

CURRICULUM VITAE

José Antonio Del Río Fernández, PhD

Born:

January 8th, 1964. Barcelona, Spain



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ScholarGPS: ID: 27009105673059

Personal Statement

José Antonio del Río has been working in the field of Developmental Neurobiology, Neuronal Regeneration, and Neurodegeneration for more than 35 years. After earning his PhD in 1994 from the University of Barcelona, he has held positions at various national and international universities and research centers, including the University of Valencia, the University of the Basque Country (Spain), and the Universities of Frankfurt and Freiburg (Germany), as well as at Bristol-Myers Squibb Pharma in Princeton, New Jersey, USA. Additionally, he has received numerous national awards, such as the Fundación Francisco Cobos CSIC Award in 2001, the Young Researcher Award from the Generalitat of Catalonia in 2003 and recently the highly competitive CaixaHealth Research Programme in 2019. He has authored over 170 articles in international scientific journals, including prestigious publications such as *Acta Neuropathologica*, *Nature Cell Biology*, *EMBO Journal*, *Progress in Neurobiology*, *Nature Communications*, *Scientific Reports*, *Journal of Neuroscience*, *Neuron*, *Development*, *Current Biology*, and *Nature*. It's noteworthy that the majority (over 70%) of these articles have been published in journals ranked in the top quartile. As a bibliometric measure, he has published numerous papers in peer-reviewed journals and books, with an *h*-index of 52 in Web of Science and 49 in Scopus, and 58 in Google Scholar, accumulating more than 9000 citations (WOS). In November 2022, José Antonio del Río was ranked 45rd among Spanish researchers in Neuroscience and 1280th among Spanish researchers (out of 70. 000 researchers across all disciplines). José Antonio del Río's commitment to student and postdoctoral training is evident in his career development of those who have worked in his group. José Antonio del Río has supervised 27 PhD theses (5 ongoing), overseen 28 Master's theses, and mentored 17 postdoctoral fellows. As a Principal Investigator (PI), he has successfully directed 21 national projects from competitive public calls, as well as funding from foundations and private sources, since 2005. Additionally, he has obtained 2 European grants, 2 MSC (Marie Skłodowska-Curie) actions, and participated in a collaborative action between Spain and Switzerland. José Antonio del Río is an esteemed member of the editorial boards of several journals, including *Frontiers in Molecular Neuroscience*, *Frontiers in Aging Neuroscience*, and *Cells*. Lastly, he was a founding member and coordinator of the Spanish Prion network and the XTReg network of regenerative Neuroscience in Catalonia. He is also an invited member of several scientific societies, including SEBBM, SENC, FENS, and Prionet Spain.

Education:

1982-1987: Graduate in Biology, University of Barcelona (4/4/1988)

1987: Master of Education of the University of Barcelona

1987-1994: Ph.D. in Biology, Cell Biology and Biochemistry Programme. University of Barcelona, Thesis Advisor: Eduardo Soriano (University of Barcelona), Title: Neurogenesis of interneurons in the neocortex and hippocampus. Qualification: *Excel.lent cum laude* and **Excellence Award of the University of Barcelona** to the Best Doctoral Thesis in Biology. (12/4/1994)

Research laboratories

1988: Institute of Histology. Faculty of Biology. University of Valencia (Spain). Advisor: Prof Carlos Lopez (5 months)

1988: Institute of Anatomy. Faculty of Medicine. University of Basque country (Spain). Advisor: Prof. Concepción Reblet (3 months)

1989: Institute of Anatomy (I), University of Frankfurt (Germany). Advisor: Prof. Michael Frotscher (8 months)

1990: Institute of Anatomy, University of Freiburg (Germany). Advisor: Prof. Michael Frotscher (5 months)

1994: Institute of Anatomy, University of Freiburg (Germany). Advisor: Prof. Michael Frotscher (16 months)

1996: Visiting Professor, Bristol-Myers Squibb, Princeton, New Jersey (USA). Advisors: Prof. Mariano Barbacid and Dr. Immaculada Silos-Santiago (5 months)

1988-2002: Developmental Neurobiology Lab. Department of Cell Biology, Faculty of Biology.

Status: Predoctoral Student (1988-1994) and Assistant Professor (1994-2002).

2002-2009: Developmental Neurociencies and Regeneration Lab. Parc Scientific of Barcelona, Institute for Research in Biomedicine – IRB. Status: Research Associate (2002-2006) and Tenure track (2006-2009).

2009 >: Molecular and Cellular Neurobiotechnology Lab. Institute for Bioengineering of Catalonia (IBEC). Status: Senior Group leader.

Academic appointments:

1988-1991: Collaborator in practical classes as graduate student. ISCIII fellow. 01/10/1989 - 30/09/1991

1991-1996: Assistant Professor. Dept. of Cell Biology. University of Barcelona. 01/10/1991 - 30/09/1996

1994: Visiting Professor. Institute of Anatomy. Freiburg, Germany.

1996: Visiting Professor. Bristol Myers Squibb. Princeton, USA.

1996-1997: Assistant professor LRU2. Dept. of Cell Biology. University of Barcelona. 01/10/1996 - 25/06/1997

1997- 2006: Associate Professor. Dept. of Cell Biology. University of Barcelona. 26/06/1997 - 20/02/2006

2006 >: Full Professor of Cell Biology. Dept. of Cell Biology, Physiology, and immunology. University of Barcelona. 21/02/2006

Teaching experience (Resume, * current, # coordinator):

Graduate Courses:

1988-1997: *Cytology and Histology* (practical laboratory), Faculty of Biology, University of Barcelona.

1991-1997: *Microscopic Anatomy* (practical laboratory), Faculty of Biology, University of Barcelona.

1997-1999: *Neurobiology* (practical laboratory), Faculty of Biology, University of Barcelona.

1997-1998: *Citology* (30 h/year and practical course), Faculty of Biology, University of Barcelona.

1997-2015: *Cell Biology* (60 h/year and practical course), Faculty of Biology, University of Barcelona.

2003-2012: *Neurobiology* (10 h/year), Faculty of Biology, University of Barcelona.

2012-2016: *Neurobiology* (5 h/year), Faculty of Biology, University of Barcelona.

2013-2015: *Histology* (15 h/year and practical courses), Faculty of Biology, University of Barcelona.

*** # 2011- today:** *Biomaterials and Nanotechnologies* (60 h/year and practical course, Faculty of Biology, University of Barcelona.

2012-2022: *Gene and Cellular therapy*, (20 h/year and practical course), Faculty of Biology, University of Barcelona.

*** 2022- today:** *Cell Biology*, (20 h/year and practical course), Faculty of Biology, University of Barcelona.

Postgraduate and Master Courses:

1990-2000: *Immunocytochemistry*, Faculty of Biology. University of Barcelona.

1999-2001: *Molecular Neurosciences*, Faculty of Medicine. Autonomous University of Barcelona.

1994-1996: *Cell Culture Techniques*, Faculty of Biology. University of Barcelona.

2010-2014: *Stem cells and tissue repair*, Master of Biomedicine, University of Barcelona.

2002-2018: *New insights on Cellular and Molecular Neuroscience* (12 h/year), International Master of Neuroscience. University of Pablo de Olavide, Sevilla.

*** # 2000- today:** *Neural Regeneration* (15 h/year). Master of Neuroscience, University of Barcelona.

*** 2000- today:** *Neurobiología de la Glía* (2 h/year) . Master of Neuroscience, University of Barcelona.

*** 2000- today:** *Cell and gene therapy* (5 h/year) Master of Molecular Biotechnology. University of Barcelona.

*** 2012- today:** *Patologies neurològiques i psiquiàtriques* (2 h/year). Master of Biomedicine. University of Barcelona.

*** 2014- today:** *Introduction to Medical Bioengineering* (3 h/year), International Master of Medical Bioengineering, UB-UPC.

*** # 2014- today:** *Neural Bioengineering* (35 h/year), International Master of Medical Bioengineering, UB-UPC.

Students:

Undergraduate students (TFGs students):

Victor Borrell (1994), Marta Solé (1998), Oriol Casanovas (1998), María Ángeles Carmona (2000), Xavier Fontana (2000), Alejandra Rangel (2004), Sara Rubio (2006), Fabiana Nuñez (2007), Oscar Seira (2006), Cristina León (2010), Jorge Sánchez (2010), Andreu Matamoros (2013), Anna Prieto (2014), Lorena Sureiro (2014), Laia Lidón (2015), Francina Mesquida (2016), Sara Alzina (2020). Ariadna Llop Peiró (2021). Neus Gil Sancho (2022-23), Harley Doyer (2023)*, Jordi Mascaró (2024). Tamara Brick (2025).

