



MINISTERIO
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Publicaciones en las que ha participado el Servicio de Microscopía Láser Confocal y Multidimensional *in vivo* del CIB Margarita Salas (SMC-CIB) en los últimos 10 años.

Juan Ignacio Jiménez-Loygorri, Álvaro Viedma-Poyatos, Raquel Gómez-Sintes and Patricia Boya. [2024]. Urolithin A promotes p62-dependent lysophagy to prevent acute retinal neurodegeneration. *Molecular Neurodegeneration* (2024) 19:49
<https://doi.org/10.1186/s13024-024-00739-3>

Juan Ignacio Jiménez-Loygorri, Beatriz Villarejo-Zori, Álvaro Viedma-Poyatos, Juan Zapata-Muñoz, Rocío Benítez-Fernández, María Dolores Frutos-Lisón, Francisco A. Tomás-Barberán, Aurora Gomez-Duran, Juan Carlos Espín, Estela Area-Gómez & Patricia Boya. [2024]. Mitophagy curtails cytosolic mtDNA dependent activation of cGAS/STING inflammation during aging. *Nature Communications* | (2024) 15:830. <https://doi.org/10.1038/s41467-024-45044-1>

Enrique Bravo, Marion Arce, Honorato Ribeiro-Vidal, David Herrera and Mariano Sanz. [2024]. The Impact of *Candida albicans* in the Development, Kinetics, Structure, and Cell Viability of Biofilms on Implant Surfaces-An In Vitro Study with a Validated Multispecies Biofilm Model. *Int. J. Mol. Sci.* 2024, 25, 3277. <https://doi.org/10.3390/ijms25063277>

Rosa Antón, Miguel Á. Treviño, David Pantoja-Uceda, Sara Félix, María Babu, Eurico J. Cabrita, Markus Zweckstetter, Philip Tinnefeld, Andrés M. Vera & Javier Oroz. [2024]. Alternative low-populated conformations prompt phase transitions in polyalanine repeat expansions. *Nature Communications* | (2024) 15:1925. <https://doi.org/10.1038/s41467-024-46236-5>

Patricia González-Jiménez, Sofía Duarte, Alma E. Martínez, Elena Navarro-Carrasco, Vasiliki Lalioti, María A. Pajares, Dolores Pérez-Sala. [2023]. Vimentin single cysteine residue acts as a tunable sensor for network organization and as a key for actin remodeling in response to oxidants and electrophiles. *Redox Biology* 64 (2023) 102756.
<https://doi.org/10.1016/j.redox.2023.102756>

Ignacio Ramírez-Pardo, Beatriz Villarejo-Zoria, Juan Ignacio Jiménez-Loygorria, Elena Sierra-Filardia, Sandra Alonso-Gila, Guillermo Mariño, Pedro de la Villa, Patrick S Fitzee, José Manuel Fuentes, Ramón García-Escuderoi, Deborah A. Ferringtonl, Raquel Gomez-Sintesa, and Patricia Boya. [2023]. Ambra1 haploinsufficiency in CDI mice results in metabolic alterations and exacerbates age-associated retinal degeneration. *Autophagy*. 2023, VOL. 19, NO. 3, 784–804. <https://doi.org/10.1080/15548627.2022.2103307>

Jaime Carrasco, Rosa Antón, Alejandro Valbuena, David Pantoja-Uceda, Mayur Mukhi, Rubén Hervás, Douglas V. Laurents, María Gasset & Javier Oroz. [2023]. Metamorphism in TDP-43 prion-like domain determines chaperone recognition. *Nature Communications* 14:466.
<https://doi.org/10.1038/s41467-023-36023-z>

Enrique Bravo, Benjamín Serrano, Honorato Ribeiro-Vidal, Leire Virto, Ignacio Sanz Sánchez, David Herrera, Mariano Sanz. [2023]. Biofilm formation on dental implants with a hybrid surface microtopography: An in vitro study in a validated multispecies dynamic biofilm model. *Clinical Oral Implants Research*. 2023;00:1–11. <https://doi.org/10.1111/clr.14054>

Andrea Alonso-Español, Enrique Bravo, Honorato Ribeiro-Vidal, Leire Virto, David Herrera, Bettina Alonso and Mariano Sanz. [2023]. The Antimicrobial Activity of Curcumin and Xanthohumol on Bacterial Biofilms Developed over Dental Implant Surfaces. *Int. J. of Molecular Sciences* 24, 2335. <https://doi.org/10.3390/ijms24032335>

Begoña Monterroso, Miguel Ángel Robles-Ramos, Marta Sobrinos-Sanguino, Juan Román Luque-Ortega, Carlos Alfonso, William Margolin, Germán Rivas and Silvia Zorrilla. [2023]. Bacterial division ring stabilizing ZapA versus destabilizing SlmA modulate FtsZ switching between biomolecular condensates and polymers. *Open Biol.* 13(3). 220324. <https://doi.org/10.1098/rsob.220324>

