

Curriculum Vitae **Francesc R. Garcia-Gonzalo, Ph.D.**

Born: June 10, 1976, Barcelona, Spain

Alberto Sols Biomedical Research Institute CSIC-UAM
Department of Biochemistry (Lab C-11), UAM School of Medicine
C/ Arzobispo Morcillo, 4; 28029 Madrid, Spain
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Lab Website: www.garcia-gonzalo.com



Education and Professional Experience

- | | |
|---------------------|--|
| Nov 2015 - present | Ramon y Cajal Investigator
Department of Biochemistry, School of Medicine, UAM &
Alberto Sols Biomedical Research Institute CSIC-UAM (IIBM) &
La Paz University Hospital Research Institute (IdiPAZ) |
| Mar 2008 – Oct 2015 | Postdoctoral Fellow (Associate Specialist since 03/2014)
Department of Biochemistry and Biophysics
University of California, San Francisco (UCSF)
Supervisor: Dr. Jeremy F. Reiter |
| Sep 2006 – Feb 2008 | Postdoctoral Fellow
Gene Expression Laboratory
The Salk Institute for Biological Studies (La Jolla, USA)
Supervisor: Dr. Juan Carlos Izpisua Belmonte |
| Jul 2005 – Sep 2006 | Postdoctoral Fellow
Cell and Developmental Biology
University of California, San Diego (UCSD)
Supervisor: Dr. Vivek Malhotra |
| June 2005 | Ph.D. in Biochemistry (“Summa Cum Laude”)
Dissertation: “ <i>Functional Characterization of the HERC1 protein</i> ”
University of Barcelona |
| Jan 2001 – Apr 2001 | Visiting Ph.D. Student
Institute for Biochemistry and Endocrinology
Justus Liebig University (Giessen, Germany)
Supervisors: Dr. Erich Eigenbrodt & Dr. Sybille Mazurek |
| Jan 1999 – Jun 2005 | Ph.D. Student
Department of Physiological Sciences II
University of Barcelona
Supervisor: Dr. Jose Luis Rosa |
| Sep 1998 – Jan 1999 | Associate Researcher
Bellvitge University Hospital (Hospitalet, Spain)
Supervisors: Dr. Jose M. Caminal & Dr. Jose L. Rosa |
| June 1998 | Degree in Biochemistry with Highest Honors
Faculty of Sciences
Autonomous University of Barcelona |
| Sep 1997 – Jun 1998 | Undergraduate Research Assistant
Institute for Biotechnology and Biomedicine
Autonomous University of Barcelona
Supervisor: Dr. Enrique Querol |

Teaching Experience

Nov 2015 - present

Ramon y Cajal Investigator

Department of Biochemistry, School of Medicine, UAM

- Regular participation in teaching following subjects:

- Degree in Biochemistry:
 - Cellular Control and Organization I (3rd year)
 - Animal Developmental Biology (4th year)
 - Experimental Design & Execution (4th year)
 - Final Degree Project (4th year)
- Degree in Medicine:
 - Biochemistry & Molecular Biology (1st year)
 - Human Biochemistry & Biophysics (2nd year)
 - Introduction to Biomedical Research (3rd year)
- Master's Degree in Molecular Biomedicine:
 - Critical Analysis of Scientific Literature (Coordinator)
- Master's Degree in Biotechnology:
 - Critical Analysis of Scientific Literature (Coordinator)
 - Genetic & Protein Engineering
 - Final Master Project
- Master's Degree in Biomolecules & Molecular Dynamics:
 - Critical Analysis of Scientific Literature (Coordinator)
 - Final Master Project

- Direction of Final Degree and Final Master Projects:

- Final Degree Projects:
 - Carmen Palomino Cano (Biochemistry, UAM, 2020)
 - Aline Brillouet (Biology, U.Hasselt, Belgium, 2019)
 - Estela Méndez Jiménez (Biology, UAH, 2019)
 - Paula Moreno de la Cruz (Biology, UAH, 2018)
 - Inés Palacios Blanco (Biochemistry, UAM, 2018)
 - Kimberly Rodríguez Herrera (Biology, UAH, 2017)
 - Paula Pereira Bouzas (Biology, UCM, 2017)
 - Darío Cilleros Rodríguez (Biochemistry, UAM, 2017)
 - Leticia Gallego Colastra (Biochemistry, UAM, 2017)
- Final Master Projects:
 - Paula Moreno de la Cruz (Drug targets, UAH, 2019)
 - Darío Cilleros Rodríguez (Biomedicine, UCM, 2018)

Sep 2008 – Mar 2013

Postdoctoral Fellow

Department of Biochemistry and Biophysics (UCSF)

Mentored rotation students from TETRAD and BMS graduate programs at UCSF (Laura Yee, Elle Roberson & Christina Hueschen)

Sep 2003 – Jun 2004

Assistant Professor in Biochemistry (non-tenure track)

Department of Physiological Sciences II

School of Medicine and Dentistry, University of Barcelona

Sep 2000 – Jun 2003

Assistant Organizer and Teacher of Lab Practicals

Department of Physiological Sciences II

School of Medicine and Dentistry, University of Barcelona

Research Grants

Jun 2020 – May 2024

MICINN Research Grant

Participation as: Principal Investigator

Source: Spanish Ministry of Science and Innovation (MICINN)

Title: Tuning the Cell's Antenna: Molecular Mechanisms of

Primary Cilia Composition
Reference: PID2019-104941RB-I00
Amount: 145,200 euros

Jan 2016 – Dec 2020

MINECO/FEDER Research Grant
Participation as: Principal Investigator
Source: Spanish Ministry of Economy and Competitiveness (MINECO)
Title: Regulation of Ciliary Function by Phosphoinositides
Reference: SAF2015-66568-R
Amount: 242,000 euros

Nov 2015 – Oct 2020

Ramón y Cajal Investigator Grant
Participation as: Principal Investigator
Source: Spanish Ministry of Economy and Competitiveness (MINECO)
Title: Molecular Mechanisms of Primary Cilia Function
Reference: RYC-2013-14887
Amount: 40,000 euros (+salary)

Scholarships

Nov 2015 – Mar 2021

Ramon y Cajal Investigator Scholarship
Ministry of Economy & Competitiveness
Government of Spain

Jul 2006 – Jun 2008

Postdoctoral Grant
Ministry of Education & Science
Government of Spain

Jan 2003 – Jun 2005

Ramon Areces Predoctoral Fellowship
Fundación Ramón Areces, Spain

Jan 1999 – Dec 2002

FPU Predoctoral Fellowship
Regional Government of Catalonia, Spain

Research Assessment

2019-2021

Peer Reviewer for Scientific Journals:
Science Advances
Journal of Cell Biology
eLife
Cancers
Antioxidants
Cell Biology and Toxicology
Journal of Clinical Medicine
Clinical and Translational Medicine

2020-2021

Guest Editor for Scientific Journal:
Frontiers in Cell and Developmental Biology

2017-2020

Reviewer for Government of Spain:
National Assessment & Forecasting Agency (ANEP)
Ministry of Economy, Industry & Competitiveness

2016-2020 **Reviewer for Government of Uruguay:**
National Research Agency (ANII) &
Sectorial Committee for Scientific Research (CSIC)

2020 **Reviewer for Government of the Czech Republic:**
Czech Science Foundation (GACR)

Language Skills

English	Proficient	<i>Certificate of Proficiency in English</i> , Cambridge University, UK
Spanish	Proficient	Native language
Catalan	Proficient	Native language
German	Upper-intermediate	Level 5 of 6 (University of Barcelona, School of Modern Languages)
French	Intermediate	Level 2 of 6 (University of Barcelona, School of Modern Languages)

Publication List

2021

- Barbeito P and **Garcia-Gonzalo FR** (2021) *HTR6 and SSTR3 targeting to primary cilia*. *Biochemical Society Transactions* 49:79-91.
- Barbeito P, Tachibana Y, Martin-Morales R, Moreno P, Mykytyn K, Kobayashi T and **Garcia-Gonzalo FR** (2021) *HTR6 and SSTR3 ciliary targeting relies on both IC3 loops and C-terminal tails*. *Life Science Alliance* 4:e202000746.