Master students (TFM) (* Erasmus / international students):

Antoni Homs (2010), Anna Gómez (2010), Cristina León (2010), Sara Nocentini (2010)*, Cristina Riggio (2011)*, Cristiana Ferreira (2012)*, Jorge Gómez (2012), Cristina Vergara (2013), Andreu Matamoros (2014), Ágata Mata (2014), Montserrat Salguero (2015), Anna Prieto (2015), Ana López Mengual (2015), Francina Mesquida (2016), Alicja Kosiorowska (2017)*. Julia Sala Jarque (2017), Nuria Planas (2019), Alessandra Speccher (2019)*, Evangelos Manousakis (2019)*. Berta Piqué (2020). María Sellés (2021). Lisa Pomp (2021-22)*. Rosa Buonamassa (2022)*. Antonio González Mas (2022). Eduardo Renato Yanac (2022)*. Sara Cruces (2022), Maria Katsiani (2022-23)*, Carmen Laura Frías (2023), Neus Gil Sancho (2023). Ingrid Andrea Sáez (2024)*.

PhD. Students (Shared responsibilities in red):	Postdoctoral contracts:
<p>Victor Borrell (1995-2001), <i>Excel.lent Cum laude</i> María José Barallobre (1999-2003) <i>Excel.lent Cum laude</i> Marta Solé (1999-2003) <i>Excel.lent Cum laude</i> Marisol Montolio (2000-2005) <i>Excel.lent Cum laude</i> Ana Mingorance-Le Meur (2002-2006) <i>Excel.lent Cum laude</i> Patricia Guijarro (1999-2006) <i>Excel.lent Cum laude</i> Xavier Fontana (2001-2007) <i>Excel.lent Cum laude</i> Oriol Nicolas (2004-2009) <i>Excel.lent Cum laude</i> Vanessa Gil (2004-2010) <i>Excel.lent Cum laude</i> Alejandra Rangel (2004-2009) <i>Excel.lent Cum laude</i> Oscar Seira (2007-2013) <i>Apto Cum laude</i> Sara Nocentini (2009-2014) <i>Excel.lent Cum laude</i> Patricia Carulla (2009-2014) <i>Excel.lent Cum laude</i> Diego Reginensi (2009-2015) <i>Excel.lent Cum laude</i> Cristina Vergara (2010-2015) <i>Excel.lent Cum laude</i> Ágata Mata (2014- 2017) <i>Excel.lent Cum laude</i> Laura Urrea (2015-2018) <i>Excel.lent Cum laude</i> Andreu Matamoros (2015-2019) <i>Excel.lent Cum laude</i> Laia Lidón (2016 - 2020) <i>Excel.lent Cum laude</i> Ana López Mengual (2017-2022) <i>Excel.lent Cum laude</i> Francina Mesquida (2017- 2022) <i>Excel.lent Cum laude</i> Julia Sala Jarque (2018 - 2023) <i>Excel.lent Cum laude</i> Karen Wells Cembrano (2019 - 2023) <i>Excel.lent Cum laude</i> Karolina Zimkowska (2021 >) <i>in progress</i> Dayaneth Jácome (2023 >) <i>in progress</i> Ines Martínez Soria (2023 >) <i>in progress</i> Renato Eduardo Yanac Huertas (2022 >) <i>in progress</i> Marc Riu Villanueva (2024 >) <i>in progress</i></p>	<p>Dr. Ferran Burgaya (1997-2000) MICINN Dr. Ashraf Muhaisen (2003-2004) MICINN Dr. Francesc Pérez (2004-2005) MICINN Dr. Rosalina Gavín (2003-2006) Juan de la Cierva Dr. Zoe Bichler (2006-2008) MICINN Dr. Ana Bribián (2007-2012) Sara Borrell Dr. Inmaculada Cobos (2007-2010) Marie Curie Dr. Franc Llorens (2010-2011) Juan de la Cierva Dr. Franc Llorens (2011-2013) FP7 Priority Dr. Silvia Vilches (2010-2012) Juan de la Cierva Dr. Vanessa Gil (2010-2013) MICINN Dr. Ariadna Pérez (2013-2015) MINECO Dr. Herena Reixarch (2013-2014) Sara Borrell Dr. Oscar Seira (2014) La Caixa Obra Social Dr. Vanessa Gil (2014-2016) Juan de la Cierva Dr. Vanessa Gil (2016-2019) MICINN Dr. Arnau Hervera (2017-2019) Juan de la Cierva Dr. Vanessa Gil (2019-2021) La Caixa Foundation Dr. Vanessa Gil (2021-2022) UBNeuro Dr. Alba Espargaró (2019) Marie Curie Dr. Amaya Hernández (2023-2024) RyC contract Dr. Pol Picón Pages (2023) Juan de la Cierva Dr. Pol Picón Pages (2023 >) Ciberned postdoc.</p>

Technician contracts:

Isabel Jiménez (2009-2010). Giovanna Tormén (2010-2012), Natalia Ruiz (2012). Miriam Segura (2013 >). Juan José López Giménez (2022 >).

Agreements with government institutions of education

Conveni de col·laboració per a la dormació pràctica en centres de treball.

Organization. Generalitat de Catalunya. Direcció general de formació Professional.

Recipient group: Molecular and Cellular Neurobiotechnology (IBEC)

Center: Institut Bonanova. Center Code: 8035039

Year / Student / Reference: **2012.** Miriam Segura Feliu. Reference 2012144847
2013. Dylan Juan Beckwith Gambin. Reference 2013169081
2015. Laura Vidal Gallegos. Reference 2014170940
2016. Daniel Albert Jares. Reference 2015182269
2017. Lorena Brun García. Reference 2016182455
2018. Oscar Garriga Monterde. Reference 2018186609

Center: Roger de Llúria. Center Code: 8035726

Year / Student / Reference: **2012.** Alejandro Palma Castillo. Reference 2011139825

Center: IQS. University Ramón Llull, **2019.** Roger Torra Raventós. Reference 2018169725

Center: Jesuïtes El Clot **2022.** Margarita Subiràs Aguiló. Reference 2021131835

Grants awarded (competitive projects between 2007-2023. * EU or USA):

* **2005-2007:** Spanish Ministry of Education and Science, Exploratory Grants with foreign groups with Switzerland. Intracellular signaling in prion diseases. Budget: 12.000 €. Reference: BFU-2004-365-E. Scientific in charge: **José A. del Río (Spain)** and **Adriano Aguzzi (Switzerland)**

2007-2009: Spanish Ministry of Education and Science. Funciones de nuevos genes candidatos y proteínas asociadas a mielina durante el desarrollo y regeneración de las conexiones corticales. Budget: 284.000 €. Reference: BFU2006-13651. Scientific in charge: **José A. Del Río**

* **2008-2011:** Marie Sklodowska-Curie actions. Differentiation of GABAergic interneuron subtypes in the mouse cerebral cortex (GABA cell types). Budget: 100.000 €. Reference: MIRG-CT-2007-210080. Scientific in charge: **José A. Del Río.**

* **2009-2015:** FP7 European grant PRÍORITY. Protecting the food chain of prions: Shaping European pRiorities through basic and applied research. Large scale Integrated Collaborative Project. Work Programme Topic addressed: KBBE-2007-2-4-06. Scientific in charge: Dr. **Jesús Requena** (USC, Santiago de Compostela, Spain)

Participation in the Project: **WP 4, UB-IBEC; P.I.: José A. del Río.** Budget: 217.000 € (seven-year project, 2009/2015)

2010-2013: Catalanian Science Agency, Support on Research groups of Catalunya, Budget: 70.720 €. Reference: SGR2009-0336. Scientist in charge: **José A. del Río**

2010-2012: Spanish Ministry of Economy and Competitiveness, Caracterización funcional de genes regulados durante la ontogenia del CNS en el desarrollo cortical y la regeneración axonal. Budget: 363.000 €. Reference: BFU2009-10848. Scientific in charge: **José A. Del Río**

2010-2013: Spanish Ministry of Economy and Competitiveness (Institute Carlos III), Biomarkers for Alzheimer's disease (intramural project of CIBERNED). Budget 2010-2013 (JADR): 65.000 €. Reference: PI2010/09-3. Coordinator: **Isidre Ferrer**

2013-2016: Spanish Ministry of Economy and Competitiveness, Nuevas funciones de PlexinD1/Sema3E, PrP^C y las proteínas asociadas a la mielina durante el desarrollo de la corteza cerebral de roedores y en neurodegeneración. Budget: 304.000 €. Reference: BFU2012-32617. Scientific in charge: **José A. Del Río**

2013-2015: Fundación Vasca de Innovación e Investigación Sanitarias, Estudio de la replicación "tipo prion" en modelos celulares obtenidos mediante la reprogramación de células somáticas de pacientes genéticamente susceptibles a la enfermedad de Alzheimer. Budget: 97.000 €. Reference: BIO12/AL/004. Scientific in charge: **Joaquín Castilla**