Álvaro Viedma-Poyatos, Patricia González-Jiménez, María A. Pajares, Dolores Pérez-Sala. [2022]. Alexander disease GFAP R239C mutant shows increased susceptibility to lipoxidation and elicits mitochondrial dysfunction and oxidative stress. *Redox Biology* 55 (2022). 102415. <https://doi.org/10.1016/j.redox.2022.102415>

Alonso Sánchez-Cruz, Alberto Hernández-Pinto, Concepción Lillo, Carolina Isiegas, Miguel Marchena, Ignacio Lizasoain, Fátima Bosch, Pedro de la Villa, Catalina Hernández-Sánchez and Enrique J. de la Rosa. [2022]. Insulin receptor activation by proinsulin preserves synapses and vision in retinitis pigmentosa. *Cell Death and Disease* (2022) 13:383. <https://doi.org/10.1038/s41419-022-04839-0>

Irene Lois-Bermejo, Patricia González-Jiménez, Sofia Duarte, María A. Pajares and Dolores Pérez-Sala. [2022]. Vimentin Tail Segments Are Differentially Exposed at Distinct Cellular Locations and in Response to Stress. *Front. Cell Dev. Biol.*, Vol.10, 08 June 2022. <https://doi.org/10.3389/fcell.2022.908263>

María Isabel Arjona, Marta Duch, Alberto Hernández-Pinto, Patricia Vázquez, Juan Pablo Aguil, Rodrigo Gómez-Martínez, Mariano Redondo-Horcajo, Ezhil Amirthalingam, Llúisa Pérez-García, Teresa Suárez, José A. Plaza. [2022]. Intracellular Mechanical Drugs Induce Cell-Cycle Altering and Cell Death. *Advanced Materials*. Volume34, Issue17 April 27, 2022. <https://doi.org/10.1002/adma.202109581>

Vasiliki Lalioti, Silvia González-Sanz, Irene Lois-Bermejo, Patricia González-Jiménez, Álvaro Viedma-Poyatos, Andrea Merino, María A. Pajares & Dolores Pérez-Sala. [2022]. Cell surface detection of vimentin, ACE2 and SARS-CoV-2 Spike proteins reveals selective colocalization at primary cilia. *Scientific Reports* volume 12, Article number: 7063 (2022). <https://doi.org/10.1038/s41598-022-11248-y>

María Ángeles Abengózar, María Fernández-Reyes, Vivian A. Salazar, Marc Torrent, Beatriz G. de la Torre, David Andreu, Ester Boix and Luis Rivas. [2021]. Essential Role of Enzymatic Activity in the Leishmanicidal Mechanism of the Eosinophil Cationic Protein (RNase 3). *ACS Infect. Dis.* <https://doi.org/10.1021/acsinfecdis.1c00537>.

Inés Maestro, Laura R de la Ballina, Anne Simonsen, Patricia Boya and Ana Martínez. [2021]. Phenotypic Assay Leads to Discovery of Mitophagy Inducers with Therapeutic Potential for Parkinson's Disease. *ACS Chem Neurosci.* 2021 Dec 15;12(24):4512-4523. <https://doi.org/10.1021/acscchemneuro.1c00529>.

Consuelo Gajate, Odile Gayet, Nicolas A. Fraunhoffer, Juan Iovanna, Nelson Dusetti and Faustino Mollinedo. [2021]. Induction of Apoptosis in Human Pancreatic Cancer Stem Cells by the Endoplasmic Reticulum-Targeted Alkylphospholipid Analog Edelfosine and Potentiation by Autophagy Inhibition. *Cancers* 2021,13, 6124. <https://doi.org/10.3390/cancers13236124>

Grigas, J., Montoya, M., Simkute, E., Buitkus, M., Zagrabskaite, R., Pautienius, A., Razukevicius, D., Jonaitis, L.V., Kiudelis, G., Skieceviciene, J., Vaiciuniene, R., Stankuviene, A., Bumblyte, I.A., Kupcinskas, J., Stankevicius, A. [2021]. Molecular characterization and seroprevalence of hepatitis e virus in inflammatory bowel disease patients and solid organ transplant recipients. *Viruses*. 13. <https://doi.org/10.3390/v13040670>

Robles-Ramos MÁ, Zorrilla S, Alfonso C, Margolin W, Rivas G, Monterroso B. [2021]. Assembly of bacterial cell division protein FtsZ into dynamic biomolecular condensates. *BBA- Mol Cell Res.* 1868, 118986. <https://doi.org/10.1016/j.bbamcr.2021.118986>

