

## BIOLOGIA MOLECULAR DE PROTOZOOS PARASÍTICOS

- Egui A., Ledesma D., Pérez-Antón E., Montoya A., Gómez I., Robledo S.M., Infante J.J., Vélez I.D., López M.C. Thomas M.C. "Phenotypic and functional profiles of antigen-specific CD4+ and CD8+ T cells associated with infection control in patients with cutaneous leishmaniasis". *Front Cell Infect Microbiol* (2018) Nov19;8:393. doi: 10.3389/fcimb.2018.00393.
- Egui A., Lasso P., Pérez-Antón E., Thomas M.C.\* , López M.C.\* "Dynamics of T cells repertoire during *Trypanosoma cruzi* infection and its post-treatment modulation". *Curr Med Chem* 2018 Nov 1.doi: 10.2174/0929867325666181101111819. \* Corresponding authors.
- Pérez-Antón E, Egui A, Thomas M.C., Puerta CJ, González J.M., Cuéllar A, Segovia M, López M.C. "Impact of benznidazole treatment on the functional response of *Trypanosoma cruzi* antigen-specific CD4+CD8+ T cells in chronic Chagas disease patients". *PLoS Neglected Tropical Diseases* 12(5):e0006480 (2018).
- Risueño J., Spitzová T., Bernal L.J., Muñoz C., López M.C., Thomas M.C., Infante J.J., Volf P., Berriatua E. 1"Longitudinal monitoring of anti-saliva antibodies as markers of repellent efficacy to *Phlebotomus perniciosus* and *P. papatasii* in dogs. *Medical and Veterinary Entomology*. (2018) Nov 18. doi: 10.1111/mve.12343
- "Biology of *Trypanosoma cruzi* retrotransposons: from an enzymatic to a structural point of view". F. Macías, R. Afonso-Lehmann1, M.C. López, I. Gómez1, M.C. Thomas. Review. *Current in Genomics* (2018) Feb; 19(2):110-118. doi: 10.2174/1389202918666170815150738.
- Ledesma D, Berriatua E, Thomas MC, Bernal LJ, Ortuño M, Benítez C, Egui A, Papasouliotis K, Tenant B, Chambers J, Infante JJ, López MC. "Performance of *Leishmania* PFR1 recombinant antigen in serological diagnosis of asymptomatic canine leishmaniosis by ELISA". *BMC Vet Res*. 2017 Oct 23;13(1):304. doi: 10.1186/s12917-017-1224-z.
- Egui A, Lasso P, Thomas MC, Carrilero B, González JM, Cuéllar A, Segovia M, Puerta CJ, López MC. "Expression of inhibitory receptors and polyfunctional responses of T cells are linked to the risk of congenital transmission of *T. cruzi*". *PLoS Negl Trop Dis*. 2017 Jun 9;11(6):e0005627. doi: 10.1371/journal.pntd.0005627. eCollection 2017
- Montenegro M, Cuervo C, Cardenas C, Duarte S, Díaz JR, Thomas MC, Lopez MC, Puerta CJ. Identification of a type I nitroreductase gene in non-virulent *Trypanosoma rangeli*. *Mem Inst Oswaldo Cruz*. 2017 Jul;112(7):504-509. doi: 10.1590/0074-02760160532.
- Mateus J, Pérez-Antón E, Lasso P, Egui A, Roa N, Carrilero B, González JM, Thomas MC, Puerta CJ, López MC, Cuéllar A. Antiparasitic Treatment Induces an Improved CD8+ T Cell Response in Chronic Chagasic Patients. *J Immunol*. 2017 Apr 15;198(8):3170-3180. doi: 10.4049/jimmunol.1602095.
- Requena JM, Rastrojo A, Garde E, López MC, Thomas MC, Aguado B. Dataset for distribution of SIDER2 elements in the *Leishmania* major genome and transcriptome. *Data Brief*. 2017 Jan 10;11:39-43. doi: 10.1016/j.dib.2017.01.001. eCollection 2017
- Fernandez-Orgiler, A.; Martínez-Jimenez, M.; Alonso, A.; Alcolea, P.; Requena, J.M.; Thomas, M. C.; Blanco, L.; Larraga, V. "A putative *Leishmania* DNA polymerase theta