* **2012-2015:** Joint Programming of Neurodegenerative diseases (EU). Neurodegenerative disease Reseach. Funded by Horizon 2020 No 643417 and No 681043. Biomarkers of Alzheimer diseases and its harmonization in EU. Budget: 200.000 €. Reference: DEMTEST. Scientific in Charge: **Inga Zerr**. Participation in the Project: **WP 2, UB-IBEC; P.I.: José A. del Río**

2013-2015: Spanish Ministry of Economy and Competitiveness (Institute Carlos III, Ministry of Health). Biomarkers of Alzheimer diseases. Budget: 117.370 €. Reference: PI11/03028. Scientific in Charge: **Pascual Sánchez Juan**

2014-2016: Catalanian Science Agency, Support on Research groups of Catalunya, Budget: 50.370 €. Reference: SGR2014-1218. Scientist in charge: **José A. del Río**

2015-2017: Marató TV3 Foundation, Project number 392, Role of the cellular prion protein as "cross-talk" protein between alpha-syn/LRRK2 and p-Tau in sporadic and familiar Parkinson's disease. Budget: 196.000 €. Scientific in Charge: **José A. Del Río**

2015-2016: Spanish Ministry of Economy and Competitiveness (Institute Carlos III). Mecanismos epigenéticos implicados en la etiología y progresión de las Demencias Neurodegenerativas rápidamente progresivas. Budget: 252.074 €. Reference: P2014-2. Scientific Coordinator. **Miguel Calero**. Scientific in charge UB-IBEC: **José A. del Río**.

2016-2018: Gestión de Ayudas a la Investigación y Becas de la Fundación Bancaria "la Caixa"-Obra Social "la Caixa". Monitoring neurocognitive deficits in Alzheimer's and Parkinson's diseases using saliva or blood-derived biomarkers and a multiplexed approach. Budget: 40.000 €. Scientific in charge: **José A. del Río**

2016-2018: Spanish Ministry of Economy and Competitiveness. Red de Excelencia Nacional de Priones. Budget: 39.000 €. Reference: AGL2015-71764-REDT. Scientific in charge and coordinator: **José A. del Río**

2016-2019: Spanish Ministry of Economy and Competitiveness. Programa EXPLORA, Robots biológicos basados en el control de la unión neuromuscular. Budget: 55.000 €. Reference: TEC2015-72718-EXP. Scientifics in charge: Josep Samitier and **José A. del Río**

2016-2019: Spanish Ministry of Economy and Competitiveness, Funciones de genes implicados en angiogénesis y remodelación vascular durante el desarrollo cortical y en neurodegeneración. Budget: 290.400 €. Reference: BFU2015-6777-R. Scientific in charge: **José A. del Río**

2009-2022: Spanish Network of Neurodegenerative Diseases of the Ministry of Health (FIS). CIBERNED. Reference: P114. Budget: 395.400 €. Scientific in charge: **José A. del Río**

2015-2018 and 2019-2023. MCOC-Ministerio de Economía y Competitividad. Severo Ochoa Award. Reference: SEV-2014-0425 and CEX2018-000789-S). Budget: 4.000.000 €. Scientific in charge and coordinator: **Josep Samitier**. Status: Granted researcher and team member

2017-2019: Monitoring the Onset and Evolution of Neuronal Dysfunctions in Propagative Neural Disorders using Microfluidic Devices and Translational approaches. Budget: 210.000 €. Reference: CNED2016/2. Budget JA Del Río: 58.000 €. Coordinator: **José A. del Río**

2017-2020: Spanish Ministry of Economy and Competitiveness. Subvención para la contratación de investigadores dentro del Programa Juan de la Cierva. Budget: 70.000 €. Reference: IJCI-2016-30783. Scientific in charge: **José A. Del Río**.

2018-2020: Catalanian Science Agency, Support on Research groups of Catalunya, Reference: SGR2017-648. Budget: 20.000 €, Scientist in charge: **José A. del Río**

2019-2020: Spanish Ministry of Economy and Competitiveness. Red de Excelencia Nacional de Priones. Budget: 6.500 €. Reference: AGL2017-90665-REDT. Scientific in charge: **Joaquin Castilla**

2019-2020: Análisis celular y molecular de la siembra y progresión de tau en modelos animales y celulares de distintas tauopatías humanas. Budget: 146.000 €, Budget JA Del Río: 58.000 €. Reference: CNED2018/2. Scientifics in charge and coordinator: **Isidre Ferrer**

2019-2021. MCINN, MCINN/AEI/10.13039/501100011033/. Nuevas aproximaciones para entender las funciones de la PrP^C y miembros secretables de semaforinas durante el desarrollo del hipocampo y en neurotransmisión. PRPSEM. Reference: RTI2018-099773-B-I00. Budget: 271,000 €. Scientific in charge: **José A. del Río**

2019-2022. La Caixa Foundation. La Caixa "Health Programme". Modulation of Tau seeding and pathology in tauopathies by BBB-nanocarriers, epitope selective vaccination and ectoPrP receptor bodies. Reference: HR18-00452 "STOPTauPathol". Budget: Total amount 763,002 €. Budget JA Del Río: 249.000 €. Scientific in charge and coordinator of the project: **José A. del Río**

2020, 2021 and 2022. Universitat de Barcelona. Convocatoria del 2020-21-22 d'ajuts per a publicacions d'articles en revistes d'accés obert. Plan S-UB. Reference: Programa AR0RI003. Budget: 1396.55 €, 915 € and 1500 €. Scientific in charge: **José A. del Río**

2022-2024. Papel de los micro-RNAs circulantes como potenciales biomarcadores y dianas terapéuticas de la resistencia a la insulina y la enfermedad de Alzheimer. Budget: 280.000 €, Budget JA Del Río: 65.000 €. Reference: CNED2021/03-1, NED21PI02DR . Scientific in charge and coordinator: **José L. Cantero**

2022-2025. MICINN, MCINN/AEI/10.13039/501100011033. Descifrando las funciones de la proteína priónica celular (PrPC) y GPR133 en el desarrollo neuronal y la neurodegeneración (tauopatías). PRPDEVTAU. Reference: PID2021-123714OB-I00, Budget: 363.000 €. Scientific in charge: **José A. del Río**

2023-2025. MICINN. MCINN/AEI/10.13039/501100011033. Gamma-peptidos basados en cis-4-amino L-prolina como terapia farmacológica en la enfermedad de Alzheimer. ALZHEPEP Reference: PDC2022-133268-I00. Budget: 143.750 €. Scientific in charge: **José A. del Río**

2023-2025. Alzheimer's disease-modifying Nanomedicines. Plan Complementario de Biotecnología aplicada a la Salud. ADnano. Reference: A7333. Budget: 357.000 €. Budget JA Del Río: 50.000 €. Coordinator: **Giuseppe Battaglia**. Status: PI member of the consortium: **José A. del Río**. Other members: J. Samitier (IBEC), Alberto LLeó, Joan Fortea (Sant Pau Hospital), Carlos Saura (UAB) and Carlos Matute (Achucarro center for Brain Research, Vasque Country).

2023-2025. Métodos in vitro alternativos humanos para el estudio de enfermedades neurodegenerativas (AlterNED). Proyectos en líneas estratégicas 2022 (colaboración público-privada). Reference: PLEC2022-009401. Budget: 889.822 €. Coordinator: **Josep M. Canals**. Status: PI member of the consortium: **José A. del Río**. Budget: 130.647 €.

2023-2026. Catalanian Science Agency, Support on Research groups of Catalunya, Reference: SGR2021-00453. Budget: 40.000 €, Budget JA Del Río: 20.000 €. Scientist in charge: **José A. del Río**

1/2025-12/2025: Spanish Network of Neurodegenerative Diseases of the Ministry of Health (FIS). CIBERNED. Reference: NESDG114. Budget: 60.000 €. Scientific in charge: **José A. del Río**

2026-2028: Hipersincronía y desacoplamiento secuencial mediados por Tau en tauopatías primarias 4R: Conocimientos funcionales y bioquímicos e intervenciones genéticas y farmacológicas THRIVE. Reference: PID2024-162521OB-I00 Budget: 446.250 €. Scientific in charge: **José A. del Río (IP1) & Rosalía Gavín (IP2)**.

2026-2028: **NeuroAge**. Innovacio en Envelliment Saludable i Malalties Neurodegeneratives d'R+D+I Xarxes R+D+I de l'AGAUR. Reference: 2025 XARDI 00006. Budget: 872.050,00 €. Scientific in charge: Rafael Navajo del VIHR. PI from IBEC. **José A. del Río**

Honors, Awards and Administration (resume):

Honors and Awards:

1997. Excellence Ph.D. Award of the University of Barcelona.

2001. National scientific Award of the Fundación Francisco Cobos-CSIC (shared with Eduardo Soriano).

2003. Generalitat de Catalunya; Award to Young investigator in Life Science.

2004. Senior Research Award, AQU, Generalitat de Catalunya.

2004. Competitive Award as Full Professor in Cell Biology in Spain (*National Habilitation*), MEC

2006. Full Professor of Cell Biology at the University of Barcelona.

2014. Marató TV3 award of research.

2019. La Caixa Foundation, Neuroscience Research “CaixaHealth” Programme

2015 - 2023. Member of IBEC-Severo Ochoa Excellence Institute Award (CEX2018-000789-S).

