CURRICULUM VITAE

F. Javier Rodríguez, Ph.D.

Personal Information

Birthdate: 25th of April, 1969.
Citizenship: Spanish.
Languages: Fluent in Spanish, English and Catalonian.

Present Address: Laboratory of Molecular Neurology.
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Education and Academic Degrees:

1992: Degree in Biology (Field of Biochemistry and Molecular Biology), Universitat Autònoma de Barcelona (UAB).

1997: Master in Biochemistry and Molecular Biology, Department of Biochemistry of the Faculty of Medicine, UAB. "Excellent" for the research work entitled: "*Modulation of hippocampal glutamate release by histamine*". Advisor: Dr. Isaac Blanco and Dr. José Rodríguez.

1999: Ph.D. in Biological Science (Field of Biochemistry and Molecular Biology), Department of Medical Physiology of the Faculty of Medicine, UAB. "Cum Laude" for the thesis entitled: "*Artificial nerve implants and Schwann cell transplants to repair peripheral nerve injuries*". Advisor: Dr. Xavier Navarro.

Positions:

1990-1992: Collaborating student at the Department of Biochemistry of the Faculty of Medicine, UAB (Spain).

1992-1994: Master student at the Department of Biochemistry of the Faculty of Medicine, UAB (Spain).

1994-1999: Ph.D. student at the Department of Human Physiology of the Faculty of Medicine, UAB (Spain).

1999-2003: Postdoctoral Researcher at the Unit of Molecular Neurobiology, Department of Medical Biochemistry and Biophysics, Karolinska Institute (Sweden).

2003-2004: Postdoctoral Researcher at the Department of Human Physiology of the Faculty of Medicine, UAB (Spain).

From 2004: Group Leader at the Research Unit of The National Hospital for Paraplegia (Spain).

Awards and Merits:

1996: VIth Grant of the Catalonian Society of Neurology – Uriach Foundation.

1998: Schering-Plough Prize in Multiple Sclerosis.

1999: IXth Grant of the Catalonian Society of Neurology – Uriach Foundation.

2000: Prize Josep Trueta. Medical Sciences Academy of Catalonia and Balearic Islands.

Fellowships:

1993-1993: Erasmus Fellowship (6 months). European Comission.

1994-1997: Felloswhip for Research Personnel Instruction (F.P.I.). Ministry of Education and Science.

1999-1999: Fellowship from Margit and Folke Pehrzon Foundation (6 months).

2000-2001: STINT Fellowship. Swedish Foundation for international cooperation in research and higher education.

2001-2003: Individual Marie Curie Fellowship. European Comission.

Member of the following Societies:

- Spanish Society of Neuroscience (SENC).
- Federation of European Neurosciences (FENS).
- Society for Neuroscience.
- Peripheral Nerve Society.

Predoctoral Advisor:

Master students:

2003-2004: Mónica Sofía Guzmán. Program of Neuroscience of the Universitat Autònoma de Barcelona."Excellent" for the research work entitled: "*Engineering of Schwann cells for peripheral nerve injury repair"*. Advisor: Dr. Xavier Navarro and Dr. F.J. Rodriguez.

2007-2009: Elisa Fernández Núñez. Program of Biochemistry, Molecular Biology and Biomedicine of the Universidad Complutense de Madrid. "Excellent" for the research work entitled: "*Promotion of axonal regeneration in spinal cord traumatic injuries by means of a combined strategy with drugs, cell transplants and gene therapy"*. Advisor: Dr. F.J. Rodríguez.

PhD students:

2009-2015: Carlos González Fernández. Program of Biochemistry, Molecular Biology and Biomedicine of the Universidad Complutense de Madrid. "Excellent Cum Laude" for research work entitled: *"Characterization of the expression pattern of the Wnt family of proteins in the spinal cord injury"*. Advisor: Dr. F.J. Rodríguez.

Postdoctoral advisor:

Previous:

2006-2008: Dr. Patricia Salama. PhD from the Universidad Autónoma de Madrid.

2008-2009: Dr. Shannon Shields. PhD from the University of California (UCLA).

2009-2012: Dr. Carmen María Fernández-Martos. PhD from the Universidad de Castilla-La Mancha.

