MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

CV date	02/10/2025

Part A. PERSONAL INFORMATION

First name	Rosa María		
Family name	Giráldez-Pérez		
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-9495-1047		

(*) Mandatory

A.1. Current position

Position	Profesora Titular de Universidad por Ciencias de la Salud	
Initial date	2019	
Institution	Universidad de Córdoba	
Department/Center	Biología Celular Fisiología e Inmunología	Facultad de Ciencias
Key words	Nanotechnology, Nanomedicine, Physiology, Neuroscience	

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
2002-2003	Seville Provincial Council 2002-2003
2004-2007; 2010-2017	Researcher and Research Staff at the University of Seville
2008-2010	Postdoctoral Researcher Carlos III Institute (CIBERNED)
2017-2019	Teaching and Research Staff University of Málaga

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Biological Sciences	University of Seville	2002
PhD Fisiología y Neurociencia	University of Seville	2008

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

Total citations Scopus 489, Google Scholar: 593; 87 co-authors. 124 publications highlighting: 6 Books, 24 book chapters. Papers indexed in JCR: 29: 27 Q1 and 14 Open Access. The percentage of score is higher than 80% of Researchgate members. 7,065 reads. h-index: 11. Index Scholar: 12 Doctor in Physiology and Neuroscience. Accredited to a University holder. Directors of numerous final degree and master's projects. Reviewer of journals (Q1) such Journal of Personalized Medicine, International Journal of Molecular Sciences, Medicina, Biomedicines, Metabolites, International Journal of Environmental Research and Public Health, Brain Sciences, Nutrients, Pharmaceuticals, Genes and Pharmaceutic. Research work has allowed more than 107 publications, presentations and communications in national and international congresses, as well as articles in international journals, most of them as first author. In addition, with books, book chapters, articles, scientific research and innovation journals, video graphic scripts and didactic materials, all with her ISBN.

Her work has been carried out thanks to her participation as a researcher in various I+D+I Projects, excellence and aid for the consolidation of groups. The training received includes a doctoral program with a mention of quality and a set of complementary studies, generic knowledge updating courses and specialization in biology, neuroscience and neurodegeneration, Nanotechnology and Biotechnology. To complete her postdoctoral training, she undergoes a 14-month stay in the Neurobiology Unit of the Ramón y Cajal Hospital, Madrid. Cyber of Neurodegenerative Diseases-(CIBERNED) with research carried out in neurodegenerative diseases with production of two articles. In addition to another 10-month stay in the Department of Cell Biology, Genetics and Physiology and hired under the excellence project of the Junta de Andalucía reference: p09-cvi-4617, with research has been developed with an animal model deficient in FMRP and that shows similar symptoms to individuals who suffer from Fragile X Syndrome, with the production of a paper plus a Master's thesis. Other stays at (IBIMA) Regional University Hospital of Malaga, UGC Mental health, with the study of

the distribution of nitric oxide in the central nervous system. Other collaborations carried out with various groups, including the Department of Experimental Psychology of the US with studies on the distribution of cfos in the telencephalon of the golden carp, after conducting behavioral tests from which a publication in congresses is derived. and preparation of a paper. Another collaboration maintained is with the Andalusian Center for Development Biology (CABD) of the CSIC in Seville, in the group led by Dr. Carvajal in the research line of Functional Genomics, mouse transgenesis and skeletal muscle formation. The work has culminated in several international communications and a paper published in the prestigious CELL REPORTS magazine. At present I am a member of the group of FQM 386: "Synthesis and Physicochemistry of Nanoparticles", led by Rafael Prado Gotor, carrying out studies of fluorescent gold nanoparticles for the efficient transport and release of genes and drugs into the cell. Development of biosensors and nanosystem internalization studies in different organisms complemented with toxicity studies. These studies extend to a collaboration with IBIMA Researchers in the study of new therapies for Diabetes, they have generated two Patents, one of them International registered with file number PCTP201930118 and another registered at the national level with application number P201930486, Participated by the SAS, IBIMA UMA and US.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications *(see instructions)*