2024 - 2027. Member of IBEC-Severo Ochoa Excellence Institute Award (CEX2023- 001282-S)

2017 - 2021. Member of UBNeuro-Maria de Maeztu Excellence Institute Award (MDM-2017-0729).

2022- 2025. Member of UBNeuro-Maria de Maeztu Excellence Institute Award (CEX2021- 001159-M)

2023. First laboratory in Spain with My Green Lab certification. <https://www.mygreenlab.org/green-lab-certification.html>

2023. Supervisor/Tutor UB of the First TFG Award Dra. Mercè Durfort in Biology to the student Mirela Rico Effect of Matrigel on Targeting 3D Bladder Cancer Spheroids with Urease- Powered Nanomotors”, of the Catalan Society of Biology. <https://scb.iec.cat/8a-edicio-dels-premis-de-la-scb/>

2024. First Autor of the most cited paper of the Catalan Society of Biology 1986-88 ([del Río et al., Nature 1997](#)), Ramón Turró award received by E. Soriano (CA). May29th 2024.

Editorial Board membership (last five years):

2020: Cells, Guest Editor: <https://www.mdpi.com/journal/cells>

2020: Review Editor, Frontiers in Aging Neuroscience, Aging Neuroscience archive and Alzheimer’s disease and related dementia. <https://loop.frontiersin.org/people/121815/overview>

2020: Review Editor, Frontiers in Molecular Neuroscience, Brain disease Mechanisms and Molecular Neuroscience Archive. <https://loop.frontiersin.org/people/121815/overview>

2022: Guest Editor “*Tau-Targeting Therapies for Neurodegenerative Diseases*” ISSN 2073-4409, Cells “Cellular Aging”

2024: Guest Editor “Cellular and Molecular Mechanisms Involved in Neurodegenerative Diseases” ISSN 2073-4409, Cells

Reviewer of the following Journals:

Journal of Neuroscience - Cell and Tissue Research - Journal of Neurochemistry - Journal of Neuroscience Methods - European Journal of Neuroscience - Neuroscience - Brain Research Reviews - Molecular Brain Research - Experimental Neurology - Prion - Molecular and Cellular Neuroscience - Developmental Neuroscience - Molecular Neurobiology - Plos One - BMC Biology - Glia - Scientific reports - Cerebral Cortex – Plos Pathogens - J Alzheimer’s Disease – Nature

Communications - Frontiers Aging Neuroscience - FASEB J – Neurobiology of Disease.

Scientific evaluation:

National evaluation (last 10 years):

(2013) Excellence Research Groups of Andalucía. DEVA. Agencia Andaluza del Conocimiento. Proyectos de Excelencia. (Ev. Committee).

(2012-2015) Adjunto de ANEP (Área de Biomedicina) para la evaluación de proyectos de Acciones estratégicas en Salud (AES). Área: 512 (Bioingeniería y terapia celular). Fondo de Investigaciones Sanitarias. Instituto Carlos III.

(2009-2017) Evaluador de DEVA, Agencia Andaluza del Conocimiento. Proyectos de Excelencia. (Ev. Committee).

(2018) Remote evaluator Fundación Tatiana Perez de Guzman el Bueno. Proyectos investigación.

(2016-2017) Spanish Ministry of Economy, Industry and Competitiveness. BFI2016 Program (Ev. Committee).

(2019) Remote evaluation AES (Instituto Carlos Tercero (ISCiii), Ministry of Health)

(2019) MICINN, Follow-up committee, Panel evaluator of BFI Programme (Ev. Committee).

(2019) Excellence Research Groups of Andalucía. DEVA. Agencia Andaluza del Conocimiento. Proyectos de Excelencia. Remote evaluator.

(2019) Remote evaluator of translational call of the Blood and Tissue Bank (BST) of the Hospital Clinic, Barcelona.

(2019) Remote evaluation: Proyectos de investigación en biomedicina y ciencias de la salud de la Fundación Instituto de Investigación Sanitaria de Canarias (FIISC). Resp. T. Montalban (Cidisalud)

(2020) Juan de la Cierva Programme (JdCI), BIO-BIOTEC Programme. (Ev. Committee).

(2021 >) Gestor de la Agencia Estatal de Investigación (AEI) (Subárea BIO-BIF).

(2022) IKUR-Neurobiocencias. Departamento de Educación del País Vasco. Resp. Iban Ubarretxena. Instituto Biofisika (CSIC, EHU/UPV) and Fundación Biofísica Bizkaia.

(2024) Excellence Research Groups of Andalucía. DEVA. Agencia Andaluza del Conocimiento. Proyectos de Excelencia. Remote evaluator.

International evaluation (from 2015):

(2024). National Science Centre Poland. Panel NZ7 (Diagnostic tools, therapies and public health). Resp. Jadwiga Spyrka.

(2024). ERC-ADG, LS9- Applied Life Sciences, Biotechnology and Molecular and Biosystems engineering. Resp. Lone Gram, invited.

(2024). Swiss National Science Foundation. Resp. Simona Berardi Vilei. Invited.

(2024). Fondazione Telethon ETS. Research Program. Resp. Irene Artuso, PhD

(2023). The DBT/Wellcome Trust India Alliance. Resp. Ariraa Lahiri.

(2023). HFSP. 2023 Research Grant awards from the Human Frontier Science Program Organization. Resp. Almut Kelber, Director of Research Grants. Invited.

(2022). MRC OFFICIAL: Scientific Review of the MRC Unit at UCL, Resp. H. Aplitz. Molecular and Cellular Medicine Board. Medical Research Council.

(2022). NWO the Dutch Research Council, Domain Science, Round Open Competition Domain Science package 21-5. Officer, Dr. dipl.-Ing. Olivia Muthsam.

(2020). Israel Science Foundation (ISF). Personal Research Grants. Officer, Daniel Zajfman

(2018). Fondation pour la Recherche Médicale. Equipes FRM 2018. Officer; Sarka Pavlickova.

(2017). Cyprus Research Promotion Foundation. Restart 2016-2020.

(2016). Sphere. International Postdoctoral young research program. Funded by Horizon 2020. UAB.

(2016). NC3R's – National Centre for the Replacement, Refinement and Reduction of Animals Research. Officer: Dr. Hazel McLaughlin.

(2015) Fundación Parkinson Schweiz. Swiss Parkinson Association (Schweizerische Parkinsonvereinigung).

Administration at the University:

(1995-2008) Member of the Animal Facility Committee, University of Barcelona,

(1997-2002) Responsible and coordinator of the Doctorate program of Cell Biology at the University of Barcelona.

(2009-2011) Member of the Academic Committee of the Faculty of Biology.

(2006-2012) Director of the Department of Cell Biology, Faculty of Biology. University of Barcelona.

(2013 >) Member of the Research Committee of the Faculty of Biology.

Organization of congresses and scientific meetings/workshops (last 5 years):

1. **PrionetSpain**, Institute for Bioengineering of Catalonia, 29 Nov 2016. Barcelona.

2. **6th Iberian prion congress**, Faculty of Veterinary. Cordoba 26-27 Oct 2017. Scientific Committee.

3. **7th Iberian prion congress**, La Guardia, Alava. 25-26 Oct 2018. Scientific Committee.

4. **Prion 2018**, World Congress of Prion Biology, Santiago de Compostela, 22-25 May, Organizing Committee.

5. **8th Iberian prion congress**, Castello Blanco, Portugal, 24-25 Oct 2019. Scientific Committee.

6. **11th Iberian prion congress**, Barcelona. 2023. 11-12 May 2023. Scientific Committee.

