford Stem Cells Institute (**OSCI**) Annual Symposium. 20th March 2014. Oxford, United Kingdom (National).

"Understanding the evolution of the neocortex through transcriptomic and clonal analyses" at Christmas Meeting 2013. 19th December 2013. Instituto de Neurociencias de Alicante, Spain (International).

ABSTRACTS (2010-2019)

Rueda-Alaña E, Encinas JM, García-Moreno F (2018) "Birth-seq, a new method to isolate dividing or dated cells" at Neurogune 2018, 7 Sept 2018 - Vitoria, Spain (National).

Ftara A, Gallego-Flores T, Rueda-Alaña E, Encinas JM, García-Moreno F (2018) "Chronological construction of high order sensory processing circuits in embryonic birds" at Cortical Evolution Conference. 4-6 Jun 2018 - Las Palmas, Spain (International).

García-Moreno F, Anderton E, Krolak M, Martinez-Garay I, Molnar Z (2016) Crucial tangential contributions for the developing neocortex are lacking in avian brains. 39th International Japanese Neuroscience Society (**JNSS**) conference (Yokohama -Japan). International.

García-Moreno F, Anderton E, Krolak M, Martinez-Garay I, Molnar Z (2016) Substantial lack of pallial tangential migration during avian brain development. 21st International Society of Developmental Neuroscience (**ISDN**). Nice (France). International.

García-Moreno F, and Molnar Z (2014) Selective contribution of a subset of Emx2-expressing early radial glial cells to the development of the murine upper cortical layers. Cortical Development Conference 2014 - Neural Stem Cells to Neural Circuit. Chania (Greece). International.

García-Moreno F, Begbie J and Molnar Z (2013) Comparisons of clones derived from single pallial progenitors in chick and mouse. 7th

European Conference on Comparative Neurobiology (ECCN). Budapest (Hungary). International.

García-Moreno F, Molnar Z (2012) A novel lineage tracing method from single cortical progenitors in vivo based on multiple arrested fluorophores and Cre-recombinase. 8th FENS Forum of Neuroscience, Barcelona (Spain). International.

Wang WZ, Oeschger F, Montiel JF, García-Moreno F, Hoerder-Suabedissen A, Krubitzer L, Karlen SJ, Bayatti N, Clowry G, Molnár Z (2010) The subplate as a developmental target for neocortical evolution. Anatomical Society Winter Meeting 2010. Oxford (United Kingdom). International.

Hoerder-Suabedissen A, Kousha O, García-Moreno F, Molnár Z (2010) GFP-expression in subplate cells in the Edg2-GFP and CTGF-GFP mouse. Anatomical Society Winter Meeting 2010. Oxford (United Kingdom). International.

TEACHING AND MENTORING EXPERIENCE

- **Supervision of PhD student Miss Eneritz Rueda-Alaña, funded by Gobierno Vasco Predoctoral Fellowship (2018-2021) at Achucarro Basque Center for Neuroscience (Bilbao – Spain).**
 - Supervision of International student Miss Rosana Reyes Pinto, from Universidad de Chile, in a 3-month research visit at Achucarro BCN (Bilbao – Spain).
 - Supervision of Masters in Neurosciences (UPV/EHU) students Miss Artemida Ftara, (2016-2017) and Miss Macarena Erviti Lara (2018-2019) at Achucarro BCN.
 - Laboratory supervision of Erasmus students Marta Krolak (from Warsaw, Poland) and Elia Sanchez (From Universidad de Barcelona – Spain).
 - Supervision of Mr. Edward Anderton (Oriol College), undergraduate Research Project for Biochemistry projects (Part II). “*The role of Dbx1 and the ventral pallium in the evolution of the forebrain*”; Univ. Oxford.
 - Supervision of Miss. Rosina Savisaar (St Cross College), Masters in Neuroscience Wellcome Trust Research Project 2013 “*Looking for migrating interneurons in the embryonic chick forebrain*”; University of Oxford. Miss. Savisaar is currently a PhD student in University of Bath (United Kingdom).
 - Supervision of Mr. Miklos Perenyi (Queens College), undergraduate Research Project for the 2012 Final Honour Schools in Medical Sciences and Biomedical Sciences (Neuroscience or Cell & Systems Biology) “*The Inner Fibre Layer in pig embryonic brains*”; University of Oxford.
 - Supervision of graduate and undergraduate students from Univ. Jiao Tong, People’s Republic of China. “*In ovo electroporation of chick embryos*”. 2012.
 - Supervision of undergraduate Final Research Projects for Universidad Complutense de Madrid (Spain):
 - Dr Ana Benito-González (2004-2005, current Postdoctoral fellow at Johns Hopkins University, Baltimore, Maryland, United States).
 - Ángel Bardasco Blázquez (2007-2008).
 - Dr María Pedraza Botí (2008-2009) (current Postdoctoral fellow on Prof. Milos Pekny’s laboratory, University of Gotheburg, Sweden).
 - Eventual participation in Final Honour School Lectures “Evolutionary developmental biology” (2011-14); 3rd year Medical school - University of Oxford.
 - Teaching assistant at practical sessions of Human Neuroanatomy (2015); 2nd year Medical School – University of Oxford
 - Contribution to several local meetings and symposia such as *Development and Reproduction Meeting* (16th October 2013) “Clonal analysis of forebrain progenitors during evolution”; Department of Physiology, Anatomy and Genetics; University of Oxford.

DISSEMINATION ACTIVITIES

- Scientific organization of the national meeting of the Spanish Society for Developmental biology (SEDB), to be held in Bilbao (Spain; 18th-20th Nov 2020).
- **Management and organization of the symposium “New views on the development and evolution of the forebrain” in 18th SENC Biannual Conference (Santiago de Compostela, Spain; 5th September 2019).** <https://www.congresosenc.es>
- Organization of the satellite symposium “*XI Meeting of the Red NeuroEvoDevo Pedro Ramón y Cajal*” in 18th SENC Biannual Conference (Santiago de Compostela, Spain; 4th September 2019).
- Organization and presentation of Cajal Institute’s research to the general public in “Madrid Semana de la Ciencia”, 2006-2008 (Spain, “*Madrid Week for the Science*”). <http://www.madrimasd.org/SemanaCiencia/2013/que-es-semana-ciencia/default.aspx>
- Divulging seminars to high school students in Madrid (Spain), 2006-2008: “*Get to know your brain*” and “*The effects of drugs on your brain*”.

MEMBERSHIPS TO PROFESSIONAL SOCIETIES

- Spanish Society of Developmental Biology (SEBD)
- British Society for Developmental Biology (BSDB)
- Spanish Society for Neurosciences (SENC)
- Human Frontiers Science Program Organization (HFSP)
- Society for Neurosciences (SfN)
- Federation of European Neuroscience Societies (FENS)