2020

- Montes-Fernández MA, Pérez-Villegas EM, **Garcia-Gonzalo FR**, Pedrazza L, Rosa JL, de Toledo GA, Armengol JA (2020) *The HERC1 ubiquitin ligase regulates presynaptic membrane dynamics of central synapses*. *Scientific Reports* 10:12057.
- Martin-Hurtado A, Lastres-Becker I, Cuadrado A and **Garcia-Gonzalo FR** (2020) *NRF2 and primary cilia: an emerging partnership*. *Antioxidants* 9:475.

2019

- Martin-Hurtado A, Martin-Morales R, Robledinos-Anton N, Blanco R, Palacios-Blanco I, Lastres-Becker I, Cuadrado A and **Garcia-Gonzalo FR** (2019) *NRF2-dependent gene expression promotes ciliogenesis and Hedgehog signaling*. *Scientific Reports* 9:13896.

2018

- Raleigh DR, Sever N, Choksi PK, Sigg MA, Hines KM, Thompson BM, Elnatan D, Jaishankar P, Bisignano P, **Garcia-Gonzalo FR**, Krup AL, Eberl M, Wong SY, Renslo AR, Grabe M, McDonald JG, Xu L, Beachy PA and Reiter JF (2018) *Cilia-associated oxysterols activate Smoothed*. *Molecular Cell* 72:316-327.

2017

- **Garcia-Gonzalo FR** and Reiter JF (2017) *Open sesame: how transition fibers and the transition zone control ciliary composition*. *Cold Spring Harb Perspect Biol* 9:a028134.

2016

- Li C, Jensen VL, Park K, Kennedy J, **Garcia-Gonzalo FR**, Romani M, De Mori R, Bruel AL, Gaillard D, Doray B, Lopez E, Rivière JB, Faivre L, Thauvin-Robinet C, Reiter JF, Blacque OE, Valente EM and Leroux MR (2016) *MKS5 and CEP290 dependent assembly pathway of the ciliary transition zone*. PLoS Biology 14:e1002416.

2015

- Yee LE, **Garcia-Gonzalo FR (Co-First Author)**, Bowie RV, Li C, Kennedy J, Ashrafi K, Blacque OE, Leroux MR and Reiter JF (2015) *Conserved genetic interactions between ciliopathy complexes cooperatively support ciliogenesis*. PLoS Genetics 11:e1005627.
- **Garcia-Gonzalo FR**, Phua SC, Roberson EC, Garcia III G, Abedin M, Schurmans S, Inoue T and Reiter JF (2015) *Phosphoinositides regulate ciliary protein trafficking to modulate Hedgehog signaling*. Developmental Cell 34:400-409.
- Roberson EC, Dowdle WE, Ozanturk A, **Garcia-Gonzalo FR**, Li C, Halbritter J, Elkhartoufi N, Porath JD, Cope H, Ashley-Koch A, Gregory S, Thomas S, Sayer JA, Saunier S, Otto EA, Katsanis N, Davis EE, Attié-Bitach T, Hildebrandt F, Leroux MR and Reiter JF (2015) *TMEM231, mutated in orofacioidigital and Meckel syndromes, organizes the ciliary transition zone*. Journal of Cell Biology 209:129-142.

2012

- **Garcia-Gonzalo FR** and Reiter JF (2012) *Scoring a backstage pass: mechanisms of ciliogenesis and ciliary access*. Journal of Cell Biology 197:697-709.