Main invited lectures at Universities and Organizations (most relevants from 2015, up to 44):

- Instituto de Biología de Sevilla, (IBIS), Sevilla, Spain (2015)

- Instituto Cajal, Madrid, Spain (2015)

- Instituto de Neurociencias de la UAB, Barcelona, Spain (2016)
- Achucarro Basque Center of Neuroscience, Derio, Bilbao, (2017)
- Cibernet Congress, Alicante (2017)
- Plenary season Cibernet, Santiago de Compostela (2018)
- CIMA, Pamplona, Spain (2019)
- HVIR, Barcelona, Spain (2021)
- i3A, Zaragoza, Spain (2022)
- UAM, Madrid, Spain (2022)

Scientific Publications with number of citations Scopus, (IF and Quartile/Decile from 2009):

183: Del Río, J. A., Lidon, L., & Gavin, R. (2025). Prion and "Prion-Like" Detection: From Conventional Methods to Microfluidics or Lab-on-Chip Platforms to Monitor Seeding and Spreading of Misfolded Proteins. *Subcell Biochem*, 112, 115-142. doi:10.1007/978-3-031-97055-9_6

182: Wells-Cembrano, K; Riu-Villanueva, M; López-Jimenez, JJ; Segura-Feliu, M; Gavín, R; Del Río, JA* (2025). Optogenetic activation of entorhinal projection neurons alters the target recognition and circuit development without enhancing axon regeneration after axotomy in organotypic slices. BioRxiv: <https://doi.org/10.1101/2024.01.20.576414>.

181: Gavín, R*; Del Río, JA* (2025). Exploring the Biological Connection Between Tau and PrP^C in Neuronal Cells: GSK3 β as a Possible Key Player. *Molecular Neurobiology* DOI: 10.1007/s12035-025-05163-2.

180: López, CF, Sala-Jarque, J; Del Río, JA; Soriano, J (2025). Experiments on a tauopathy model with mice primary cortical cultures: the difficult of observing network functional alterations. *Biomedicines* (submitted).

179: Álvarez-Berbel, I; Llabrés, S; Domènech, O; Busquets, MA, Fernández-Busquets, X, Arce, EM, Gavín, R; Del Río, JA, Muñoz-Torrero, D; Javier Luque, F; Sabate, R; Espargaró, A. (2025). YAT2150: Overcoming limitations of traditional amyloid dyes in aggregation studies. *Bioorganic & Medicinal Chemistry*. Mar 19:123:118163. doi: 10.1016/j.bmc.2025.118163.

178: Sala-Jarque J, Gil V, Andrés-Benito P, Martínez-Soria I, Picón-Pagès P, Hernández F, Ávila J, Lanciego JL, Nuvolone M, Aguzzi A, Gavín R, Ferrer I, Del Río JA*. (2024). The cellular prion protein does not affect tau seeding and spreading of sarkosyl-insoluble fractions from Alzheimer's disease. *Scientific Reports* Sep 16;14(1):21622. doi: 10.1038/s41598-024-72232-2. IF: 3,8, 25 of 135 publications, **1Q**.

177: Sala-Jarque J, Gil V, Andrés-Benito P, Lidón L, Eduardo Yanac-Huertas R, López-León CF, Hernández F, Ávila J, Lanciego JL, Soriano J, Nuvolone M, Aguzzi A, Gavín R, Ferrer I, Del Río JA* (2024): Involvement of the cellular prion protein in seeding and spreading of sarkosyl-derived fractions of Alzheimer's disease in *Pmp* mutant mice and in the P301S transgenic tauopathy mice model. BioRxiv. doi: <https://doi.org/10.1101/2024.01.20.576414>.

176: Jácome D; Cotrufo T; Andrés-Benito P; Lidón L; Martí E; Ferrer I; Del Río JA*; Gavín R* (2024). miR-519a-3p, found to regulate cellular prion protein during Alzheimer's disease pathogenesis, as a biomarker of asymptomatic stages. *Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease*. DOI: 10.1016/j.bbadis.2024.167187. IF: 4.2, 12 of 77 publications, **1Q**. (Biophysics- SCIE). * shared senior authorships.

175: Martínez-Torres S, Bergadà-Martínez A, Ortega JE, Galera-López L, Hervera A, de Los Reyes-Ramírez L, Ortega-Álvaro A, Remmers F, Muñoz-Moreno E, Soria G, Del Río JA, Lutz B, Ángel Ruíz-Ortega A, Meana JJ, Maldonado R, Ozaita A. (2023) Peripheral CB1 receptor blockade acts as a memory enhancer through a noradrenergic mechanism *Neuropsychopharmacology*, 48(2): 341-350. IF: 6,6, 21 de 357 publications (Pharmacology), **1D**.

174: Martínez-Torres S, Mesquida-Veny F, Del Río JA*, Hervera A* (2023). Injury-induced activation of the endocannabinoid system promotes axon regeneration. *iScience*. May 5;26(6):106814. doi: 10.1016/j.isci.2023.106814. IF: 4,6, 19 de 135 publications, **1Q**.

173: Andrés-Benito P, Íñigo-Marco I, Brullas M, Carmona M, Del Río JA, Fernández-Irigoyen J, Santamaría E, Povedano M, Ferrer I (2023). Proteostatic modulation in brain aging without associated Alzheimer's disease-and age-related neuropathological changes. *Aging (US)* 15 (9): 3295-3330. IF: 3,9, 25 de 74 publications, **2Q**

172: Andrés-Benito P, Flores Á, Busquet-Areny S, Carmona M, Ausín K, Cartas-Cejudo P, Lachén-Montes M, Del Río JA, Fernández-Irigoyen J, Santamaría E, Ferrer I. (2023). Deregulated transcription and proteostasis in adult *mapt* knockout mouse. *International Journal of Molecular Sciences*. 2023 Mar 31;24(7):6559. doi: 10.3390/ijms24076559. IF: 4,9, 69 de 313 publications, **2Q**.

171: Tonelli M, Catto M, Sabaté R, Francesconi V, Laurini E, Priol E, Pisani L, Miniero DV, Luzzi DM, E Gatta, Relini A, Gavín R, Del Río JA, Sparatore F, A Carotti (2023). Thioxanthenone-based derivatives as multitarget therapeutic leads

for Alzheimer's disease. [European Journal of Medicinal Chemistry](#). Mar 15;250:115169. doi: 10.1016/j.ejmech.2023.115169. IF: 6, 8 of 72 publications, 2 citations 1Q.

170: Ferrer I, Andrés-Benito P, Carmona M, [Del Río JA](#). (2022). Common and Specific Marks of Different Tau Strains Following Intra-Hippocampal Injection of AD, PiD, and GGT Inoculum in hTau Transgenic Mice. [International Journal of Molecular Sciences](#). Dec 14;23(24):15940. doi: 10.3390/ijms232415940. IF: 6,208, 69 de 296 publications, 1 citation 1Q.

169: Sala-Jarque J*, Zimkowska K, Ávila J, Ferrer I, [Del Río JA*](#) (2022). Towards a Mechanistic Model of Tau-Mediated Pathology in Tauopathies: What Can We Learn From Cell-Based *In Vitro* Assays?. [International Journal of Molecular Sciences](#). Sep 29;23(19):11527. doi: 10.3390/ijms231911527. IF: 6,208, 69 de 296 publications, 1 citation 1Q.

167: Ferrer I, Andrés-Benito P, Ausín K, Cartas-Cejudo P, Lachén-Montes M, [Del Río JA](#), Hernández-Irigoyen J, Santamaría E (2022). Dysregulated Protein Phosphorylation in a Mouse Model of FTLD-Tau. [J Neuropathol Exp Neurol](#). 81(9):696-706 IF: 3.021, 122 of 212 publications 1 citation 3Q.

166: Mesquida-Veny F, Martínez-Torres S, [Del Río JA*](#), Hervera A* (2022) Genetic control on neuronal activity enhances axonal growth only on permissive substrates. [Molecular Medicine](#). 28 (1), 1-16, IF: 6.376, 31 of 190 publications 1Q.

165: Wells-Cembrano K, Sala-Jarque J, [Del Río JA*](#) (2022). Development of a simple and versatile *in vitro* method for production, stimulation, and analysis of bioengineered muscle. [Protocols.io](#), <https://dx.doi.org/10.17504/protocols.io.b4qiqvue> and [Plos One](#). Aug 11;17(8):e0272610. doi: 10.1371/journal.pone.0272610. IF: 3.752, 29 of 73 publications, 1 citation 2Q.

164: Ferrer I, Andrés-Benito P, Ausin K, Cartas Cejudo P, Lachen Montes M, [Del Río JA](#), Fernández Irigoyen J, Santamaria E (2022). Dysregulated brain protein phosphorylation linked to increased human tau expression: the hTau transgenic mouse model. [International Journal of Molecular Sciences](#) June 8 23(12),6427. IF: 6.081, 5 of 40 publications 1Q

163: Mesquida-Veny F, Martínez-Torres S, [Del Río JA](#), Hervera A (2022). Nociception-dependent CCL21 induce dorsal root ganglia axonal growth via CCR7-ERK activation. [Frontiers in Immunology](#) Jul 14;13:880647. doi: 10.3389/fimmu.2022.880647. IF: 8,786, 33 de 162 publications, 4 citations 1Q.