2016-2018 Dr. Francisco González Pérez. PhD in Neurosciences from the Universitat Autònoma de Barcelona.

Present:

2008- : Dr. Alfredo Maqueda-Fernández. PhD from the Universidad Autónoma de Madrid.

2009- : Dr. Pau H. González. PhD from the Autonomous Universitat Autònoma de Barcelona.

2015- : Dr. Carlos González Fernández. PhD from the Universidad Complutense de Madrid.

Ad hoc reviewer in the last years:

- For Journals including: J Neuroscience, Brain, J Neurotrauma, PLoS One, Stem Cells, J Neurochem, Mol Cell Life Sci, etc…
- National Agency for Evaluation of Research Projects (ANEP).
- ERA-NET Program.

Teaching activity:

Pregraduate courses: Practical classes as associate professor and associate professor of the subject "General Physiology" for students of first and second year of the Degree of Medicine and Surgery, Faculty of Medicine, Autonomous University of Barcelona (UAB). Years 1996-2000 and 2003-2004.

Postgraduate courses: Collaborator of the PhD course "Basic techniques in Neurophysiology". Program of Neurosciences, years 1995-96 and 1997-98. Organized by the Unit of Medical Neurophysiology from the Autonomous University of Barcelona (UAB). Director: Dr. Xavier Navarro.

Research Grants and Projects:

Previous:

1990-1994: Spanish Ministry of Health, Program "Fondo de Investigaciones Sanitarias" (FIS). Project: *Histamine regulation of hippocampal NMDA-mediated excitatory neurotransmission.* Principal Investigator: *Dr. Isaac Blanco.* Role: *PhD student*.

1993-1994: European Comission, ESPRIT Program. Project: *Neural interphase: Design and development of a biocompatible neurofunctional system.* Principal Investigator: *Dr. Xavier Navarro.* Role: *PhD student.*

1994-1996: Spanish Ministry of Health, Program "Fondo de Investigaciones Sanitarias" (FIS). Project: *Development of artificial neural grafts. Application of neurotrophic factors and neurotropic elements for the recovery of peripheral nerve injuries.* Principal Investigator: *Dr. Xavier Navarro.* Role: *PhD student.*

1996-1997: VIth Grant from Catalonian Society of Neurology- Uriach Foundation. Project: *Schwann cell transplants: a new therapy for regeneration.* Principal Investigator: *Dr. Xavier Navarro.* Role: *PhD student.*

1995-1997: Spanish Ministry of Health, Program "Fondo de Investigaciones Sanitarias" (FIS). Project: *Use of olfactory bulb ensheathing glia cell transplants to promote the regeneration of injured peripheral and central nervous systems.* Principal Investigator: *Dr. Xavier Navarro.* Role: *PhD student.*

1997-1999: Spanish Ministry of Science and Innovation, Program "Proyectos de Investigación Fundamental No Orientada" (SAF). Project: *Development and application of cellular prostheses to repair peripheral nerves.* Principal Investigator: *Dr. Xavier Navarro.* Role: *PhD student.*

1998-2000: European Comission, ESPRIT Program. Project: *An integrated system for the neuroelectric control of grasp in disabled persons (GRIP).* Principal Investigator: *Dr. Xavier Navarro.* Role: *PhD student.*

1998-1999: Schering-Plough Prize in Multiple Sclerosis. Project: *Olfactory bulb ensheathing glia transplants in demyelinated spinal cord: a therapeutic approach for multiple sclerosis.* Principal Investigator: *Dr. Xavier Navarro.* Role: *PhD student.*

2000-2002: Swedish Medical Research Council. Project: *Studies on the regeneration of the nigrostriatal pathway.* Principal Investigator: *Dr. Ernest Arenas.* Role: *Postdoctoral researcher.*

2001-2004: European Commission, Cell Factory Program. Project: *Development of human dopaminergic neuronal cell lines for transplantation.* Principal Investigator: *Dr. Ernest Arenas.* Role: *Postdoctoral researcher.*

2001-2004: Swedish Foundation for Strategic Research, INGVAR program. Project: *Neural development and neural stem cell therapies for Parkinson's disease.* Principal Investigator: *Dr. Ernest Arenas.* Role: *Postdoctoral researcher.*