2011

- **Garcia-Gonzalo FR**, Corbit KC, Sirerol-Piquer MS, Ramaswami G, Otto EA, Noriega TR, Seol AD, Bennett CL, Robinson JF, Josifova DJ, García-Verdugo JM, Katsanis N, Hildebrandt F and Reiter JF (2011) *A Transition Zone Complex Regulates Mammalian Ciliogenesis and Ciliary Membrane Composition*. Nature Genetics. 43: 776-784.
- Sang L, Miller JJ, Corbit KC, Giles R, Brauer M, Otto EA, Baye LM, Wen X, Scales SJ, Kwong M, Huntzicker EG, Sfakianos MK, Sandoval W, Bazan JF, Kulkarni P, **Garcia-Gonzalo FR**, Seol AD, O'Toole JF, Held S, Reuther HM, Lane WS, Rafiq MA, Noor A, Ansar M, Rama Devi AR, Sheffield VC, Slusarski DC, Vincent JB, Doherty DA, Hildebrandt F, Reiter JF and Jackson PK (2011) *Mapping the NPHP-JBTS-MKS Protein Network Reveals Ciliopathy Disease Genes and Pathways*. Cell 145:513-528.

2008

- **Garcia-Gonzalo FR** and Izpisua Belmonte JC (2008) *Albumin-associated lipids regulate human embryonic stem cell self-renewal*. PLoS One 3(1):e1384.
- Hadjebi O, Casas-Terradellas E, **Garcia-Gonzalo FR** and Rosa JL (2008) *The RCC1 superfamily: from genes, to function, to disease*. Biochimica et Biophysica Acta 1783: 1467-1479.

2006

- Casas E, **Garcia-Gonzalo FR**, Hadjebi O, Bartrons R, Ventura F and Rosa JL (2006) *Simultaneous electrophoretic analysis of proteins of very high and low molecular weights*. Electrophoresis 27:3935-3938 (see associated patent below).
- Chong-Kopera H, Inoki K, Li Y, Zhu T, **Garcia-Gonzalo FR**, Rosa JL and Guan KL (2006) *TSC1 stabilizes TSC2 by inhibiting the interaction between TSC2 and the HERC1 ubiquitin ligase*. Journal of Biological Chemistry 281:8313-8316.

2005

- **Garcia-Gonzalo FR** and Rosa JL (2005) *The HERC proteins: functional and evolutionary insights*. Cellular and Molecular Life Sciences 62:1826-1838.
- **Garcia-Gonzalo FR**, Bartrons R, Ventura F and Rosa JL (2005) *Requirement of phosphatidylinositol-4,5-bisphosphate for HERC1-mediated guanine nucleotide dissociation from ARF proteins*. FEBS letters 579:343-348.

2004

- **Garcia-Gonzalo FR**, Muñoz P, González E, Casaroli-Marano RP, Vilaró S, Bartrons R, Ventura F and Rosa JL (2004) *The giant protein HERC1 is recruited onto aluminum fluoride-induced actin-rich surface protrusions in HeLa cells*. FEBS letters 559:77-83.

2003

- **Garcia-Gonzalo FR**, Cruz C, Muñoz P, Mazurek S, Eigenbrodt E, Ventura F, Bartrons R and Rosa JL (2003) *Interaction between HERC1 and M2-type pyruvate kinase*. FEBS letters 539:78-84.

Book Chapters

2017

- **Garcia-Gonzalo FR** and Reiter JF (2017) *Open sesame: how transition fibers and the transition zone control ciliary composition*. Cilia (pp. 91-110). Edited by W. Marshall & R. Basto. Cold Spring Harbor Laboratory Press, New York.

1998

- Querol E, Pons J, Cedano J, Vallmitjana M, **Garcia F**, Bonet C, Pérez-Pons J, Planas A and Mozo-Villarías A (1998) *Protein engineering for thermostabilisation of proteins: some theoretical rules and application to a β -glucanase*. Stability and Stabilization of Biocatalysts (Progress in Biotechnology, Vol. 15, pp. 303-310). Edited by A. Ballesteros, F.J. Plou, J.L. Iborra, P.J. Halling. Elsevier, Amsterdam.

Patents

2006

- Casas-Terradellas E, **Garcia-Gonzalo FR**, Hadjebi O, Bartrons R, Ventura F, Rosa JL. *Gel for the electrophoretic separation of very high molecular weight proteins*. Application number: 0300E-41054, Priority date: 09/22/2006, University of Barcelona.