162: Hernández F, Ferrer I, Pérez M, Zabala JC, [Del Río JA](#), Ávila J (2022). Tau aggregation. [Neuroscience](#) 518, 64-69. IF 3,708, 147 of 274 publications. 10 citations 3Q

161: Ferrer I, Andrés-Benito P, Garcia-Esparcia P, López-Gonzalez I, Valiente D, Cladera J, Carmona M, Sala-Jarque J, Gil V, [Del Río JA](#) (2022). Differences in tau seeding in newborn and adult wild type mice. [International Journal of Molecular Sciences](#) Apr 26;23(9):4789. doi: 10.3390/ijms23094789. IF: 6,208, 69 de 296 publications, 1 citation, 1Q.

160: López-Mengual A; Segura-Feliu M; Sunyer R; Sanz-Fraile H; Otero J, Mesquida-Veny F; Gil V; Hervera A; Ferrer I; Soriano J; Trepát X; Farré R; Navajas D; [Del Río JA*](#) (2022). Involvement of mechanical cues in the migration of Cajal-Retzius cells in the marginal zone during neocortical development. [Frontiers in Cell and Developmental Biology](#), May 16;10:886110. doi: 10.3389/fcell.2022.886110. eCollection 2022. IF: 6.081, 5 of 40 publications 3 citations 1Q.

159: Matamoros-Angles A, Hervera A, Soriano J, Martí E, Carulla P, Llorens F, Nuvolone M, Aguzzi A, Ferrer I, Gruart A, Delgado-García JM*, [Del Río JA*](#) (2022). Analysis of co-isogenic prion protein deficient mice reveals behavioral deficits, learning impairment, and enhanced hippocampal excitability.; [BMC Biology](#). Jan 13;20(1):17. doi: 10.1186/s12915-021-01203-0. IF: 7,364, 10 of 94 publications, 4 citations, 1Q.

158: Andrés-Benito P, Carmona M, Jordan M, Fernández J, Santamaría E, [Del Río JA](#), Ferrer I (2022). Host tau genotype specifically designs and regulates tau seeding and spreading, and host tau transformation following intrahippocampal injection of identical tau AD inoculum. [International Journal of Molecular Sciences](#), Jan 10;23(2):718. doi: 10.3390/ijms23020718. IF: 6,208, 69 de 296 publications, 6 citations 1Q.

157: Pellegrini P, Hervera Abad A, Varea O, Lopez-Soldado I, Guitart A, Aguilera M, Prats-Costa N, [Del Río JA](#), Guinovart JJ, Duran J (2022). Lack of p62 impairs glycogen aggregation and exacerbates pathology in a mouse model of myoclonic epilepsy of Lafora. [Molecular Neurobiology](#); 59(2):1214-1229, IF: 5,687, 68 de 274 publications. 4 citations. 1Q.

156: Hervera A, De Virgili F, Palmisano I, Zhou L, Tantardini E, Kong G, Hutson T, Danzi MC, Ben-Tov R, Santos CXC, [Del Río JA](#), Carroll T, Lemmon V, Bixby JL, Shah AM, Fainzilber M, Di Giovanni S. (2021). NOX-dependent reactive oxygen species are essential regulators of axonal regeneration. [Free Radical Biology and Medicine](#), 177: S59-S60, Conference paper. <https://doi.org/10.1016/j.freeradbiomed.2021.08.046>.

155: Andrés-Bendito P; Carmona M; Jordan-Pirla M, Torrehon-Escribano B, [Del Río JA](#), Ferrer I (2021). Dysregulated protein phosphorylation as main contributor of granulovacuolar degeneration at the first stages of NFT pathology.

Neuroscience 2021 Oct 30: S0306-4522(21)00534-0. doi: 10.1016/j.neuroscience.2021.10.023. IF 3,708, 147 of 274 publications. 7 citations. 3Q.

154: Ferrer I, Andrés-Benito P, Ausín P, Pamplona R, Del Río JA, Fernández-Irigoyen J, Santamaría E (2021) Dysregulated protein phosphorylation: a determining condition in the continuum of brain aging and Alzheimer's disease. *Brain Pathology*, 2021 Nov;31(6):e12996. doi: 10.1111/bpa.12996, IF 7,611, 8 of 77 publications. 17 citations. 1Q.

153: Lidón L, Llaó-Hierro L, Nuvolone M, Aguzzi A, Ávila J, Ferrer I, Del Río JA*, R Gavín*. (2021). Tau exon 10 inclusion by PrP^C through downregulating GSK3 β activity. *International Journal of Molecular Sciences*. May 20;22(10):5370, IF: 6,208, 69 de 296 publications, 1 citation. 1Q.

152: D Diaz-Lucena, N Kruse, K Thüne, M Schmitz, A Villar-Piqué, J Eriton Gomes da Cunha, PHermann, O López-Pérez, P Andrés-Benito, A Ladogana, M Calero, E Vidal, J Riggert, H Pineau, Va Sim, H Zetterberg, K Blennow, JA Del Río, A Marín-Moreno, J Carlos Espinosa, J María Torres, R Sánchez-Valle, B Mollenhauer, I Ferrer*, I Zerr*, F Llorens (2021). TREM2 expression in the brain and biological fluids in prion diseases. *Acta Neuropathologica*, Jun;141(6):841-859. IF 15,887, 5 of 212 publications, 11 citations. 1D.

151: Castaño O, López-Mengual A, Reginensi DA, Matamoros-Anglès A, Engel E*, Del Río JA* (2021). Chemotactic TEG3 cells' guiding platforms based on PLA fibers functionalized with the SDF-1 α /CXCL12 chemokine for neural regeneration therapy. *Frontiers in Bioengineering and Biotechnology*. 22 March 2021, <https://doi.org/10.3389/fbioe.2021.627805>. IF 6,064, 16 of 73 publications, 3 citations. 1Q.

150: Duran J, Hervera A, Markussen K, Varea O, López-Soldado I, Sun R, Del Río JA, Gentry M, Guinovart A (2021). Astrocytic glycogen accumulation drives the pathophysiology of neurodegeneration in Lafora disease. *Brain*. Sep 4;144(8):2349-2360, IF: 15,255, 11 of 274 publications, 16 citations. 1D.

149: Moya-Andérico L, Vukomanovic M, Cendra M, Segura-Feliu M, Gil V, Del Río JA, E. Torrents (2021). Utility of *Galleria mellonella* larvae for evaluating nanoparticle toxicology. *Chemosphere*. 266:129235 IF 8.943, 33 of 279 publications. 24 citations. 1Q.

148: Mesquida-Veny F, Del Río JA, Hervera A (2021). Phenotypical complexity of macrophages and microglia after neuronal injury. *Progress in Neurobiology*. May; 200:101970. IF 10.885, 21 of 274, 40 citations. 1D.

147: Duran J, Brewer MK, Hervera A, Gruart A, Del Río JA, Delgado-García JM, Guinovart JJ (2020). Lack of astrocytic glycogen alters synaptic plasticity but not seizure susceptibility. *Molecular Neurobiology*. 57:4657-4666. IF 5,590, 61 of 273 publications. 8 citations, 1Q.

146: Del Río JA*, I Ferrer* (2020). Potential of microfluidics and lab-on-chip platforms to improve understanding of "prion-like" protein assembly and behavior. *Frontiers in Bioengineering and Biotechnology* Sep 8;8:570692. doi: 10.3389/fbioe.2020.570692, IF 5,890, 17 of 126 publications. 3 citation, 1Q.

145. Eixarch H, Calvo-Barreiro L, Costa C, Reverter-Vives G, Castillo M, Gil V, Del Río JA, Montalban X, Espejo C (2020). Inhibition of the BMP-signaling pathway ameliorated established clinical symptoms of experimental autoimmune encephalomyelitis. *Neurotherapeutics*, Oct;17(4):1988-2003, IF 5,552,16 of 275 publications (Pharmacology). 6 citations. 1D.

144: Lidón L, Vergara C, Hernández F, Ávila J, Ferrer I, Del Río JA*, Gavín R* (2020). Tau protein as a new regulator of cellular prion protein transcription. *Molecular Neurobiology*. 57:4170–4186, IF 5,590, 65 of 273 publications, 6 citations. 1Q.

143. Lidón L*, Urrea L*, Llorens F, Gil V, Alvarez I, Diez-Fairén M, Aguilar M, Pastor P, Zerr I, Alcolea D, Lleó A, Vidal E, Gavín R, Ferrer I, Del Río JA. (2020). Disease-specific changes in Reelin protein and mRNA in neurodegenerative diseases. *Cells*. 9(5):1252. IF 6,60, 53 of 195 publications. 5 citations. 2Q.