- protects the parasite against oxidative damage" *Nucleic Acids Research*, 44(10):4855-70 (2016). doi: 10.1093/nar/gkw346.
- Requena, J.M; Rastrojo, A.; Garde, E.; López, M.C.; Thomas, M.C.; Aguado, B. Genomic cartography and proposal nomenclature for the repeated, interspersed elements of the Leishmania major SIDER 2 family and identification of SIDER2-containing transcripts. *Mol Biochem Parasitol* 212:9-15 (2017). doi: 10.1016/j.molbiopara.206.12.009.
  - Lasso, P., Beltran, L., Guzman, F., Rosas, F., Thomas M.C., López, M.C., González, J.M., Cuellar, A., Puerta, C.J. "Promiscuous recognition of a Trypanosoma cruzi CD8+ T cell epitope among HLA-A2, HLA-A24 and HLA-A1 supertypes in chagasic patients". *PLoS One*, 11(3):e0150996 (2016). doi: 10.1371/journal.pone.0150996.
  - Fernandez-Villegas, A., Thomas, M.C., Carrilero, B., Lasso, P., Egui, A., Murcia, Laura; Segovia, Manuel; Alonso, Carlos; Lopez, Manuel C. A 12mer repetitive antigenic epitope from *T. cruzi* is a potential marker of therapeutic efficacy in chronic Chaga's disease. *J Antimicrob Chemother*. 71:2005-9, (2016). doi:10.1093/jac/dkw090.
  - Macías, F., López, M.C., Thomas, M.C. The trypanosomatid Pr77-hallmark contains a downstream promoter element essential for transcription activity of the Trypanosoma cruzi L1Tc retrotransposon. *BMC Genomics* 17:105 (2016). DOI 10.1186/s 12864-016-2427-6. 2016.
  - Lasso P, Cárdenas C, Guzmán F, Rosas F, Thomas MC, López MC, González JM, Cuellar A, Campanera JM, Luque FJ, Puerta CJ. Effect of secondary anchor amino acid substitutions on the immunogenic properties of an HLA-A\*0201-restricted T cell epitope derived from the Trypanosoma cruzi KMP-11 protein. *Peptides* 78:68-76 (2016). Doi: 10.1016/peptides.2016. A.
  - Afonso-Lehmann RN, Thomas MC, Santana-Morales MA, Déniz D, López MC, Valladares B, Martínez-Carretero E. A DEVH-box RNA Helicase from Leishmania braziliensis is Associated to mRNA Cytoplasmic Granules. *Protist*. 166(4):457-67 (2015). doi: 10.1016/j.protis.2015.07.002. ISSN 1618-0941.
  - Lasso P, Mateus J, Pavía P, Rosas F, Roa N, Thomas MC, López MC, González JM, Puerta CJ, Cuéllar A. Inhibitory Receptor Expression on CD8+ T Cells Is Linked to Functional Responses against Trypanosoma cruzi Antigens in Chronic Chagasic Patients. *J Immunol*. 195(8):3748-58 (2015). doi: 10.4049/jimmunol.1500459. ISSN 1550-6606.
  - Pinazo M.J., Thomas M.C., Bustamante, J., Correira de Almeida I., López M.C., Gascon J. Biomarkers of therapeutic responses in chronic Chagas disease: state of the art and future perspectives. *Mem Inst Oswaldo Cruz*, Rio de Janeiro: 1-11, (2015). Doi: 10.1590/0074-02760140435 110 (3):422-32.
  - Egui, A., Thomas M.C., Carrilero B., Segovia M., Alonso C., Marañón C., López M.C. Differential phenotypic and functional profiles of TcCA-2-specific cytotoxic CD8+ T cells in the asymptomatic versus cardiac phase in chagasic patients. *PLOS one* (2015) DOI:10.1371/journal.pone.0122115, 2015. A.
  - Finkelsztein E.J., Diaz-Soto J.C., Vargas-Zambrano J.C., Suesca E., Guzmán F., López M.C., Thomas M.C., Forero-Shelton M., Cuellar A., Puerta C.J. Altering the motility of Trypanosoma cruzi with rabbit polyclonal anti-peptide antibodies reduces infection to susceptible mammalian cells. *Experimental Parasitology*, 150:36-43 (2015). doi: 10.1016/j.exppara.2015.01.007.
  - Fernandez-Villegas A., Thomas M.C., Carrilero B., Téllez C., Marañón C., Murcia L., Moralo S., Alonso C., Segovia M., López M.C. The innate immune response status correlates with a divergent clinical course in congenital Chagas disease of twins born in

- a non-endemic country. *Acta Tropica* 140C:84-90 (2014). doi: 10.1016/j.actatropica.2014.08.006.
- Sanchez-Luque, F.J., López, M.C., Carreira, P., Alonso, C., Thomas, M.C. The broad expansion of Hepatitis Deltha Virus-like ribozyme through trypanosomatid genomes is linked to the spreading of the L1Tc/ingi clade mobile element. *BMC Genomics*, 15:340 DOI: 10.1186/1471-2164-15-340 (2014).
  - Pinazo M.J., Thomas M.C., Bua J., Perrone A., Schijman A., Viotti R., Ramsey J., Ribeiro I., Sosa-Estani S., López M.C., Gascon J. Biological markers for evaluating therapeutic efficacy in Chagas disease, a systematic review. *Expert Review of Anti-infective Therapy* 12(4):479-496 (2014). doi: 10.1586/14787210.2014.899150. R.
  - Díaz-Bello Z.; Thomas M.C., López M.C. Zavala-Jaspe R., Noya O., Alarcón de Noya B., Abate T. Trypanosoma cruzi genotyping supports the common source of infection in a school-related oral outbreak of acute Chagas disease in Venezuela. *Epidemiology and Infection*. 142(1):156-62 (2014). doi: 10.1017/S0950268813000757.
  - Montenegro M., Cardenas C., Cuervo C., Bernal C., Grisard E.C., Thomas M.C., Lopez M.C., Puerta C.J. Molecular characterization of calcineurin B from the non-virulent Trypanosoma rangeli kinetoplastid indicates high gene conservation. *Molecular Biology Reports*. 40(8):4901-12 (2013). doi: 10.1007/s11033-013-2590-7.
  - Muñoz-Calderón A., Díaz-Bello Z., Valladares B., Noya O., López M.C., Alarcón de Noya B., Thomas M.C. Oral transmission of Chagas disease: Typing of Trypanosoma cruzi from five outbreaks occurred in Venezuela shows multiclonal and common infections in patients, vectors and reservoirs. *Infection, Genetics and Evolution*. 17:113-122 (2013). doi: 10.1016/j.meegid.2013.03.036.
  - Marañón C., Egui A., Fernández-Villegas A., Carrilero B., Thomas M.C., Segovia M., López M.C. Benznidazole treatment reduces the induction of indoleamine 2, 3-dioxygenase (IDO) enzymatic activity in Chagas disease symptomatic patients. *Parasite Immunology*. 35:180-187 (2013). doi: 10.1111/pim.12030.
  - Cuervo C.L., Thomas M.C., Lopez M.C., Puerta C.J. Sequence polymorphism in the Trypanosoma rangeli HSP70 coding genes allows typing of the parasite KP1(+) and KP1(-) groups. *Experimental Parasitology*. 133:447-453 (2013). doi: 10.1016/j.exppara.2013.01.001.
  - Murcia L., Carrilero B., Muñoz-Davila M.J., Thomas M.C., López M.C., Segovia M. Risk factors and primary prevention of congenital Chagas disease in a non-endemic country. *Clinical Infectious Diseases*. 56(4):496-502 (2013). doi: 10.1093/cid/cis910. A.
  - López M.C., Thomas M.C. Biomarkers for pathology and therapeutic efficacy in Chagas disease. *Berenice Newsletters* 2:3 (2014).
  - Gómez-Pérez V, Manzano JI, García-Hernández R, Castanys S, Campos Rosa JM, Gamarro F. 4-Amino bis-pyridinium derivatives as novel antileishmanial agents. *Antimicrobial Agents and Chemotherapy* 58: 4103-4112. 2014.
  - Manzano JI, Lecerf-Schmidt F, Lespinasse M-A, Di Pietro A, Castanys S, Boumendjel A, Gamarro F. Identification of specific reversal agents for Leishmania ABC14-mediated antimony resistance by flavonoid and trolox derivative screening. *Journal of Antimicrobial Chemotherapy* 69: 664-672. 2014.
  - Manzano JI, García-Hernández R, Castanys S, Gamarro F. A new ABC half-transporter in Leishmania is involved in resistance to antimony. *Antimicrobial Agents and Chemotherapy* 57: 3719-3730. 2013.