Invited Talks

2019	International Conference on Cilia, Flagella and Centrosomes Imagine Institute Paris, France
2017	Bellvitge Institute of Biomedical Research (IDIBELL) University of Barcelona Hospitalet, Spain
2014	Institute of Biomedicine in Valencia (IBV-CSIC)

Spanish National Research Council (CSIC)
Valencia, Spain

- 2014 Alberto Sols Biomedical Research Institute (IIBM)
Spanish National Research Council (CSIC) & UAM
Madrid, Spain
- 2014 Institute of Cellular Physiology (IFC)
National Autonomous University of Mexico (UNAM)
Mexico City, Mexico
- 2013 Developmental and Stem Cell Biology Retreat
University of California, San Francisco
Tomales Bay, USA
- 2013 FASEB Meeting on the Biology of Cilia and Flagella
Federation of American Societies for Experimental Biology (FASEB)
Niagara Falls, USA
- 2013 Departments of Physiology and Cell Biology
School of Biological Sciences, Pontifical Catholic University of Chile
Santiago, Chile
- 2012 52nd ASCB Meeting
American Society for Cell Biology (ASCB)
San Francisco, USA
- 2011 Department of Physiological Sciences II
School of Medicine and Dentistry, University of Barcelona
Hospitalet, Spain
- 2011 Cardiovascular Research Institute
University of California, San Francisco
San Francisco, USA
- 2010 Developmental Biology Retreat
University of California, San Francisco
Tomales Bay, USA
- 2004 12th Joint Seminars of the Catalan Society of Biology
Institute for Catalan Studies
Barcelona, Spain
- 2001 Institute for Biochemistry and Endocrinology
Justus Liebig University
Giessen, Germany

Poster Presentations

- 2019 Title: *Molecular mechanisms of INPP5E-dependent cilia disassembly.*
Authors: Sierra-Rodero MB, Cilleros D & **Garcia-Gonzalo FR**
Meeting: 42nd SEBBM Meeting
Venue: Madrid, Spain
- 2019 Title: *Identification of primary cilia targeting sequences in HTR6 and SSTR3.*
Authors: Barbeito P, Moreno P, Martin-Morales R, Sierra-Rodero MB & **Garcia-Gonzalo FR**
Meeting: 6th UAM Symposium on Biomedical Research (Advances and Perspectives in
Molecular Endocrinology)
Venue: Madrid, Spain