142. Ferrer I, Andres-Benito P, Sala-Jarque J, Gil V, Del Río JA. (2020). Capacity for seeding and spreading of argyrophilic grain disease in a wild-type murine model; comparisons with primary age-related tauopathy. *Frontiers in Molecular Neurosciences*, 13:101, IF 5,639, 60 of 271 publications, 9 citations. 1Q,

141. Diaz-Lucena D, Escaramis G, Villar-Piqué A, Hermann P, Schmitz M, Varges D, Santana I, Del Río JA, Martí E, Ferrer I, Baldeiras I, Zerr I, Llorens F. (2020). A new tetra-plex fluorimetric assay for the quantification of cerebrospinal fluid β -amyloid 42, total-tau, phospho-tau and α -synuclein in the differential diagnosis of neurodegenerative dementia. *Journal of Neurology*, 267(9):2567-2581. IF 4,949, 51 of 208 publications, 5 citation. 1Q.

140. Gavín R, Lidón L, Ferrer I, Del Río J.A.* (2020). The quest for cellular prion protein functions in aged and neurodegenerating brain. *Cells*, 9(3):591 IF 6,60, 53 of 195 publications, 10 citations 2Q

- 139.** Ferrer I, Ferrer, Andrés-Benito, MV Zelaya, MEI Erro Aguirre, M Carmona, K Ausín, M Lachén-Montes, J Fernández-Irigoyen, E Santamaría, **Del Río J.A.** (2020). Familial Globular Glial Tauopathy Linked to MAPT Mutations: Molecular Neuropathology and Seeding Capacity of a Prototypical Mixed Neuronal and Glial Tauopathy. *Acta Neuropathologica*. 139(4):735-771, IF 17,008, 2 of 77 publications, 31 citations. **1D.**
- 138.** Sala-Jarque, J, Mesquida-Veny F, Badiola-Mateos M, Samitier J, Hervera A*, **Del Río JA***. (2020) Neuromuscular activity induces paracrine signaling and triggers axonal regrowth after injury. *Cells*, 9(2), 302, IF 6,60, 53 of 195 publications, 9 citations. **2Q.**
- 137.** Ferrer I, Zelaya MV, Aguiló M, Carmona M, López-González I, Andrés-Benito P, Lidón P, Gavín R , Garcia-Esparcia P, **Del Río JA.** (2020) Relevance of host tau in tau seeding and spreading in tauopathies. *Brain Pathology* 30(2):298-318.. IF 5,568, 8 of 77 publications, 18 citations. **1Q.**
- 136.** Ferrer I, Aguiló-García M, Carmona Murillo M, Andrés Benito P, Torrejon-Escribano B, Garcia-Esparcia P, **Del Río JA.** (2019) Involvement of oligodendrocytes in tau seeding and spreading in tauopathies. *Frontiers in Aging Neuroscience*. 11:112, IF 5,750, 9 of 53 publications, 35 citations. **1Q.**
- 135.** Hervera A, Zhou L, Palmisano I, McLachlan E, Kong G, Hutson T, Danzi MC, Lemmon VP, Bixby JL, Matamoros-Angles A, Forsberg K, De Virgiliis F, Matheos DP, Kwapis J, Wood MA, Puttagunta R, **Del Río JA**, S Di Giovanni (2019). PP4-dependent HDAC3 dephosphorylation discriminates between axonal regeneration and regenerative failure. *EMBO J* 1;38(13):e101032. doi: 10.15252/embj.2018101032. IF 9,889, 21 of 297 publications, 25 citations. **1D.**
- 134.** Gil V*, **Del Río JA*** (2019) Generation of 3D collagen-based hydrogels to analyze axonal growth and behavior during nervous system development. *JoVE* Jun 25;(148). doi: 10.3791/59481. IF 1.163, 45 of 71 publications, 1 citation. **3Q.**
- 133.** Gil V, **Del Río JA*** (2019) Functions of Plexins/Neuropilins and Their Ligands during Hippocampal Development and Neurodegeneration. *Cells* 8(3) 206: doi:10.3390/cells8030206. IF 4,366, 70 of 195 publications. 13 citations **2Q.**
- 132.** Navarro, G; Aguinaga D; Reyes I; **Del Río JA**; Ávila J; Saura C & R. Franco (2018) Interaction between n-methyl aspartate (NMDA) glutamate receptors and calcium sensors in neurons: Alterations and calcium-sensor modulation in the APP-PS1 model of AD. *Alzheimer's and Dementia*. 14(7):P371. (conference paper) IF 17,127, 3 of 204 publications
- 131.** Badiola-Mateos, M, Hervera A, **Del Río JA**, Samitier J (2018) Challenges and future prospects on 3D *in-vitro* modelling of the neuromuscular circuit. *Frontiers in Bioengineering and Biotechnology* 1;6:194. doi: 10.3389/fbioe.2018.00194.5., IF 5.122, 10 of 69 publications, 8 citations. **1Q.**
- 130.** Franco R, Aguinaga Andrés D, Canela EI, Lillo J, Tarutani A, Hasegawa M, **Del Río JA**, Kreutz MR, Saura C, Navarro G (2018). N-Methyl-D-Aspartate Receptor Link to the MAP Kinase Pathway in Cortical and Hippocampal Neurons and Microglia Is Dependent on Calcium Sensors and Is Blocked by α -Synuclein, Tau, and Phospho-Tau in Non-transgenic and Transgenic APP_{Sw,Ind} Mice. *Frontiers in Molecular Neuroscience*. Aug 28;11:273. doi: 10.3389/fnmol.2018.00273. IF 3,902, 71 of 261 publications, 15 citations. **2Q.**
- 129.** Hervera A, De Virgiliis F, Palmisano I, Zhou L, Tantardini E, Kong G, Hutson T, Danzi MC, Perry RB, Santos CXC, Kapustin AN, Fleck RA, **Del Río JA**, Carroll T, Lemmon V, Bixby JL, Shah AM, Fainzilber M, Di Giovanni S. (2018) Reactive oxygen species regulate axonal regeneration through the release of exosomal NADPH oxidase 2 complexes into injured axons. *Nature Cell Biology*. 20(3):307-319. IF 19,064, 7 of 190 publications, 181 citations. **1D.**
- 128.** **Del Río JA***, Ferrer I, Gavín R (2018). Role of cellular prion protein in interneuronal amyloid transmission. *Progress in Neurobiology* 165-167: 87-102. IF 14,162, 8 of 261 publications, 19 citations **1D.**
- 127.** Ferrer I, Aguil. García M, López Gonzalez I, Diaz Lucena D, Roig Villalonga A, Carmona M, Llorens F, García-Esparcia P, Martínez-Maldonado A, Frau Mendez M, Benjamín Torrejón E, Bech Serra JJ, Sabido E, Carolina de la Torre G, **Del Río JA** (2018). Aging-related tau astroglipathy (ARTAG): Not only tau phosphorylation in astrocytes. *Brain Pathology*. DOI:10.1111/bpa.12593. IF 6.155, 18 of 199 publications, 53 citations. **1D.**
- 126.** Tomas-Roig J, Piscitelli F, Gil V, Quintana E, Ramió-Torrentà LL, **Del Río JA**, Moore TP, Agbemenyah H, Salinas G, Pommerenke C, Lorenzen S, Beißbarth T, Hoyer-Fender S, Di Marzo V, Havemann-Reinecke U. (2018). Effects of repeated long-term psychosocial stress and acute cannabinoid exposure on mouse corticostriatal circuitries: Implications for neuropsychiatric disorders. *CNS Neurosci Ther*. Jun;24(6):528-538. doi: 10.1111/cns.12810. IF 3,495, 65 of 261 publications (Pharmacology), 10 citations. **1Q.**
- 125.** Mata A, Gil V, Pérez-Clausell J, Dasilva M, González-Calixto MC, Soriano E, García-Verdugo JM, Sanchez-Vives MV, **Del Río JA***. (2018) New functions of Semaphorin 3E and its receptor PlexinD1 during developing and adult hippocampal formation. *Scientific Reports*. Jan 22;8(1):1381. IF 4.011, 15 of 69 publications, 14 citations. **1Q.**