- Campos-Salinas J, León-Guerrero D, González-Rey E, Delgado M, Castanys S, Pérez-Victoria JM, Gamarro F. LABC2, a new ABC transporter implicated in phosphatidylserine exposure is involved in the infectivity and pathogenicity of Leishmania. *PLOS Neglected Tropical Diseases* 7(4): e2179. 2013.
- Gamarro F, Sanchez-Cañete MP, Castanys S. Mechanisms of miltefosine resistance in Leishmania. In: Drug Resistance in Leishmania parasites. Consequences, molecular mechanisms and possible treatments (Ponte-Sucre A and Padrón-Nieves M eds) Part V Pharmacology and Chemotherapy of leishmaniasis. pp 351-379. DOI:10.1007/878-3-7091-1125-3\_17, Springer-Verlag Wien. 2013
- Alberto Rastrojo, Raquel García-Hernández, Paola Vargas, Esther Camacho, Laura Corvo, Hideo Imamura, Jean-Claude Dujardin, Santiago Castanys, Begoña Aguado, Francisco Gamarro\*, Jose M Requena\*. Genomic and transcriptomic alterations in Leishmania donovani lines experimentally resistant to antileishmanial drugs. *International Journal of Parasitology: Drugs and Drug Resistance*. 2018, 8:246-264.
- Rubén Perandrés-López, María P. Sánchez-Cañete, Francisco Gamarro and Santiago Castanys. Functional role of highly-conserved residues of the N-terminal tail and first transmembrane segment of a P4-ATPase. *Biochemical Journal*. 2018. 475:887-899.
- Ana Perea, José Ignacio Manzano, Yasuhisa Kimura, Kazumitsu Ueda, Santiago Castanys, Francisco Gamarro. Leishmania LABC2 transporter is involved in ATP-dependent transport of thiols. *Biochemical Journal*. 2018. 475:87-97.
- Talia Arcari, José Ignacio Manzano, Francisco Gamarro. ABCI3, a new mitochondrial ABC transporter from Leishmania major involved in susceptibility to antimonials and infectivity. *Antimicrobial Agents and Chemotherapy*. 2017. 61(12). pii: e01115-17. doi: 10.1128/AAC.01115-17.
- Alicia Ponte Sucre, Francisco Gamarro, Jean-Claude Dujardin, Michael P. Barrett, Rogelio López-Vélez, Raquel García-Hernández, Andrew W. Pountain, Roy Mwenechanya, Barbara Papadopoulou. Drug resistance and treatment failure in leishmaniasis: A XXI century challenge. *PLoS Negl Trop Dis*. 2017. 11(12):e0006052. doi: 10.1371/journal.pntd.0006052.
- ThanhTruc Pham, Madeline Walden, Christopher Butler, Rosario Diaz Gonzalez, Guiomar Pérez, Gloria Ceballos-Pérez, Veronica Gomez-Pérez, Raquel García-Hernández, Henry Zecca, Emma Krakoff, Brian Kopec, Caden Mackenzie, Marika Pitot, Luis Miguel Ruiz, Francisco Gamarro, Dolores González-Pacanowska, Miguel Navarro, Amy B. Dounay\*. Novel 1,2-dihydroquinazolin-2-ones: Design, synthesis, and biological evaluation against Trypanosoma brucei. *Bioorg. Med. Chem. Lett.* 2017. 27(16):3629-3635. doi: 10.1016/j.bmcl.2017.07.032.
- José Ignacio Manzano, Ana Perea, David León-Guerrero, Jenny Campos-Salinas, Lucia Piacenza, Santiago Castanys and Francisco Gamarro. Leishmania LABC1 and LABC2 transporters are involved in virulence and oxidative stress: functional linkage with autophagy. *Parasites and Vectors*. 2017. 10(1):267. doi: 10.1186/s13071-017-2198-1.
- José Ignacio Manzano, Florent Cochet, Benjamin Boucherle, Verónica Gómez-Pérez, Ahcène Boumendjel, Francisco Gamarro, Marine Peuchmaur. Arylthiosemicarbazones as Antileishmanial agents. *European Journal of Medicinal Chemistry*. 2016, 123:161-170. doi: 10.1016/j.ejmech.2016.07.014.
- Efres Belmonte-Reche, Marta Martínez-García, Pablo Peñalver, Verónica Gómez-Pérez, Ricardo Lucas, Francisco Gamarro, José María Pérez-Victoria, Juan Carlos Morales. Tyrosol and hydroxytyrosol derivatives as antitrypanosomal and antileishmanial