Silvia González-Sanz, Odei Barreñada, Eduardo Rial, Miguel A. Briño-Enriquez & Jesús del Mazo. [2020]. The antiandrogenic vinclozolin induces differentiation delay of germ cells and changes in energy metabolism in 3D cultures of fetal ovaries. *Nature Research. Scientific Reports* (2020) 10:18036. <https://doi.org/10.1038/s41598-020-75116-3>

Bartolomé, R.A., Pintado-Berninches, L., Jaén, M., de Los Ríos, V., Imbaud, J.I., Casal, J.I. [2020]. SOSTDC1 promotes invasion and liver metastasis in colorectal cancer via interaction with ALCAM/CD166. *Oncogene*. 39:6085-6098. <https://doi.org/10.1038/s41388-020-01419-4>

Robles-Ramos MÁ, Margolin W, Sobrinos-Sanguino M, Alfonso C, Rivas G, Monterroso B, Zorrilla S. [2020]. The Nucleoid Occlusion Protein SImA Binds to Lipid Membranes. *mBio*. 11(5):e02094-20. <https://doi.org/10.1128/mBio.02094-20>

Natalia S. Fagali, Marcos A. Madrid, Blanca T. Pérez Maceda, María E. López Fernández, Rosa M. Lozano Puerto, Mónica Fernández Lorenzo de Mele [2020]. “Effect of degradation products of iron-bioresorbable implants on the physiological behavior of macrophages in vitro”. *Metallomics*. <https://doi.org/10.1039/D0MT00151A>

Álvarez-Lindo N, Baleriola J, de Los Ríos V, Suárez T, de la Rosa EJ. [2019]. RAG-2 deficiency results in fewer phosphorylated histone H2AX foci, but increased retinal ganglion cell death and altered axonal growth. *Sci Rep*. 9:18486. <https://doi.org/10.1038/s41598-019-54873-w>

Sofia Duarte, Álvaro Viedma-Poyatos, Elena Navarro-Carrasco, Alma E. Martínez, María A. Pajares, & Dolores Pérez-Sala. [2019]. Vimentin filaments interact with the actin cortex in mitosis allowing normal cell division. *NATURE COMMUNICATIONS*. 10:4200. <https://doi.org/10.1038/s41467-019-12029-4>

Monterroso B, Zorrilla S, Sobrinos-Sanguino M, Robles-Ramos MA, López-Álvarez M, Margolin W, Keating CD, Rivas G. [2019]. Bacterial FtsZ protein forms phase-separated condensates with its nucleoid-associated inhibitor SImA. *EMBO Rep*. 20(1). pii: e45946. <https://doi.org/10.15252/embr.201845946>

Monterroso B, Zorrilla S, Sobrinos-Sanguino M, Robles-Ramos MÁ, Alfonso C, Söderström B, Meiresonne NY, Verheul J, den Blaauwen T, Rivas G. [2019]. The Bacterial DNA Binding Protein MatP Involved in Linking the Nucleoid Terminal Domain to the Divisome at Midcell Interacts with Lipid Membranes. *MBio*. 10(3). pii: e00376-19.
<https://doi.org/10.1128/mBio.00376-19>

Fernández-Calleja V., Fernández-Nestosa M.J., Hernández P., Schwartzman J.B. and D.B. Krimer [2019]. CRISPR/Cas9-mediated deletion of the Wiskott-Aldrich syndrome locus causes actin cytoskeleton disorganization in murine erythroleukemia cells. *PeerJ* 7:e6284.
<https://doi.org/10.7717/peerj.6284>

Kamal, Khaled Y., Herranz, Raúl, van Loon, Jack J.W.A., Medina, F. Javier [2019]. Cell cycle acceleration and changes in essential nuclear functions induced by simulated microgravity in a synchronized Arabidopsis cell culture. *Plant, Cell & Environment*. 42:480-494-.
<https://doi.org/10.1111/pce.13422>

Lima, M.L., Abengózar, M.A., Nácher-Vázquez, M., Martínez-Alcázar, M.P., Barbas, C., Tempone, A.G., López-González, A., Rivas, L. [2018]. Drug repurposing for Leishmania. Molecular basis of the leishmanicidal activity of the antidepressant sertraline. *Antimicrobial Agents and Chemotherapy*. <https://doi.org/10.1128/AAC.01928-18>

Pérez-Maceda, Blanca; López-Fernández, María Encarnación; Díaz, Ivan; Kavanaugh, Aaron; Billi, Fabrizio; Escudero, María; Garcia-Alonso, María Cristina; Lozano, Rosa M. [2018]. "Macrophage biocompatibility of CoCr wear particles produced under polarization in hyaluronic acid aqueous solution". *Materials* 11, 756. <https://doi.org/10.3390/ma11050756>