- 124.** Llorens, F; Thüne, K; Martí, E; Kanata, E; Dafou, D; Vivancos, A,P.; Shomroni, O; Zafar, S; Schmitz, M; Michel, U; Fernandez-Borges, N; Andreóletti, O; **Del Río, JA**; Díez, J; Fischer, A; Bonn, S; Sklaviadis, T; Maria, J; Ferrer, I; Zerr, I (2018) Regional and subtype-dependent miRNA signatures in sporadic Creutzfeldt-Jakob disease are accompanied by alterations in miRNA silencing machinery and biogenesis. *Plos Pathogens* Jan 22;14(1): e1006802. IF 6,158, 3 of publications 37 (Parasitology), 22 citations. **1D**.
- 123.** Urrea L, Segura-Feliu M, Masuda-Suzukake M, Pedraz L, García Aznar JM, Vila M, Samitier J, Torrents E, Ferrer I, Gavín R, Hagesawa M, **Del Río JA*** (2018). Involvement of Cellular Prion Protein in α -Synuclein Transport in Neurons. *Molecular Neurobiology*. 55(3):1847-1860. Epub 2017 Feb 22. IF 5.076, 44 of 261 publications, 44 citations. **1Q**.
- 122.** Matamoros-Angles A, Mayela-Gayosso L, Richaud Y, di Domenico A, Vergara C, Hervera A, Sousa A, Fernández Borges N, Consiglio A, Gavín R, Lopez de Maturana R, Ferrer I, López de Munain A, Raya A*, Castilla J*, Sánchez-Pernaute R*, **Del Río JA***. (2018). iPS cell cultures from a Gerstmann-Sträussler-Scheinker patient with the Y218N *PRNP* mutation recapitulate Tau pathology. *Molecular Neurobiology*. Apr;55(4):3033-3048. IF 4.586, 57 of 267 publications, 21 citations. **1Q**.
- 121.** Garcia-Esparcia P, Koneti A, Rodríguez-Oroz MC, Lago B, **Del Río JA**, Ferrer I. (2018). Mitochondrial activity in the frontal cortex area 8 and angular gyrus in Parkinson's disease and Parkinson's disease with dementia. *Brain Pathology*. Jan;28(1):43-57. IF 6.155, 18 of 199 publications, 23 citations. **1D**.
- 120.** Urrea, L, Ferrer I, Gavín R, **Del Río JA*** (2017). The cellular prion protein (PrP^C) as neuronal receptor for α -synuclein. *Prion*. Jul 4;11(4):226-233. IF 2.011, 209 of 292 publications, 27 citations. **3Q**.
- 119.** Garcia-Esparcia P, López-González I, Grau-Rivera O, García-Garrido MF, Konetti A, Llorens F, Zafar S, Carmona M, **Del Río JA**, Zerr I, Gelpi E, Ferrer I. (2017). Dementia with Lewy Bodies: Molecular Pathology in the Frontal Cortex in Typical and Rapidly Progressive Forms. *Frontiers in Neurology*. Mar 13;8:89. doi: 10.3389/fneur.2017.00089. eCollection 2017.. IF 3.508, 88 of 261 publications, 35 citations. **2Q**.
- 118.** Mata A, Urrea L, Vilches S, Llorens F, Thüne K, Espinosa JC, Andreóletti O, Sevillano AM, Torres JM, Requena JR, Zerr I, Ferrer I, Gavín R, **Del Río JA*** (2017) Reelin Expression in Creutzfeldt-Jakob Disease and Experimental Models of Transmissible Spongiform Encephalopathies. *Molecular Neurobiology* Oct;54(8):6412-6425. IF 6.190, 25 of 258 publications, 1 citation. **1D**.
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- 116.** Vilches S, Vergara C, Nicolas O, Mata A, **Del Río JA***, Gavin R* (2016) Domain-Specific Activation of Death-Associated Intracellular Signalling Cascades by the Cellular Prion Protein in Neuroblastoma Cells. *Molecular Neurobiology*. 53 (7): 4438-48. IF 6.190, 25 of 258 publications, 4 citations. **1D**.
- 115.** Requena JR, Kristensson K, Korth C, Zurzolo C, Simmons M, Aguilar-Calvo P, Aguzzi A, Andreóletti O, Benestad SL, Böhm R, Brown K, Calgua B, **Del Río JA**, Espinosa JC, Girones R, Godsave S, Hoelzle LE, Knittler MR, Kuhn F, Legname G, Laeven P, Mabbott N, Mitrova E, Müller-Schiffmann A, Nuvolone M, Peters PJ, Raeber A, Roth K, Schmitz M, Schroeder B, Sonati T, Stitz L, Taraboulos A, Torres JM, Yan ZX, Zerr I. (2016) The Priority position paper: Protecting Europe's food chain from prions. *Prion*, 10 (3): 165-181. IF 2.343, 178 of 286 publications, 12 citations. **3Q**.
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- 112.** Frau-Méndez MA, Fernández-Vega I, Ansoleaga B, Blanco Tech R, Carmona Tech M, **Del Río JA**, Zerr I, Llorens F, Zarranz J, Ferrer I. (2017). Fatal familial insomnia: mitochondrial and protein synthesis machinery decline in the mediodorsal thalamus. *Brain Pathology*, Jan;27(1):95-106. IF 6.624, 20 of 259 publications, 7 citations. **1D**.
- 111.** Ansoleaga B, Garcia-Esparcia P, Llorens F, Hernández-Ortega K, Carmona Tech M, **Del Río JA**, Zerr I, Ferrer I. (2016) Altered Mitochondria, Protein Synthesis Machinery, and Purine Metabolism Are Molecular Contributors to the Pathogenesis of Creutzfeldt-Jakob Disease. *Journal Neuropathology Experimental Neurology*. Jun 12. pii: nlw048. IF 3.503, 16 of 79 publications, 20 citations. **1Q**.

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- 99.** Riggio C, Nocentini S, Catalayud MP, Goya GF, Cuschieri A, Raffa V, [Del Río JA](#) (2013) Generation of magnetized olfactory ensheathing cells for regenerative studies in the central and peripheral nervous tissue. *International Journal of Molecular Sciences* 14 (6):10852-10868. IF 2.339, 52 of 147 publications, 15 citations. 2Q.
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ISI publications before my group leader position at IBEC

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65. Mingorance-Le Meur A, Zheng B, Soriano E, **Del Río JA** (2007) *Cerebral Cortex* 17(10):2375-2386. 73 citations.
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55. Burgaya F, Fontana X, Martinez A, Montolio M, Mingorance A, Simo S, **Del Río JA**, Soriano E (2006) *Molecular and Cellular Neurosciences* 33 (3):321-334. 14 citations.
54. Botella-Lopez A, Burgaya F, Gavin R, Garcia-Ayllon MS, Gomez-Tortosa E, Pena-Casanova J, Urena JM, **Del Río JA**, Blesa R, Soriano E, Saez-Valero J (2006). *P.N.A.S.* 103 (14):5573-5578. 176 citations.
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52. Soriano E, **Del Río JA** (2005). *Neuron* 46 (3):389-394. 207 citations.
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44. Mingorance A, Fontana X, Sole M, Burgaya F, Urena JM, Teng FY, Tang BL, Hunt D, Anderson PN, Bethea JR, Schwab ME, Soriano E, **Del Río JA** (2004). *Molecular and Cellular Neurosciences* 26 (1):34-49. 99 citations.
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42. **Del Río JA**, Sole M, Borrell V, Martinez A, Soriano E (2002). *The European Journal of Neuroscience* 15 (12):1881-1890. 21 citations.
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[Books, chapters of books and online scientific publications:](#)

1. **Del Río JA**, Borrell, V., Alcantara, S, Soriano, E (1998) Role of Cajal-Retzius cells in the formation of synapses in entorhino-hipocampal organotypic slice cocultures. Haynes, L.R. (ed.), *Methods in Neuroscience: The Neuron in tissue culture* 18. J.W. Wiley and Sons. pp 179-190.
2. **Del Río JA**, De Castro F, Soriano E (2004). Axon guidance and repulsion. The molecular code of social life in the brain. T. Herdegen, J Delgado-Garcia (eds); *Brain Damage and Repair; from Molecular Research to Clinical Therapy*. pp: 165-179.
- 3: Sala-Jarque J*, Zimkowska K, Ávila J, Ferrer I, **Del Río JA*** (2022). The “Prion-like” Nature of Tau and Its Strains. <https://encyclopedia.pub/entry/28723>. Scholarly Community Encyclopedia ([online publication](#)). Entry ID: 28723.

[Additional indicators of Research activity:](#)

Ranked in the top 0.5% of all scholars worldwide according to 2024 data by ScholarGPS: [#241 position, Molecular neuroscience](#).

Ranked 1280th among Spanish researchers in 2024 (out of 70,000 researchers across all disciplines) according to <https://www.webometrics.info/en/GoogleScholar/Spain>.

Ranked 45rd among Spanish researchers in Neuroscience in 2024 according to <https://grupodih.info/salud.html#NEUROSCIENCES> (among the top 54 researchers in Neuroscience with an *H*-index > 39).

Number of research (six-year terms) positively evaluated by **ANECA: 6 (last 9/5/2024)**

Number of research (six-year terms) positively evaluated by **AQU (Generalitat de Catalunya): 5 (last 1/2/2020)**

The results of citations published in Scopus, WOS and Google Scholar are as follows (April 2025):

Number of citations (Web of science) Number of citations: (1989-2024) = 9115 Mean citation / paper = 56.97 H index = 52	Number of citations (Scopus) Number of citations: (1989-2024) = 8461 Mean citation / paper = 48.01 H index = 49
Number of citations (Google scholar) Number of citations: (1989-2024) = 12248 Mean citation / paper = 63,27 H index = 58 i10 index = 148	



Signed: José A. del Río,
Barcelona, June 2025