- agents. European Journal of Medicinal Chemistry. 2016, 119:132-140. doi: 10.1016/j.ejmech.2016.04.047.
- Verónica Gómez Pérez, Raquel García Hernandez, Victoriano Corpas López, Ana M. Tomás, Joaquina Martín Sanchez, Santiago Castanys and Francisco Gamarro. Resistance to antimonials in *Leishmania infantum* from a dog with leishmaniasis. International Journal of Parasitology: Drugs and Drug Resistance. 2016, 6:133-139. doi:10.1016/j.ijpddr.2016.04.003.
  - Ana Perea, José Ignacio Manzano, Santiago Castanys and Francisco Gamarro. LABC2 transporter from the protozoan parasite *Leishmania* is involved in antimony resistance Antimicrobial Agents and Chemotherapy. 2016, 60(6):3489-96. doi: 10.1128/AAC.02813-15.
  - Annelies Mondelaers, Maria P. Sanchez-Cañete, Sarah Hendrickx, Eline Eberhardt, Raquel Garcia-Hernandez, Laurence Lachaud, James Cotton, Mandy Sanders, Bart Cuypers, Hideo Imamura, Jean-Claude Dujardin, Peter Delputte, Paul Cos, Guy Caljon, Francisco Gamarro, Santiago Castanys, Louis Maes. Genomic and molecular characterization of miltefosine resistance in *Leishmania infantum* strains with either natural or acquired resistance through experimental selection of intracellular amastigotes. PLOs One. 2016, 11(4):e0154101. doi: 10.1371/journal.pone.0154101.
  - Oliver Callies, María P. Sánchez-Cañete, Francisco Gamarro, Ignacio A. Jiménez, Santiago Castanys, and Isabel L. Bazzocchi. Optimization by Molecular Fine Tuning of Dihydro- $\beta$ -agarofuran Sesquiterpenoids as Reversers of P-glycoprotein-Mediated Multidrug Resistance. Journal of Medicinal Chemistry. 2016, 59(5):1880-90. doi: 10.1021/acs.jmedchem.5b01429.
  - Luis Carvalho, Marta Martínez-García, Ignacio Pérez-Victoria, José Ignacio Manzano, Vanessa Yardley, Francisco Gamarro\* and José M. Pérez-Victoria\*. The oral antimalarial drug tafenoquine shows activity against *Trypanosoma brucei*. Antimicrobial Agents and Chemotherapy. 2015, 59:6151-6160. doi:10.1128/AAC.00879-15.
  - Raquel García-Hernández, Verónica Gómez-Pérez, Santiago Castanys and Francisco Gamarro. Fitness of *Leishmania donovani* parasites resistant to drug combinations. PLoS Negl Trop Dis. 2015, 9(4): e0003704. doi:10.1371/journal.pntd.0003704
  - Oliver Callies, María P. Sánchez-Cañete, Francisco Gamarro, Ignacio A. Jiménez, Santiago Castanys, and Isabel L. Bazzocchi. Restoration of Chemosensitivity in P-Glycoprotein-dependent Multidrug Resistant Cells by Dihydro- $\beta$ -agarofuran Sesquiterpenes from *Celastrus vulcanicola*. J. Nat. Prod. 2015, 78(4):736-45. doi: 10.1021/np500903a.
  - Elena M. Sánchez-Fernández, Verónica Gómez-Pérez, Raquel García-Hernández, José Manuel García Fernández, Gabriela B. Plata, José M. Padrón, Carmen Ortiz Mellet, Santiago Castanys, Francisco Gamarro. Antileishmanial activity of sp2-iminosugar derivatives. RSC Advances. 2015, 5:21812.
  - Maya Berg, Raquel García-Hernández, Bart Cuypers, Manu Vanaerschot, José I. Manzano, José A. Poveda, José A. Ferragut, Santiago Castanys, Jean-Claude Dujardin, Francisco Gamarro. Experimental resistance to drug combinations in *Leishmania donovani*: metabolic and phenotypic adaptations. Antimicrobial Agents and Chemotherapy. 2015. 59:2242-2255. doi:10.1128/AAC.04231-14.
  - María Ángeles Abengózar, Luis A. Bustos; Raquel García-Hernández, Pilar Fernández de Palencia, Ricardo Escarcena, Santiago Castanys, Esther del Olmo, Francisco Gamarro,

- Arturo San Feliciano; Luis Rivas. The substituted  $\beta$ -aminoalcohol moiety as a versatile scaffold for chemotherapy against Leishmania. Unraveling its mechanisms of action. *Antimicrobial Agents and Chemotherapy*. 2015, 59:1211-1218.
- Verónica Gómez-Pérez, José I. Manzano, Raquel García-Hernández, Santiago Castanys, Francisco Gamarro, Joaquín M. Campos. Design, synthesis and anti-leishmanial activity of novel symmetrical bispyridiniumcyclophanes. *European Journal of Medicinal Chemistry*. 2015, 89:362-369.
  - Annang F, Pérez-Moreno G, García-Hernández R, Cordon-Obras C, Martín J, Tormo J R, Rodríguez L, de Pedro N, Gómez-Pérez V, Valente M, Reyes F, Genilloud O, Vicente F, Castanys S, Ruiz-Pérez LM, Navarro M, Gamarro F, González-Pacanowska D. High throughput screening platform for Natural Product-based drug discovery against three Neglected Tropical Diseases: human African trypanosomiasis, leishmaniasis and Chagas disease. *Journal of Biomolecular Screening*. 2015, 20:82-91. DOI: 10.1177/
  - Verónica Gómez-Pérez, José Ignacio Manzano, Raquel García-Hernández, Santiago Castanys, Joaquín Ma Campos Rosa, Francisco Gamarro. 4-Amino bis-pyridinium derivatives as novel antileishmanial agents. *Antimicrobial Agents and Chemotherapy*. 2014, 58(7):4103-12. doi: 10.1128/AAC.02481-13.
  - Sebastián García-Sánchez, María P. Sánchez-Cañete, Francisco Gamarro and Santiago Castanys. Functional role of evolutionarily highly conserved residues, N-glycosylation level and domains of the Leishmania miltefosine transporter-Cdc50 subunit. *Biochemical Journal*, 2014, 459 (1): 83-94.
  - Manzano, J.I., Florine Lecerf-Schmidt, Marie-Ange Lespinasse, Attilio Di Pietro, Santiago Castanys, Ahcène Boumendjel, Gamarro, F. Identification of specific reversal agents for Leishmania ABCI4-mediated antimony resistance by flavonoid and trolox derivative screening . *Journal Antimicrobial Chemotherapy*, 2014, 69(3):664-72.
  - Jenny Campos-Salinas, David León-Guerrero, Elena González-Rey, Mario Delgado, Santiago Castanys, José M. Pérez-Victoria and Francisco Gamarro. LABC2, a new ABC transporter implicated in phosphatidylserine exposure is involved in the infectivity and pathogenicity of Leishmania. *PLoS Negl Trop Dis*. 2013. Apr 25; 7(4):e2179.
  - Manzano, J.I., García-Hernández, R., Castanys, S., Gamarro, F. A new ABC half-transporter in Leishmania is involved in resistance to antimony. *Antimicrobial Agents and Chemotherapy*, 2013, 57(8):3719-30.
  - Yagüe-Capilla M, García-Caballero D, Aguilar-Pereyra F, Castillo-Acosta VM, Ruiz-Pérez LM, Vidal AE, González-Pacanowska D. Base excision repair plays an important role in the protection against nitric oxide- and in vivo-induced DNA damage in *Trypanosoma brucei*. *Free Radic Biol Med*. 2018 Nov 22;131:59-71. doi: 10.1016/j.freeradbiomed.2018.11.025.
  - Annang F, Pérez-Victoria I, Pérez-Moreno G, Domingo E, González I, Tormo JR, Martín J, Ruiz-Pérez LM, Genilloud O, González-Pacanowska D, Vicente F, Reyes F. MDN-0185, an Antiplasmodial Polycyclic Xanthone Isolated from *Micromonospora* sp. CA-256353. *J Nat Prod*. 2018 Jul 27;81(7):1687-1691. doi: 10.1021/acs.jnatprod.8b00323.
  - Schiafino-Ortega S, Baglioni E, Pérez-Moreno G, Marco PR, Marco C, González-Pacanowska D, Ruiz-Pérez LM, Carrasco-Jiménez MP, López-Cara LC. 1,2-Diphenoxiethane salts as potent antiplasmodial agents. *Bioorg Med Chem Lett*. 2018 Aug 1;28(14):2485-2489. doi: 10.1016/j.bmcl.2018.05.060.
  - Annang F, Pérez-Victoria I, Appiah T, Pérez-Moreno G, Domingo E, Martín J, Mackenzie T, Ruiz-Pérez L, González-Pacanowska D, Genilloud O, Vicente F, Agyare C, Reyes F.