Sánchez-Cruz A, Villarejo-Zori B, Marchena M, Zaldivar-Díez J, Palomo V, Gil C, Lizasoain I, de la Villa P, Martínez A, de la Rosa EJ, Hernández-Sánchez C. [2018]. Modulation of GSK-3 provides cellular and functional neuroprotection in the rd10 mouse model of retinitis pigmentosa. *Mol Neurodegener*. 13, 19. <https://doi.org/10.1186/s13024-018-0251-y>

BT Pérez-Maceda, ME López-Fernández, I Díaz, A. Kavanaugh, F. Billi, ML Escudero, MC García-Alonso, & RM Lozano I. (2017). Osteoblasts MC3T3-E1 Response in 2D and 3D Cell Cultures Models to High Carbon Content CoCr Alloy Particles. Effect of Metallic Particles on Vimentin Expression. *Journal of Materials Science Research*; Vol. 6, No. 4. <https://doi.org/10.5539/jmsr.v6n4p41>

Sobrinos-Sanguino M, Zorrilla S, Keating CD, Monterroso B, Rivas G. [2017]. Encapsulation of a compartmentalized cytoplasm mimic within a lipid membrane by microfluidics. *Chem Commun (Camb)*. 53(35):4775-4778. <https://doi.org/10.1039/c7cc01289f>

Abengózar, M.A., Cebrián, R., Saugar, J.M., Gárate, T., Valdivia, E., Martínez-Bueno, M., Maqueda, M., Rivas, L. [2017]. Enterocin AS-48 as evidence for the use of bacteriocins as new leishmanicidal agents. *Antimicrobial Agents and Chemotherapy*. 61:-.
<https://doi.org/10.1128/AAC.02288-16>

María Platón-Corchado, Pablo F Barcelona, Sean Jmaeff, Miguel Marchena, Alberto M Hernández-Pinto, Catalina Hernández-Sánchez, H Uri Saragovi and Enrique J de la Rosa [2017]. p75 NTR antagonists attenuate photoreceptor cell loss in murine models of retinitis pigmentosa. *Cell Death and Disease*, 8, e2922 <https://doi.org/10.1038/cddis.2017.306>

Carlos Perea-Resa, Cristian Carrasco-López, Rafael Catalá, Veronika Turčková, Ondrej Novak, Weiping Zhang, Leslie Sieburth, José Manuel Jiménez-Gómez, and Julio Salinas. [2016]. The LSM1-7 Complex Differentially Regulates Arabidopsis Tolerance to Abiotic Stress Conditions by Promoting Selective mRNA Decapping. *The Plant Cell*, Vol. 28: 505–520, American Society of Plant Biologists

Isiegas C, Marinich-Madzarevich JA, Marchena M, Ruíz JM, Cano MJ, de la Villa P, Hernández-Sánchez C, de la Rosa EJ, De Pablo F. [2016]. Intravitreal injection of Proinsulin-loaded microspheres delays photoreceptor cell death and vision loss in the rd10 mouse model of Retinitis Pigmentosa. *Invest. Ophthalmol. Vis. Sci.* 57, 3610-3618 <https://doi.org/10.1167/iovs.16-19300>

Florencia Alvarez,†, Rosa M. Lozano Puerto, Blanca Pérez-Maceda, Claudia A. Grillo and Mónica Fernández Lorenzo de Mele. [2016]. Time-Lapse Evaluation of Interactions Between Biodegradable Mg Particles and Cells. *Microscopy and Microanalysis*. Microscopy Society of America. Vol 22. Issue 1. 1-12. <https://doi.org/10.1017/S1431927615015597>.

Begoña Monterroso, Silvia Zorrilla, Marta Sobrinos-Sanguino, Christine D. Keating & Germán Rivas [2016]. Microenvironments created by liquid-liquid phase transition control the dynamic distribution of bacterial division FtsZ protein. *Scientific Reports* | 6:35140 | <https://doi.org/10.1038/srep35140>

Elisa J. Cabré, Begoña Monterroso, Carlos Alfonso, Alicia Sánchez-Gorostiaga, Belén Reija, Mercedes Jiménez, Miguel Vicente, Silvia Zorrilla, Germán Rivas. [2015]. The Nucleoid Occlusion SImA Protein Accelerates the Disassembly of the FtsZ Protein Polymers without Affecting Their GTPase Activity. *PLOS ONE* | <https://doi.org/10.1371/journal.pone.0126434>.

Torras N, Aguil JP, Vázquez P, Duch M, Hernández-Pinto AM, Samitier J, de la Rosa EJ, Esteve J, Suárez T, Pérez-García L, Plaza JA [2015]. Suspended Planar-Array Chips for Molecular Multiplexing at the Microscale. *Adv Mater* <https://doi.org/10.1002/adma.201504164>