Books

1. **Giráldez Pérez, Rosa María**, Gaytan Guía, Susana Pilar, Pasaro Dionisio, M. Rosario. Cartography of the Central Nervous System in golden carp (C. auratus) Histochemical and immunohistochemical study. Systems of coneurotransmission of cholinergic and nitrogen cell groups. Spanish Academic Editorial. LAP LAMBERT Academic Publishing GmbH & Co. 2012. 276. ISBN ISBN-13: 978-3-8484-7190-4ISBN-10: 3848471906 EAN: 9783848471904.
2. **Giráldez Pérez, Rosa María**, Luque Lao, Maria de los Angeles, Gaytan Guía, Susana Pilar. Semi-dry Transfer of Proteins. Immunodetection, Development and Capture of Images. Seville. Spain. Secretariat of Audiovisual Resources and New Technologies of the University of Seville. 2015. ISBN 978-84-16326-70-9.
3. G**iráldez Pérez, Rosa María**, Luque Lao, Maria de los Angeles, Gaytan Guía, Susana Pilar: Acrylamide Gel Electrophoresis. Seville. Spain. Secretariat of Audiovisual Resources and New Technologies of the University of Seville. 2015. ISBN 978-84-16326-71-6
4. **Giráldez Pérez, Rosa María**, Luque Lao, Maria de los Angeles, Morcuende, Sara, Gaytan Guía, Susana Pilar: CARDIOVASCULAR PHYSIOLOGY: BIOPHYSICAL BASES. Hemodynamics. Santander (SPAIN). Secretariat of Audiovisual Resources and New Technologies, University of Seville. 2013. ISBN 978-84-15881-32-2.

Publication in scientific journal (JCR) "peer review"

1. **Giráldez-Pérez, R.M**., Grueso, E. M., Montero-Hidalgo, A. J., Muriana-Fernández, C., Kuliszewska, E., Luque, R. M., & Prado-Gotor, R. (2025). Daunomycin Nanocarriers with High Therapeutic Payload for the Treatment of Childhood Leukemia. Pharmaceutics, 17(9), 1236. https://doi.org/10.3390/pharmaceutics17091236
2. Yolanda de Diego-Otero; Rajaa El Bekay; Francisco García-Guirado; Lourdes Sánchez-Salido; **Rosa María Giráldez-Pérez**. Apocynin, a Selective NADPH Oxidase (Nox2) Inhibitor, Ameliorates Behavioural and Learning Deficits in the Fragile X Syndrome Mouse Model. Biomedicines 2024, 12, 2887.
3. Lhamyani, S., Gentile, A. M., Mengual-Mesa, M., Grueso, E., **Giráldez-Pérez, R. M**., Fernandez-Garcia, J. C., Vega-Rioja, A., Clemente-Postigo, M., Pearson, J. R., González-Mariscal, I., Olveira, G., Bermudez-Silva, F. J., & El Bekay, R. 2024. Au@16-pH-16/miR-21 mimic nanosystem: An efficient treatment for obesity through browning and thermogenesis induction. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie, 171, 116104. https://doi.org/10.1016/j.biopha.2023.116104 **R.M 5ª position / 13 authors**
4. **Giráldez-Pérez, RM,** Grueso-Molina, Elia María, Carbonero-Martínez, Alfonso, Álvarez-márquez, Juan, Kuliszewska, Edyta, Gordillo-macías, Mirian, Prado-Gotor, Rafael. **Synergistic** Antibacterial Effects of Amoxicillin and Gold Nanoparticles: A Therapeutic Option to Combat Antibiotic Resistance. Antibiotics. 2023. Vol: 12. Núm: 8. https://doi.org/10.3390/antibiotics12081275. **AC: Giráldez-Pérez, R.M 1ª position / 7 authors.**
5. **Giráldez-Pérez RM,** Grueso E, Montero-Hidalgo AJ, Luque RM, Carnerero JM, Kuliszewska E, Prado-Gotor R. Gold Nanosystems Covered with Doxorubicin/DNA Complexes: A Therapeutic