- Antiprotozoan sesterterpenes and triterpenes isolated from two Ghanaian mushrooms. *Fitoterapia*. 2018 Jun;127:341-348. doi: 10.1016/j.fitote.2018.03.016.
- Castillo-Acosta VM, Balzarini J, González-Pacanowska D. Surface Glycans: A Therapeutic Opportunity for Kinetoplastid Diseases: (Trends in Parasitology 2017). *Trends Parasitol*. 2017 Dec;33(12):1003-1004. doi: 10.1016/j.pt.2017.09.005.
  - García-Caballero D, Pérez-Moreno G, Estévez AM, Ruíz-Pérez LM, Vidal AE, González-Pacanowska D. Insights into the role of endonuclease V in RNA metabolism in Trypanosoma brucei. *Sci Rep*. 2017 Aug 17;7(1):8505. doi: 10.1038/s41598-017-08910-1.
  - Timm J, Valente M, García-Caballero D, Wilson KS, González-Pacanowska D. Structural Characterization of Acidic M17 Leucine Aminopeptidases from the TriTryps and Evaluation of Their Role in Nutrient Starvation in Trypanosoma brucei. *mSphere*. 2017 Aug 16;2(4). pii: e00226-17. doi: 10.1128/mSphere.00226-17.
  - Castillo-Acosta VM, Balzarini J, González-Pacanowska D. Surface Glycans: A Therapeutic Opportunity for Kinetoplastid Diseases. *Trends Parasitol*. 2017 Oct;33(10):775-787. doi: 10.1016/j.pt.2017.06.009. Epub 2017 Jul 28. Review. Erratum in: *Trends Parasitol*. 2017 Dec;33(12):1003-1004.
  - Pham T, Walden M, Butler C, Diaz-Gonzalez R, Pérez-Moreno G, Ceballos-Pérez G, Gomez-Pérez V, García-Hernández R, Zecca H, Krakoff E, Kopec B, Ichire O, Mackenzie C, Pitot M, Ruiz LM, Gamarro F, González-Pacanowska D, Navarro M, Dounay AB. Novel 1,2-dihydroquinazolin-2-ones: Design, synthesis, and biological evaluation against Trypanosoma brucei. *Bioorg Med Chem Lett*. 2017 Aug 15;27(16):3629-3635. doi: 10.1016/j.bmcl.2017.07.032.
  - Valente M, Timm J, Castillo-Acosta VM, Ruiz-Pérez LM, Balzarini T, Nettleship JE, Bird LE, Rada H, Wilson KS, González-Pacanowska D. Cell cycle regulation and novel structural features of thymidine kinase, an essential enzyme in Trypanosoma brucei. *Mol Microbiol*. 2016 Nov;102(3):365-385. doi: 10.1111/mmi.13467.
  - Castillo-Acosta VM, Ruiz-Pérez LM, Etxebarria J, Reichardt NC, Navarro M, Igarashi Y, Liekens S, Balzarini J, González-Pacanowska D. Carbohydrate-Binding Non-Peptidic Pradimicins for the Treatment of Acute Sleeping Sickness in Murine Models. *PLoS Pathog*. 2016 Sep 23;12(9):e1005851.
  - Requena CE, Pérez-Moreno G, Horváth A, Vértesy BG, Ruiz-Pérez LM, González-Pacanowska D, Vidal AE. The nucleotidohydrolases DCTPP1 and dUTPase are involved in the cellular response to decitabine. *Biochem J*. 2016 Sep 1;473(17):2635-43.
  - Pérez-Moreno G, Cantizani J, Sánchez-Carrasco P, Ruiz-Pérez LM, Martín J, El Aouad N, Pérez-Victoria I, Tormo JR, González-Menendez V, González I, de Pedro N, Reyes F, Genilloud O, Vicente F, González-Pacanowska D. Discovery of New Compounds Active against Plasmodium falciparum by High Throughput Screening of Microbial Natural Products. *PLoS One*. 2016 Jan 6;11(1):e0145812.
  - Timm J, Bosch-Navarrete C, Recio E, Nettleship JE, Rada H, González-Pacanowska D, Wilson KS. Structural and Kinetic Characterization of Thymidine Kinase from Leishmania major. *PLoS Negl Trop Dis*. 2015 May 15;9(5):e0003781. doi: 10.1371/journal.pntd.0003781.
  - Castillo-Acosta VM, Ruiz-Pérez LM, Van Damme EJ, Balzarini J, González-Pacanowska D. Exposure of Trypanosoma brucei to an N-acetylglucosamine-binding lectin induces VSG switching and glycosylation defects resulting in reduced infectivity. *PLoS Negl Trop Dis*. 2015 Mar 6;9(3):e0003612. doi: 10.1371/journal.pntd.0003612.