2002-2005: European Commission, IST Program. Project: *Development of a cybernetic hand prosthesis (CYBERHAND).* Principal Investigator: *Dr. Xavier Navarro.* Role: *Postdoctoral researcher.*

2004-2007: European Commission, IST Program. Project: *The fusion of neuroscience and robotics for augmenting human capabilities (NEUROBOTICS).* Principal Investigator: *Dr. Xavier Navarro.* Role: *Postdoctoral researcher.*

2006-2007: Counselling of Health of the "Junta de Comunidades de Castilla-La Mancha". Grant for Emerging Research Groups. Project: *Development of a combined strategy with neuroprotective drugs and transplants of ensheathing glia and neural precursors to repair traumatic spinal cord injuries.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2006-2008: Spanish Ministry of Health, Program "Fondo de Investigaciones Sanitarias" (FIS). Project: *Neuroprotection and promotion of axonal regeneration in traumatic spinal cord injuries by means of a combined strategy including drugs, cell transplants and gene therapy.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2006-2008: Counselling of Health of "Junta de Comunidades de Castilla-La Mancha". Project: *Transplants of genetically modified ensheathing glia and adeno-associated virus for controlled expression of neuroprotective and axonal growth promoting factors in traumatic spinal cord injuries.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2006-2008: Counselling of Education and Science of the "Junta de Comunidades de Castilla-La Mancha". Project: *Development of a combined strategy with neuroprotective drugs and transplants of olfactory ensheathing glia and neural precursors for the repair of traumatic spinal cord injuries.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2006-2008: Foundation "Mutua Madrileña" for Biomedical Research. Project: *Novel strategy for the repair of traumatic spinal cord injuries: Transplants of ensheathing glia genetically modified to overexpress growth factors combined with transplants of adult neural precursors instructed to the oligodendroglial and neuronal cell lineages.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2006-2007: Counselling of Health of"Junta de Comunidades de Castilla-La Mancha. Project: *Grant for acquisition of Scientific Equipment. Acquisition of a system for rodent surgery, including microinjectors and stereotactic frames for brain and spinal cord.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2006-2007: Foundation for Health Research of Castilla-La Mancha (FISCAM). Project: *Grant for the acquisition of Research equipment. Acquisition of a cryostat and two centrifuges.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2007-2008: Foundation for Health Research of Castilla-La Mancha (FISCAM). Project: *Grant for the acquisition of Research Equipment. Acquisition of a Scan-R module for quantitative analysis in a Video Time Lapse Microscope (Olympus).* Principal Investigator: *Dr. F. Javier Rodríguez.*

2009-2012: Foundation for Health Research of Castilla-La Mancha (FISCAM). Project: *Characterization of the response driven by the Wnt family of glycoproteins through the canonical pathway in the proliferation and differentiation of adult neural precursors in adult traumatic spinal cord injuries.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2009-1012: Spanish Ministry of Health, Program "Fondo de Investigaciones Sanitarias" (FIS). Project: *Neuroprotection and repair of traumatic spinal cord injuries by means of combined administration of drugs and adult ensheathing glia transplants.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2011-2013: Ministry of Science and Innovation (MICINN), Program INNPACTO. Project: *NEUROREG: Regenerative Medicine applied to spinal cord and peripheral nerve injuries. New products in advanced therapies and tools of diagnostic.* Principal Investigator: *HISTOCELL (Coordinator of a Consortium of 5 partners); F. Javier Rodríguez (HNP_SESCAM partner).*

2012-2014: International Foundation for Research in Paraplegia (IRP). Project: *Unravel the functional role and the therapeutic potential of meningeal stem cells in spinal cord injury.* Principal Investigator: *Prof. G. Fumagalli (Univ. of Verona) and F. Javier Rodríguez (HNP_SESCAM).*

2011-2014: HISTOCELL. Public-Private Research Agreement. Project: *Assessment of the functional recovery/preservation promoted by grafting of human adipose mesenchymal cells in a rat contusion model of spinal cord injury.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2013-2017: Spanish Ministry of Health, Program "Fondo de Investigaciones Sanitarias" (FIS). Project: *The Wnt family of proteins in the inflammatory and glial response after spinal cord injury: a new therapeutic target?.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2013-2018: European Comission, NMP Program. Project: *NEURIMP: Novel Combination of biopolymers and manufacturing technologies for production of a peripheral nerve implant containing an internal aligned channels array.* Principal Investigators: *TEKNIKER (Coordinator of a consortium of 8 partners); F. Javier Rodríguez (HNP-SESCAM Partner).*