- 2018 Title: *Htr6 contains a second ciliary targeting sequence in its C-terminal tail.*
Authors: Barbeito P, Moreno P, Martin-Morales R, Sierra-Rodero MB, Mykytyn K & **Garcia-Gonzalo FR**
Meeting: EMBO Workshop Cilia 2018
Venue: Copenhagen, Denmark
- 2017 Title: *Regulation of INPP5E ciliary localization by phosphorylation.*
Authors: Sierra-Rodero MB, Cilleros-Rodriguez D, Martin-Morales R, Barbeito P & **Garcia-Gonzalo FR**
Meeting: ASCB/EMBO 2017 Meeting
Venue: Philadelphia, USA
- 2016 Title: *Hsd11 β 2 is enriched in medulloblastoma and generates ciliary oxysterols to stimulate Hedgehog signaling.*
Authors: Raleigh D, Sever N, Sigg MA, **Garcia-Gonzalo FR**, Choksi PK, Hines KM, Choksi SP, Krup AL, McDonald JG, Xu L, Beachy PA & Reiter JF
Meeting: Annual Meeting of the American Society for Radiation Oncology (ASTRO)
Venue: Boston, USA
- 2015 Title: *Keeping out the ruffles: Inpp5e depletes PI(4,5)P2 in primary cilia to eliminate F-actin dynamics and achieve cilia stability.*
Authors: Phua SC, **Garcia-Gonzalo FR**, Reiter JF & Inoue T
Meeting: Biology of Cilia and Flagella (FASEB meeting)
Venue: Snowmass, CO, USA
- 2013 Title: *Is Phosphatidylinositol-4-phosphate involved in mammalian Hedgehog signaling?*
Authors: **Garcia-Gonzalo FR**, Reiter JF
Meeting: Biology of Cilia and Flagella (FASEB meeting)
Venue: Niagara Falls, NY, USA
- 2011 Title: *A transition zone complex of MKS and JBTS proteins regulates ciliogenesis and ciliary traffic*
Authors: **Garcia-Gonzalo FR**, Corbit K, Sierrol-Piquer MS, Yee L, Ramaswami G, Otto E, Noriega T, Seol A, Robinson J, Bennet C, Josifova D, Geimer S, Garcia-Verdugo JM, Katsanis N, Hildebrandt F, Reiter JF
Meeting: 51st ASCB Meeting
Venue: Denver, CO, USA
- 2010 Title: *Tectonic1 is required for ciliary membrane protein targeting*
Authors: **Garcia-Gonzalo FR**, Corbit K, Sierrol MS, Garcia-Verdugo JM, Katsanis N, Reiter JF
Meeting: FASEB Meeting on the Biology of Cilia and Flagella
Venue: Saxton Rivers, VT, USA
- 2006 Title: *Interaction between HERC1 and the TSC1/TSC2 complex*
Authors: Casas E, Hadjebi O, **Garcia-Gonzalo FR**, Bartrons R, Ventura F, Rosa JL
Meeting: 46th ASCB Meeting
Venue: San Diego, CA, USA
- 2004 Title: *HERC1 is a phosphatidylinositol-3-phosphate-binding protein*
Authors: **Garcia-Gonzalo FR**, Casas E, Hadjebi O, Bartrons R, Ventura F, Rosa JL
Meeting: ELSO Meeting
Venue: Nice, France
- 2004 Title: *HERC1 is recruited onto actin protrusions induced by ARF6 activation*
Authors: **Garcia-Gonzalo FR** and Rosa JL
Meeting: 4th Dubrovnik Signaling Conference
Venue: Dubrovnik, Croatia
- 2003 Title: *HERC1 recruitment onto actin protrusions upon aluminum fluoride treatment*
Authors: **Garcia-Gonzalo FR**, Muñoz P, González E, Casaroli-Marano RP, Vilaró S, Ventura F and Rosa JL
Meeting: ELSO Meeting

- Venue: Dresden, Germany
- 2002 Title: *Interaction between the HECT and RCC1-like domain containing protein HERC1 and pyruvate kinase type M2*
Authors: **Garcia-Gonzalo FR**, Cruz C, Ventura F, Bartrons R, Mazurek S, Eigenbrodt E and Rosa JL
Meeting: ELSO Meeting
Venue: Nice, France
- 2001 Title: *Identification and characterization of interacting proteins with the HECT domain of HERC1*
Authors: **Garcia-Gonzalo FR**, Cruz C, Ventura F, Bartrons R, Eigenbrodt E, Rosa JL
Meeting: 27th FEBS Meeting
Venue: Lisbon, Portugal
- 1999 Title: *Involvement of p532/HERC1 protein in fluid phase endocytosis*
Authors: Casaroli-Marano RP, Cruz C, **Garcia-Gonzalo FR**, Ventura F, Bartrons R, Vilaró S and Rosa JL
Meeting: International Meeting on Protein and Membrane Transport
Venue: Göttingen, Germany

Scientific Memberships

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| American Society for Cell Biology (ASCB) | Since 2004 |
| Spanish Society for Biochemistry and Molecular Biology (SEBBM) | Since 2004 |

Science & Economics Courses

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| 2017 | Virtual Mises University
Mises Institute
Online course |
| 2016 | Summer University
<i>Instituto Juan de Mariana</i>
Lanzarote, Spain |
| 2013 | Scientific Leadership and Management
University of California, San Francisco
San Francisco, USA |
| 2007 | Molecular Embryology of the Mouse
Cold Spring Harbor Laboratory
New York, USA |
| 2004 | FEBS Lecture Course on Cellular Signaling
Federation of European Biochemical Societies (FEBS)
Dubrovnik, Croatia |
| 2003 | Innovation and Entrepreneurship
University of Barcelona
Barcelona, Spain |