- Veiga-Santos P, Li K, Lameira L, de Carvalho TM, Huang G, Galizzi M, Shang N, Li Q, Gonzalez-Pacanowska D, Hernandez-Rodriguez V, Benaim G, Guo RT, Urbina JA, Docampo R, de Souza W, Oldfield E. SQ109, a new drug lead for Chagas disease. *Antimicrob Agents Chemother*. 2015 Apr;59(4):1950-61. doi: 10.1128/AAC.03972-14.
- Annang F, Pérez-Moreno G, García-Hernández R, Cordon-Obras C, Martín J, Tormo JR, Rodríguez L, de Pedro N, Gómez-Pérez V, Valente M, Reyes F, Genilloud O, Vicente F, Castanys S, Ruiz-Pérez LM, Navarro M, Gamarro F, González-Pacanowska D. High-throughput screening platform for natural product-based drug discovery against 3 neglected tropical diseases: human African trypanosomiasis, leishmaniasis, and Chagas disease. *J Biomol Screen*. 2015 Jan;20(1):82-91.
- Martín J, Crespo G, González-Menéndez V, Pérez-Moreno G, Sánchez-Carrasco P, Pérez-Victoria I, Ruiz-Pérez LM, González-Pacanowska D, Vicente F, Genilloud O, Bills GF, Reyes F. MDN-0104, an antiplasmodial betaine lipid from *Heterospora chenopodi*. *J Nat Prod*. 2014 Sep 26;77(9):2118-23.
- Rubio-Ruiz B, Castillo-Acosta VM, Pérez-Moreno G, Espinosa A, González-Pacanowska D, Ruiz-Pérez LM, Entrena A, Conejo-García A. In vitro antiplasmodial and cytotoxic activities of asymmetrical pyridinium derivatives. *Eur J Med Chem*. 2014 Oct 6;85:289-92.
- Gigante A, Priego EM, Sánchez-Carrasco P, Ruiz-Pérez LM, Vande Voorde J, Camarasa MJ, Balzarini J, González-Pacanowska D, Pérez-Pérez MJ. Microwave-assisted synthesis of C-8 aryl and heteroaryl inosines and determination of their inhibitory activities against *Plasmodium falciparum* purine nucleoside phosphorylase. *Eur J Med Chem*. 2014 Jul 23;82:459-65.
- Shang N, Li Q, Ko TP, Chan HC, Li J, Zheng Y, Huang CH, Ren F, Chen CC, Zhu Z, Galizzi M, Li ZH, Rodrigues-Poveda CA, Gonzalez-Pacanowska D, Veiga-Santos P, de Carvalho TM, de Souza W, Urbina JA, Wang AH, Docampo R, Li K, Liu YL, Oldfield E, Guo RT. Squalene synthase as a target for Chagas disease therapeutics. *PLoS Pathog*. 2014 May 1;10(5):e1004114.
- Aripirala S, Gonzalez-Pacanowska D, Oldfield E, Kaiser M, Amzel LM, Gabelli SB. Structural and thermodynamic basis of the inhibition of *Leishmania* major farnesyl diphosphate synthase by nitrogen-containing bisphosphonates. *Acta Crystallogr D Biol Crystallogr*. 2014 Mar;70(Pt 3):802-10. doi: 10.1107/S1399004713033221.
- Requena CE, Pérez-Moreno G, Ruiz-Pérez LM, Vidal AE, González-Pacanowska D. The NTP pyrophosphatase DCTPP1 contributes to the homoeostasis and cleansing of the dNTP pool in human cells. *Biochem J*. 2014 Apr 1;459(1):171-80. doi: 10.1042/BJ20130894.
- Timm J, González-Pacanowska D, Wilson KS. Structures of adenosine kinase from *Trypanosoma brucei brucei*. *Acta Crystallogr F Struct Biol Commun*. 2014 Jan;70(Pt 1):34-9. doi: 10.1107/S2053230X13033621. Epub 2013 Dec 24.
- Cordon-Obras C, Cano J, González-Pacanowska D, Benito A, Navarro M, Bart JM. *Trypanosoma brucei gambiense* adaptation to different mammalian sera is associated with VSG expression site plasticity. *PLoS One*. 2013 Dec 23;8(12):e85072. doi: 10.1371/journal.pone.0085072. eCollection 2013..
- Hemsworth GR, González-Pacanowska D, Wilson KS. On the catalytic mechanism of dimeric dUTPases. *Biochem J*. 2013 Nov 15;456(1):81-8.
- Castillo-Acosta VM, Vidal AE, Ruiz-Pérez LM, Van Damme EJ, Igarashi Y, Balzarini J, González-Pacanowska D. Carbohydrate-binding agents act as potent trypanocidals that

- elicit modifications in VSG glycosylation and reduced virulence in *Trypanosoma brucei*. *Mol Microbiol*. 2013 Nov;90(4):665-79. doi: 10.1111/mmi.12359.
- Hampton SE, Schipani A, Bosch-Navarrete C, Recio E, Kaiser M, Kahnberg P, González-Pacanowska D, Johansson NG, Gilbert IH. Investigation of acyclic uridine amide and 5'-amido nucleoside analogues as potential inhibitors of the *Plasmodium falciparum* dUTPase. *Bioorg Med Chem*. 2013 Sep 15;21(18):5876-85. doi: 10.1016/j.bmc.2013.07.004. Epub 2013 Jul 12.
  - 29: Cui H, Carrero-Lerida J, Silva AP, Whittingham JL, Brannigan JA, Ruiz-Pérez LM, Read KD, Wilson KS, González-Pacanowska D, Gilbert IH. Synthesis and evaluation of α-thymidine analogues as novel antimalarials. *J Med Chem*. 2012 Dec 27;55(24):10948-57. doi: 10.1021/jm301328h. Epub 2012 Dec 14. PubMed PMID: 23240776; PubMed Central PMCID: PMC3530961.
  - Castillo-Acosta VM, Aguilar-Pereyra F, García-Caballero D, Vidal AE, Ruiz-Pérez LM, González-Pacanowska D. Pyrimidine requirements in deoxyuridine triphosphate nucleotidohydrolase deficient *Trypanosoma brucei* mutants. *Mol Biochem Parasitol*. 2013 Jan;187(1):9-13. doi: 10.1016/j.molbiopara.2012.11.003.
  - Zuffo M, Stucchi A, Campos-Salinas J, Cabello-Donayre M, Martínez-García M, Belmonte-Reche E, PÉREZ-VICTORIA JM\*, Mergny JL, Freccero M, Morales JC\*, Doria F\*. Carbohydrate-naphthalene diimide conjugates as potential antiparasitic drugs: Synthesis, evaluation and structure-activity studies. *Eur J Med Chem*. 2019 Feb 1;163:54-66
  - Fernández-Pastor I, Martínez-García M, Medina-O'Donnell M, Rivas F\*, Martínez A, PÉREZ-VICTORIA J.M\*, Parra A\*. Semi-synthesis of w-hydroxyalkyl-carbonate derivatives of hydroxytyrosol as anti-trypanosome agents *J Nat Prod*. 2018 Sep 28;81(9):2075-2082.
  - Martínez-García M, Bart JM, Campos-Salinas J, Valdivia E, Martínez-Bueno M, González-Rey E, Navarro M, Maqueda M, Cebrián R\*, PÉREZ-VICTORIA JM\*. Autophagic-related cell death of *Trypanosoma brucei* induced by bacteriocin AS-48. *Int J Parasitol Drugs Drug Resist*. 2018 Mar 12;8(2):203-212.
  - Belmonte-Reche E, Martínez-García M, Guédin A, Zuffo M, Arévalo-Ruiz M, Doria F, Campos-Salinas J, Maynadier M, López-Rubio JJ, Freccero M, Mergny JL, PÉREZ-VICTORIA JM\*, Morales JC\*. G-Quadruplex Identification in the Genome of Protozoan Parasites Points to Naphthalene Diimide Ligands as New Antiparasitic Agents. *J Med Chem*. 2018 Feb 8;61(3):1231-1240.
  - Arévalo-Ruiz M, Doria F, Belmonte-Reche E, De Rache A, Campos-Salinas J, Lucas R, Falomir E, Carda M, PÉREZ-VICTORIA JM, Mergny JL, Freccero M\*, Morales JC\*. Synthesis, Binding Properties, and Differences in Cell Uptake of G-Quadruplex Ligands Based on Carbohydrate Naphthalene Diimide Conjugates. *Chemistry*. 2017 Feb 10;23(9):2157-2164.
  - Cabello-Donayre M, Malagarie-Cazenave S, Campos-Salinas J, Gálvez FJ, Rodríguez-Martínez A, Pineda-Molina E, Orrego LM, Martínez-García M, Sánchez-Cañete MP, Estévez AM, PÉREZ-VICTORIA JM\*. Trypanosomatid parasites rescue heme from endocytosed hemoglobin through lysosomal HRG transporters. *Mol Microbiol*. 2016 Sep;101(6):895-908.
  - Belmonte-Reche E, Martínez-García M, Peñalver P, Gómez-Pérez V, Lucas R, Gamarro F, PÉREZ-VICTORIA JM\* and Morales JC\*. "Tyrosol and hydroxytyrosol derivatives as