Current:

2019-2022: Ministry of Science, Innovation and Universities. Project: *WINSPIRE: Development of a therapy based on selective activation of the Wnt canonical pathway for the treatment of acute spinal cord injury.* Principal Investigator: *Dr. F. Javier Rodríguez.*

2019-2022: Spanish Ministry of Health**,** Institute of Health Carlos III for Technological Development in Health. Project: *SCI-IMMUNOPROTECT: Acute Spinal Cord Injury: IMMUNOmodulation & NeuroPROTection by means of Elastin-Like Recombinamers and Wnt Canonical Signaling Trigger.* Principal Investigators: *Dr. F. Javier Rodríguez (Cooordinator), Dr. F. Javier Arias (Group BIOFORGE, University of Valladolid) and Israel González (Technical Proteins NanoBiotechnology, SME).*

2019-2023: Counselling of Education, Culture and Sports of the Regional Government of the "Junta de Comunidades de Castilla-La Mancha"**.** Project*: SCI-*

WINTHERAPY: Acute treatment of spinal cord injury by combined therapy with elastin hydrogels and recombinant activating proteins of the canonical Wnt pathway. Principal Investigators: *Dr. F. Javier Rodríguez and Dr. Pau Honorato González.*

Publication List:

1. Navarro X, **Rodríguez FJ**, Labrador RO, Butí M, Ceballos D, Cuadras J, Perego G. *Peripheral nerve regeneration through bioresorbable and durable nerve guides.* J Periph Nerv Syst 1996, 1: 53-64.
2. **Rodríguez FJ**, Lluch M, Dot J, Blanco I, Rodríguez-Alvarez J. *Histamine modulation of glutamate release from hippocampal synaptosomes.* Eur J Pharmacol 1997, 323: 283-286.
3. Navarro X, Calvet S, **Rodríguez FJ**, Stieglitz T, Blau C, Butí M, Valderrama E, Meyer JU. *Stimulation and recording from regenerated peripheral nerves through polymide sieve electrodes*. J Periph Nerv Syst 1997, 3:91-101.
4. Navarro X, Valero A, Gudiño G, Forés J, **Rodríguez FJ**, Verdú E, Pascual R, Cuadras J, Nieto-Sampedro M. *Ensheathing glia transplants promote dorsal root regeneration and spinal reflex restitution after multiple lumbar rhizotomy.* Annals of Neurology 1999, 45: 207-215.
5. Vilches JJ, **Rodriguez FJ**, Verdú E, Valero A, Navarro X. *Changes in cholinergic responses of sweat glands during denervation and reinnervation.* J Auton Nerv Syst 1998 , 74: 1334-142.
6. **Rodríguez FJ**, Gómez N, Labrador RO, Butí M, Ceballos D, Cuadras J, Verdú E, Navarro X. *Improvement of regeneration with predegenerated nerve transplants in silicone chambers.* Restor Neurol Neurosci 1999, 14: 65-79.
7. **Rodríguez FJ**, Gómez N, Perego G, Navarro X. *Highly permeable polylactide-caprolactine nerve guides enhance peripheral nerve regeneration through long gaps.* Biomaterials 1999, 20: 1489-1500.
8. Verdú E, Navarro X, Gudiño-Cabrera G, **Rodríguez FJ**, Ceballos D, Valero A, Nieto-Sampedro M. *Olfactory bulb ensheathing cells enhance peripheral nerve regeneration.* Neuroreport 1999, 10: 1097-1101.
9. Verdú E, Vilches J, **Rodríguez FJ**, Ceballos D, Valero A, Navarro X. *Physiological and immunohistochemical characterization of cisplatin-induced neuropathy in mice.* Muscle Nerve 1999, 22: 329-340.
10. **Rodríguez FJ**, Verdú E, Ceballos D, Navarro X. *Nerve guides seeded with autologous Schwann cells improve nerve regeneration.* Experimental Neurology 2000, 161: 571-584.
11. **Rodríguez FJ**, Ceballos D, Schuttler M, Valero A, Valderrama E, Stieglitz T, Navarro X. *Polyimide cuff electrodes for peripheral nerve stimulation.* J Neurosci Meth 2000, 98: 105-118.
12. Verdu E, **Rodríguez FJ,** Gudiño-Cabrera G, Nieto-Sampedro M, Navarro X. *Expansion of adult Schwann cells from mouse predegenerated peripheral nerves.* J Neurosci Meth, 2000, 99:111-117.
13. Verdu E, Labrador R, **Rodríguez FJ,** Ceballos D, Forés J, Navarro X. *Alignment of collagen and laminin-containing gels improve nerve regeneration within silicone tubes.* Restor Neurol Neurosci 2002, 20 (5): 169-180.
14. Navarro X, Verdú E, **Rodríguez FJ**, Ceballos D. *Artificial nerve graft for the repair of peripheral nerve injuries.* Neurol Sci 2001, 22: S7-S13.