Target for Prostate and Liver Cancer. Int J Mol Sci. 2022 Dec 8;23(24):15575. doi: https://doi.org/10.3390/ijms232415575. **AC: Giráldez-Pérez, R.M 1ª position / 7 authors.**

6. **Giráldez-Pérez RM,** Grueso EM, Jiménez-Aguayo R, Carbonero A, González-Bravo M, Kuliszewska E, Prado-Gotor R. Use of Nanoparticles to Prevent Resistance to Antibiotics-Synthesis and Characterization of Gold Nanosystems Based on Tetracycline. Pharmaceutics. 2022 Sep 14;14(9):1941. doi: https://doi.org/10.3390/pharmaceutics14091941. **AC: Giráldez-Pérez, R.M 1ª position / 7 authors.**
7. Lhamyani, S., Gentile, A.-M**., Giráldez-Pérez, R.M**., et. al., R. miR-21 mimic blocks obesity in mice: A novel therapeutic option Molecular Therapy - Nucleic Acids, 2021, 26, pp. 401–416. https://doi.org/10.1016/j.omtn.2021.06.019. **AC: Thinaones and El Bekay. Giráldez-Pérez, R.M Third position / 16 authors.**
8. Grueso Molina, Elia María, **Giráldez Pérez, Rosa María**, Kuliszewska, Edyta, Guerrero, Jesús A., Prado Gotor, Rafael. Reversible Cationic Gemini Surfactant-Induced Aggregation of Anionic Gold Nanoparticles for Sensing Biomolecules. En: Colloids and Surfaces. A, Physicochemical and Engineering Aspects. 2021. Vol. 610. Núm. 125893. https://doi.org/10.1016/j.colsurfa.2020.125893. **AC: Elia Grueso; Giráldez-Pérez, R.M 1ª position shared with Elia Grueso / 5 authors.**
9. Gomes, Axel, Carnerero Panduro, José María, Jimenez Ruiz, Aila, Grueso Molina, Elia María, **Giráldez Pérez, Rosa María**, et. al.. Lysozyme-AuNPs Interactions: Determination of Binding Free Energy. En: Nanomaterials. 2021. Vol. 11. Núm. 8. https://doi.org/10.3390/nano11082139. **AC: Rafael Prado-Gotor; fifth position / 6 authors**
10. **Giráldez Pérez, Rosa María**, Grueso Molina, Elia María, Domínguez García, Inmaculada, Pastor Carrillo, Nuria María, Kuliszewska, Edyta, et. al.Biocompatible DNA/5-Fluorouracil-Gemini Surfactant-Functionalized Gold Nanoparticles as Promising Vectors in Lung Cancer Therapy. En: Pharmaceutics. 2021. Vol. 13. Núm. 3. https://doi.org/10.3390/pharmaceutics13030423. **AC: Giráldez-Pérez, R.M. y Elia Grueso; first position shared with R. Giráldez-Pérez/ 7 authors**
11. Requena Domenech, Francisco, Campos, María Joana A.p.m., Martínez Marín, Andres Luis, Camacho, Rocio, **Giráldez Pérez, Rosa María**, et. al.:Assessment of Age Effects on Ovarian Hemodynamics Using Doppler Ultrasound and Progesterone Concentrations in Cycling Spanish Purebred Mares. En: Animals. 2021. Vol. 11. Núm. 2339. Pag. 1-7. https://doi.org/10.3390/ani11082339. **AC: Requena F; fifht/ position shared with R. Giráldez-Pérez/ 7**
12. Perez Tejeda, Mª Pilar, Martínez Delgado, Alberto, Grueso Molina, Elia María, **Giráldez Pérez, Rosa María**.Measuring nanoparticle-induced resonance energy transfer effect by electrogenerated chemiluminescent reactions. En: RSC Advances. 2020. Vol. 10. Pag. 3861-3871. https://doi.org/10.1039/c9ra08857a. **AC: M. P. Pérez-Tejeda; Fourth d position / 4 authors.**
13. **Giráldez-Pérez, Rosa María**; Grueso-Molina, Elia María; Lhamyani, Said; Perez-Tejeda, Mª Pilar; Gentile, Adriana Mariel; Kuliszewska, Edyta; Roman-perez, Jessica; El Bekay, Rajaa. 2020. miR-21/gemini Surfactant-capped Gold Nanoparticles as Potential Therapeutic Complexes: Synthesis, Characterization and in Vivo. Nanotoxicity Probes. Journal of Molecular Liquids. 313, pp. 1-12. https://doi.org/10.1016/j.molliq.2020.113577
    AC: Elia Grueso; M. P. Pérez-Tejeda and Rajaa El Bekay; **first position shared with Giráldez-Pérez, R.M / 8 authors**
14. Grueso Molina, Elia María, **Giráldez Pérez, Rosa María**, Perez Tejeda, Mª Pilar, Roldán González, Emilio, Prado Gotor, Rafael. What controls the unusual melting profiles of small AuNPs/DNA complexes. En: Physical Chemistry Chemical Physics. 2019. Vol. 21. Pag. 11019-11032. https://doi.org/10.1039/c9cp01162e. **AC: Elia Grueso; second position/ 5 authors.**
15. Clemente Postigo, Mercedes, Oliva Olivera, Wilfredo, Coin Araguez, Leticia, Ramos Molina, Bruno, **Giráldez Pérez, Rosa María**, et. al. Metabolic endotoxemia promotes adipose dysfunction and inflammation in human obesity. En: American Journal of Physiology: Endocrinology and Metabolism. 2018. Vol. 316. Núm. 2. https://doi.org/10.1152/ajpendo.00277.2018. **AC: Cardona; second position/ 5 authors.fifth position/11 authors.**
16. Grueso Molina, Elia María, Perez Tejeda, Mª Pilar, **Giráldez Pérez, Rosa María**, Prado Gotor, Rafael, Prado Gotor, Rafael, et. al. Ethanol effect on Gold Nanoparticle aggregation state and its implication in the interaction mechanism with DNA. En: Journal of Colloid and Interface Science.