- antitrypanosomal and antileishmanial agents". *Eur J Med Chem*. 2016 Aug 25;119:132-40.
- Martínez-García M, Campos-Salinas J, Cabello Donayre, Pineda-Molina E, Gálvez FJ, Orrego LM, Sánchez-Cañete MP, Malagarie-Cazenave S, Koeller DM and PÉREZ-VICTORIA JM\*. "LmABCB3, an Atypical Mitochondrial ABC Transporter Essential for *Leishmania major* Virulence, Acts in Heme and Cytosolic Iron/Sulfur Clusters, Biogenesis". 2016 *Parasit. Vectors* \_9(1):7 doi: 10.1186/s13071
  - Carvalho L, Martínez-García M, Pérez-Victoria I, Manzano JI, Yardley V, Gamarro F and PÉREZ-VICTORIA JM\*. "The oral antimalarial drug tafenoquine shows activity against *Trypanosoma brucei*" 2015. *Antimicrob. Agents Ch.* 59(10):6151-6160.
  - Carvalho L, Morales JC, PÉREZ-VICTORIA JM\* y Pérez-Victoria I\*. "Hemolytic activity and solubilizing capacity of non-reducing trisaccharide fatty acid monoesters". 2015 *Eur J Pharm Biopharm.* \_92:139-45
  - Campos-Salinas J, León-Guerrero D, González-Rey E, Delgado M CastanysS, PÉREZ-VICTORIA JM\* and Gamarro F\* "LABCG2, a new ABC transporter implicated in phosphatidylserine exposure, is involved in the infectivity and pathogenicity of Leishmania" 2.013 *PLoS Negl Trop Dis* \_7(4): e2179
  - Mondelaers A, Sanchez-Cañete MP, Hendrickx S, Eberhardt E, Garcia-Hernandez R, Lachaud L, Cotton J, Sanders M, Cuypers B, Imamura H, Dujardin JC, Delputte P, Cos P, Caljon G, Gamarro F, Castanys S, Maes L. Genomic and Molecular Characterization of Miltefosine Resistance in *Leishmania infantum* Strains with Either Natural or Acquired Resistance through Experimental Selection of Intracellular Amastigotes. *PLoS One*. 11(4):e0154101. 2016
  - Annang F, Pérez-Moreno G, García-Hernández R, Cordon-Obras C, Martín J, Tormo JR, Rodríguez L, de Pedro N, Gómez-Pérez V, Valente M, Reyes F, Genilloud O, Vicente F, Castanys S, Ruiz-Pérez LM, Navarro M, Gamarro F, González-Pacanowska D. High-throughput screening platform for natural product-based drug discovery against 3 neglected tropical diseases: human African trypanosomiasis, leishmaniasis, and Chagas disease. *Journal of Biomolecular Screening*. 20(1):82-91. 2015
  - Mondelaers A, Sanchez-Cañete MP, Hendrickx S, Eberhardt E, Garcia-Hernandez R, Lachaud L, Cotton J, Sanders M, Cuypers B, Imamura H, Dujardin JC, Delputte P, Cos P, Caljon G, Gamarro F, Castanys S, Maes L. Genomic and Molecular Characterization of Miltefosine Resistance in *Leishmania infantum* Strains with Either Natural or Acquired Resistance through Experimental Selection of Intracellular Amastigotes. *PLoS One*. 11(4):e0154101. 2016
  - Berg M, García-Hernández R, Cuypers B, Vanaerschot M, Manzano JI, Poveda JA, Ferragut JA, Castanys S, Dujardin JC, Gamarro F. Experimental resistance to drug combinations in *Leishmania donovani*: metabolic and phenotypic adaptations. *Antimicrobial and Agents Chemotherapy* 59:2242-2255. 2015.
  - Abengózar MA, Bustos LA, García-Hernández R, Fernández de Palencia P, Escarcena R, Castanys S, del Olmo E, Gamarro F, San Feliciano A, Rivas L. Mechanisms of action of substituted β-amino alkanols on *Leishmania donovani*. *Antimicrobial and Agents Chemotherapy* 59:1211-1218. 2015.
  - Gómez-Pérez V, Manzano JI, García-Hernández R, Castanys S, Campos Rosa JM, Gamarro F. 4-Amino bis-pyridinium derivatives as novel antileishmanial agents. *Antimicrobial Agents and Chemotherapy* 58: 4103-4112. 2014.