15. Akerud P, Holm PC, Castelo-Branco G, Sousa K, **Rodríguez FJ,** Arenas E. *Perspehin-overexpressing neural stem cells regulate the function of nigral dopaminergic neurons and prevent their degeneration in a model of Parkinson's disease.* Mol Cell Neurosci 2002, 21 (2): 205-222.

16. Holm P, **Rodríguez FJ**, Kresse A, Canals JM, Silos-Santiago I, Arenas E. *Critical role of TrkB ligands in the survival and phenotypic differentiation of developing locus coeruleus noradrenergic neurons.* Development 2003, 130 (15): 3535-3545.

17. *Castelo-Branco G*, Wagner J**, ***Rodríguez FJ****, Kele J, Sousa K, Rawal N, Kitajewski J, Arenas E. ****Co-first authors.*** *Proliferation of neuronal precursors and induction of midbrain dopaminergic neurons by Wnts.* PNAS 2003, 100 (22): 12747-52.

18. Navarro X, **Rodríguez FJ,** Ceballos D, Verdú E. *Engineering an artificial nerve graft for the repair of severe nerve injuries.* Med Biol Eng Comput 2003, 41(2): 220-227.

19. Wallen-Mackenzie A, Mata De Urquiza A, Petersson S, **Rodriguez FJ**, Friling S, Wagner J, Ordentlich P, Lengqvist J, Heyman RA, Arenas E, Perlmann T. *Nurr1-RXR heterodimers mediate RXR ligand-induced signaling in neuronal cells.* Genes and Development 2003, 17(24): 3036-47.

20. Udina E, **Rodriguez FJ**, Verdu E, Espejo M, Gold BG, Navarro X. *FK506 enhances nerve regeneration of long gaps repaired with collagen guides seeded with allogeneic Schwann cells.* Glia 2004, 47: 120-9.

21. **Rodríguez FJ,** Verdú E, Ceballos D, Valero A, Navarro X. *Injerto nervioso artificial y transplantes de células de Schwann en la reparación de nervio periférico.* Neurobiology: a clinical and experimental approach. Vol. 1. University Rovira i Virgili, Tarragona, 2000, pp. 89-98; (ISBN: 84-8424-018-5).

22. **Rodríguez FJ**, Valero-Cabré A, Navarro X. *Regeneration and functional recovery following peripheral nerve injury.* Drug Discovery Today: Disease Models 2004, 1(2): 177-185.

23. Lago N, Ceballos D, **Rodríguez FJ**, Stieglitz T, Navarro X. *Long term assessment of axonal regeneration through polyimide regenerative electrodes to interface the peripheral nerve.* Biomaterials 2005, 26(14):2021-31.

24. Holmberg K, Kuteeva E, Brumovsky P, Kahl U, Karlström H, Lucas GA, **Rodriguez J,** Westerblad H, Hilke S, Theodorsson E, Berge OG, Lendahl U, Bartfai T, Hökfelt T. *Generation and phenotypic characterization of a galanin overexpressing mouse.* Neuroscience. 2005;133(1):59-77.