2018. Vol. 529. Pag. 65-76.: https://doi.org/10.1016/j.jcis.2018.05.108. **AC: Elia Grueso; Third position Giráldez Pérez, Rosa María / 5 authors.**

17. Perez Tejeda, Mª Pilar, Grueso Molina, Elia María, Marín, Ana, Torres, Concepción, **Giráldez Pérez, Rosa María**. Aqueous Gold Nanoparticle Solutions for Improved Efficiency in Electrogenerated Chemiluminescent Reactions. En: ACS Applied Nano Materials. 2018. DOI: 10.1021/acsanm.8b01323. **AC: Pérez-Tejeda, M. P.; Giráldez Pérez, Rosa María fourth / 4 authors.**
18. Grueso Molina, Elia María, Roldán González, Emilio, Perez Tejeda, Mª Pilar, Kuliszewska, Edyta, Molero, Blanca, **Giráldez Pérez, Rosa**. Reversible DNA compaction induced by partial intercalation of 16-Ph-16 gemini surfactants: evidence of triple helix formation. En: Physical Chemistry Chemical Physics. 2018. Vol. 20. Núm. 38. Pag. 24902-24914. https://doi.org/10.1039/C8cp02791a. **AC: Elia Grueso; Giráldez Pérez RM seventh position / 7 authors.**
19. Lewis, Annabelle, Freeman Mills, Luke, De la Calle Mustienes, Elisa, **Giráldez Pérez, Rosa** María, Davis, Hayley, et. al. A Polymorphic Enhancer near GREM1 Influences Bowel Cancer Risk through Differential CDX2 and TCF7L2 Binding. En: Cell Reports. 2014. Vol. 8. Núm. 8. Pag. 983-990. https://doi.org/10.1016/j.celrep.2014.07.020. **AC: Tomlinson. Giráldez-Pérez, R.M Fourth position / 16 authors.**
20. **Giráldez Pérez, Rosa María**, Antolín Vallespín, Mónica, Muñoz, María Dolores, Sánchez Capelo, Amelia. Review/Reseña: Models of α-synuclein aggregation in Parkinson´s disease. En: Acta Neuropathologica Communications. 2014. Vol. 2. Núm. 176. Pag. 1-17. https://doi.org/10.1186/s40478-014-0176-9. **AC: Sánchez Capelo. Giráldez-Pérez, R.M First. position / 4 authors**.
21. **Giráldez Pérez, Rosa María**, Feijóo Cuaresma, Mónica, Ávila Martín, María Nieves, Heredia Farfán, Raúl, De Diego Otero, Yolanda, et. al.. Males but not females show differences in calbindin immunoreactivity in the dorsal thalamus of the mouse model of fragile X syndrome. En: The Journal of Comparative Neurology. 2012. Vol. 521. Pag. 894-9. https://doi.org/10.1002/cne.23209. **AC: Guirado. Giráldez-Pérez, R.M First. position / 7 authors.**
22. Tapia González, Silvia, **Giráldez Pérez, Rosa María**, Cuartero Desviat, M Isabel, Casarejos, M José, Mena, M Ángeles, et. al. Dopamine and α-synuclein dysfunction in Smad3 null mice. En: Molecular Neurodegeneration. 2011. Vol. 1. Núm. 1. Pag. 6-72. https://doi.org/10.1186/1750-1326-6-72. **AC: Sánchez Capelo. Giráldez-Pérez, R.M Second. position / 7authors.**