25. Holm PC, **Rodríguez FJ**, Kele J, Castelo-Branco G, Kitajewski J, Arenas E. *BMPs, FGF8 and Wnts regulate the differentiation of locus coeruleus noradrenergic neuronal precursors.* Journal of Neurochemistry 2006, 99(1): 343-352.

26. Lago N, **Rodríguez FJ**, Jaramillo J, Navarro X. *Effects of motor and sensory nerve transplants on amount and specificity of sciatic nerve regeneration.* Journal of Neuroscience Research 2007, 85(12): 2800-12.

27. Decimo I, Bifari F, **Rodriguez FJ**, Malpeli G, Dolci S, Lavarini V, Pretto S, Vasquez S, Sciancalepore M, Montalbano A, Berton V, Krampera M, Fumagalli G. *Nestin- and DCX-Positive Cells Reside in Adult Spinal Cord Meninges and*

Participate to Injury-Induced Parenchymal Reaction. Stem Cells 2011; 29(12):2062-76.

28. Fernandez-Martos CM, Gonzalez-Fernandez C, Gonzalez P, Maqueda A, Arenas A, **Rodriguez FJ**. *Differential expression of Wnts after Spinal Cord Contusion Injury in adult rats.* PLoS One 2011;6(11):e27000.
29. Fernandez-Martos CM, Gonzalez P, **Rodriguez FJ**. *Acute Leptin Treatment Enhances Functional Recovery after Spinal Cord Injury.* PLoS One. 2012;7(4):e35594.
30. Gonzalez P, Fernandez-Martos CM, Gonzalez-Fernandez C, Arenas E, **Rodriguez FJ**. *Spatio-Temporal Expression Pattern of Frizzled Receptors after Contusive Spinal Cord Injury in Adult Rats.* PLoS One 2012; 7(12): e50793.
31. Gonzalez P, Fernandez-Martos CM, **Rodriguez FJ**. *The Ryk Receptor Is Expressed in Glial and Fibronectin-Expressing Cells after Spinal Cord Injury.* Journal of Neurotrauma 2013, 30(10):806-17.
32. González-Fernández C, Fernández-Martos CM, Arenas E, **Rodríguez FJ**. *Wnts are expressed in the spinal cord of adult mice and are differentially induced after injury.* J Neurotrauma 2014, 31(6):565-81.
33. González-Fernández C, Mancuso R, Del Valle J, Navarro X, **Rodríguez FJ**. *Wnt Signaling Alteration in the Spinal Cord of Amyotrophic Lateral Sclerosis Transgenic Mice: Special Focus on Frizzled-5 Cellular Expression Pattern.* PLoS One. 2016, 11(5):e0155867.
34. Gonzalez P, **Rodríguez FJ**. *Analysis of the expression of the Wnt family of proteins and its modulatory role on cytokine expression in non activated and activated astroglial cells.* Neuroscience Research (2017); 114- 16-29.
35. Gonzalez-Fernandez C, Arevalo-Martin A, Paniagua-Torija B, Ferrer I, **Rodriguez FJ***, Daniel Garcia-Ovejero*. *Wnts are expressed in the ependymal region of the adult spinal cord.* * Co-corresponding authors. Mol Neurobiol (2017); 54(8):6342.
36. Dolci S, Pino A, Berton V, Gonzalez P, Braga A, Fumagalli M, Bonfanti E, Malpeli G, Pari F, Zorzin S, Amoroso C, Moscon D, **Rodriguez FJ**, Fumagalli G, Bifari F, Decimo I. *High yield of adult oligodendrocytes lineage cells obtained from meningeal biopsy.* Frontiers in Pharmacology (2017); 8:703.
37. Fernández R, González P, Lage S, Garate J, Maqueda A, Marcaida I, Maguregui M, Ochoa B, **Rodríguez FJ,** Fernández JA. *Influence of the Cation Adducts in the Analysis of MALDI-IMS. Data from Injury Models of Rat Spinal Cord.* Analytical Chemistry (2017); 89(16): 8565-8573.
38. González-Fernandez C*, González P*, Andrés-Benito P, Ferrer I, **Rodríguez FJ**. *Wnt signaling alterations in the human spinal cord of amyotrophic lateral sclerosis cases: spotlight on Fz2, Fz5 and Wnt5a*. * Co-first authors Mol Neurobiol (2019), 56(10):6777-6791.
39. Duffy P , McMahon S, Wang X, Keaveney S, O'Cearbhaill ED, Quintana I, **Rodríguez FJ**, Wang W. *Synthetic bioresorbable poly-α-hydroxyesters as peripheral nerve guidance conduits; a review of material properties, design strategies and their efficacy to date*. Biomater Sci (2019), 7(12):4912-4943.
40. González P*[&], González-Fernández C*, **Rodríguez FJ**[&]. *Spatio-temporal and cellular expression pattern of PTK7 in the healthy rat and human spinal cord and*

after traumatic spinal cord injury in the rat. * Co-first authors - [&] Co-corresponding authors. Cell Mol Neurobiol (2020), 40(7):1087-1103. doi: 10.1007/s10571-020-00794-6.

41. González P*[&], González-Fernández C*, Campos-Martín Y, Mollejo M, Carballosa-Gautam M, Marcillo A, Norenberg M, **Rodríguez FJ**[&]. *Frizzled 1 and Wnt1 as new potential therapeutic targets in the traumatically injured spinal cord.* * Co-first authors - [&] Co-corresponding authors. Cell Mol Life Sci (2020), 77(22):4631-4662. doi: 10.1007/s00018-019-03427-4.

42. Maqueda A[&], **Rodríguez FJ**[&]**.** *Efficacy of human HC016 cell grafts in tissue preservation and functional recovery in a rat model of acute spinal cord injury.* [&] Co-corresponding authors. J Tissue Eng Regen Med (2020), 14(2):319-333.

43. González-Fernández C*[&], González P*[&], **Rodríguez FJ**[&]. *New insights into Wnt signaling alterations in amyotrophic lateral sclerosis: a potential therapeutic target?.* * Co-first authors - [&] Co-corresponding authors. Neural Regen Res (2020), 15(9):1580-1589.

44. Diez-Ahedo R, Márquez-Posadas MC, Mendibil X, Quintana I, González F, **Rodríguez FJ**, Zilic L, Sherborne C, Glen A, Taylor CS, Claeyssens F, Haycock JW, Schaafsmad W, González E , Castro B, Merino S. *UV-casting on methacrylated PCL for production of a peripheral nerve implant containing an array of porous aligned microchannels.* Polymers (2020), 12(4):971.

45. ***González P*[&]; González-Fernández C*[&]; Rodríguez FJ***[&]. "*Effects of Wnt5a Overexpression in Spinal Cord Injury*". * Co-first authors - [&] Co-corresponding authors. Journal of Cellular and Molecular Medicine (2021), 25(11):5150-5163.

46. Mendibil X*; ***Gonzalez-Perez***[*] **F**; Bazán X; Diez-Ahedo R; Quintana I; ***Rodríguez FJ***; Basnett P; Nigmatullin R; Lukasiewicz B; Roy I; Taylor C; Glen A; Claeyssens F; Haycock J; Schaafsma W; González E; Castro B; Duffy P; Merino S. "*A bioresorbable and mechanically optimized nerve guidance conduit based on a naturally derived medium chain length polyhydroxyalkanoate and poly(ε-caprolactone) blend*". * Co-first authors. ACS Biomaterials Science & Engineering (2021), 7(2):672-689.

Patents:

1. **Use of Leptin to treat the spinal cord injury and related neuropathic pain.**
   Authors: M. Carmen Fernández Martos and F. Javier Rodríguez.
   Filed by: Fundación Hospital Nacional de Parapléjicos para la Investigación y la Integración (FUHNPAIIN).
   Application number: P201130261; ES2395370.
   Priority claim: 12/02/2013.
   Priority country: Spain.

2. **Implantable Nerve Guidance Conduit for Nerve Repair.**
   Authors: M. Carmen Fernández Martos and F. Javier Rodríguez.
   Filed by: IK4-Tekniker, The University of Westminster, The University of Sheffield and HNP-SESCAM.
   Application number: PCT/EP2018/054984PCT/EP2018/054984.
   Priority claim: 28/12/2018.
   Priority country: United Kingdon, Spain.