C.2. Research projects

1. Study of the effect of the microrna21-gold nanoparticles complex on browning: a new therapeutic tool for obesity and insulin resistance. Code: PI18 / 00785. Scope of the project: National. Funding program: Carlos III Institute (Health Research Projects) Funding entity: Ministry of Science, State Research Agency. Ministry of Science, Innovation and Universities. Responsible: Rajaa ElBekay. Date 01/01 / 2019-31 / 12/2021. Amount 98000 €.
2. Angiogenesis as a Limiting Factor for Adipose Tissue Expansion. Relationship with obesity and insulin resistance Code: PI13 / 02628 International. Financing program: PI13 / 02628 of the Carlos III Institute of the Ministry of Science, Innovation and Universities. Funding entity: PI13 / 02628 of the Carlos III Institute of the Ministry of Science, Innovation and Universities. Responsible: Rajaa ElBekay.
3. P10CTS05704, New therapeutic targets for Fragile X Syndrome: molecular mechanisms mediated by Rho-GTPases and NADPH-oxidase proteins, experimental trials in transgenic animal models and in humans. Since 01/11/2016. € 250,000. Responsable; Y. de Diego Otero.
4. P09CVI4617, Neural Bases of Decision Making and Codification of Movements Junta de Andalucía. Since 03/02/2010. € 204,445. 7. Mechanisms of neurotoxicity induced by TGF-b1 in Parkinson's disease. Ministry of Education and Science. Since 01/01/2007. € 104,650.
5. Ligand / Receptor Interactions in Nanoparticles and Biopolymers: lectrochemiluminescent, Photoluminescent and Structural Studies. Code: 2018/00000502 and Organic 1804031703 Project scope: National Financing program: VII Own Plan Financing entity: University of Seville Responsible: Pilar Pérez Tejeda. 12. Start date: 04/04/2018 End date: 12/31/2018 Total amount (EUROS): 4000.

C.4. Contracts, technological or transfer merits

1. International Patent: P20130118. Nanosystem based on microRNA for the treatment of obesity 02/15/2019. University of Malaga, University of Seville, IBIMA and SAS.

2. National Patent: Sánchez-capelo, Amelia; ROSA MARÍA GIRÁLDEZ PÉREZ; Tapia-gonzález, Silvia. New use of iMAO-B for the treatment of TGFbeta / Smad3 deficiency Fundación para la Investigación Biomédica del Hospital Universitario Ramón y Cajal and CIBERNED