- Gamarro F, Sanchez-Cañete MP, Castanys S. Mechanisms of miltefosine resistance in Leishmania. En: Drug Resistance in Leishmania parasites. Consequences, molecular mechanisms an possible treatments (Ponte-Sucre A and Padrón-Nieves M eds) Part V Pharmacology an Chemotherapy of leishmaniasis. pp 351-379. DOI:10.1007/878-3-7091-1125-3\_17, Springer-Verlag Wien. 2013.

## BIOQUIMICA Y BIOLOGIA MOLECULAR DE PLANTAS Y MICROORGANISMOS

- Calderón A, Lázaro-Payo A, Iglesias-Baena I, Camejo D, Lázaro JJ, Sevilla F, Jiménez A.Glutathionylation of Pea Chloroplast 2-Cys Prx and Mitochondrial Prx IIF Affects Their Structure and Peroxidase Activity and Sulfiredoxin Deglutathionylates Only the 2-Cys Prx. *Front Plant Sci.* 2017 Jan 31;8:118. doi: 10.3389/fpls.2017.00118. eCollection 2017.
- Sevilla F, Camejo D, Ortiz-Espín A, Calderón A, Lázaro JJ, Jiménez A.The thioredoxin/peroxiredoxin/sulfiredoxin system: current overview on its redox function in plants and regulation by reactive oxygen and nitrogen species.*J Exp Bot.* 2015 May;66(10):2945-55. doi: 10.1093/jxb/erv146. Epub 2015 Apr 6. Review.
- Lázaro JJ, Jiménez A, Camejo D, Iglesias-Baena I, Martí Mdel C, Lázaro-Payo A, Barranco-Medina S, Sevilla F. Dissecting the integrative antioxidant and redox systems in plant mitochondria. Effect of stress and S-nitrosylation.*Front Plant Sci.* 2013 Nov 28;4:460. doi: 10.3389/fpls.2013.00460. eCollection 2013.
- Lacal, J., Reyes-Darias, J.A., García-Fontana, C., Ramos, J.L., Krell, T Tactic responses to pollutants and its potential to increase biodegradation efficiency. *J. Appl. Microbiol.* 114, 923-933 (2013)
- Roca, A., P: Pizarro-Tobías, Z. Udaondo, M. Fernández, M.A. Matilla, M.A., Molina-Henares, L. Molina, A. Segura., E. Duque, and J.-L. Ramos. Analysis of the plant-growth promoting properties encoded by the genome of the rhizobacterium *Pseudomonas putida* BIRD-1. *Environ. Microbiol.* 15:780-794.2013.
- Duque, E., J de la Torre, P. Bernal, M.A. Molina-Henares, M. Alaminos, M. Espinosa-Urgel, A. Roca, M. Fernández, S. de Bentzmann, and J.L. Ramos. Identification of reciprocal adhesion genes in pathogenic and nonpathogenic *Pseudomonas*. *Environ. Microbiol.* 15:36-48. 2013.
- De Lorenzo, V., D. Pieter, and J.L. Ramos. From the test tube to the environment – and back. *Environ. Microbiol* 15:6-11. 2013.
- Sánchez de la Campa, A., A. García-Salamanca, J. Solano, J. de la Rosa, and J.L. Ramos. Chemical and microbiological characterization of atmospheric particulate matter during an intense African dust event in southern Spain. *Environ. Sci. Technol.* 47:3630-3638. 2013.
- Fernández, M., S. Conde, E. Duque, and J.-L. Ramos. In vivo gene expression of *Pseudomonas putida* KT2440 in the rhizosphere of different plants. *Microbial Biotech.* 6:307-313. 2013.
- Rico-Jiménez, M., F. Muñoz-Mertínez, C. García-Fontana, M. Fernández, B. Morel, A. Ortega, J.L. Ramos and T. Krell. Paralogous chemoreceptors mediate chemotaxis towards protein amino acids and the non-protein amino acid gamma-aminobutyrate (GABA). *Mol. Microbiol.* 88:1230-1243. 2013.

- Udaondo, Z., L. Molina, C. Daniels, M.J. Gómez, M.A. Molina-Henares, M.A. Matilla, A. Roca, M. Fernández, E. Duque, A. Segura, and J.L. Ramos. Metabolic potential of the organic-solvent tolerant *Pseudomonas putida* DOT-T1E deduced from its annotated genome. *Microbial Biotech.* 6:598-611. 2013.
- Rico-Jiménez, M., Lacal, J, Guazzaroni, M.E., H. Silva-Jiménez, Duque, E., Segura, A., Ramos, J.L. Responses of *Pseudomonas putida* to toxic aromatic compounds. *J. Biotech.* 160:25-32.
- Daddaoua, A., T. Krell, and J.L. Ramos. Transcriptional control by two interacting regulatory proteins: identification of the PtxS binding site at PtxR. *Nucl. Acids Res.* 41:10150-10156. 2013.
- Molina, L., P. Bernal, Z. Udaondo, A. Segura, J. de la Rosa, and J.L. Ramos. Complete genome sequence of a *Pseudomonas putida* clinical isolate, strain H8234. *Genome Announcements.* 1: e00496-13. 2013.
- Méndez-García, C., V. Mesa, R.R. Sprenger, M. Richter, M. Suárez-Diez, J. Solano, R. Bargiela, O.V. Golyshina, A. Manteca, J.L. Ramos, J.R. Gallego, I. Llorente, V.A.P. Martins dos Santos, O.N. Jensen, A.I. Peláez, J. Sánchez, and M. Ferrer. Microbial stratification in low pH oxic and suboxic macroscopic growths along an acid mine drainage. *The ISME J.* 8:1259-1274. 2014.
- Molina, L., Z. Udaondo, E. Duque, M. Fernández, C. Molina-Santiago, A. Roca, M. Porcel, J. de la Torre, A. Segura, P. Plesiat, K. Jeannot, and J.L. Ramos. Antibiotic resistance determinants in a *Pseudomonas putida* strain isolated from a hospital. *PLOS ONE* 9:e81604. 2014.
- Timmis, K.N., V. de Lorenzo, W. Verstraete, J.L. García, J.L. Ramos, H. Santos, I. Economidis, B. Nogales, J.K. Timmis, C. Fonseca, C. Pruzzo, A. Karagouni, N. Panopoulos, and B. Dixon. Pipelines for New Chemicals: a strategy to create new value chains and stimulate innovation-based economic revival in Southern European countries. *Environ. Microbiol.* 16:9-18. 2014.
- Molina-Santiago, C., A. Daddaoua, S. Fillet, T. Krell, B. Morel, E. Duque and J.L. Ramos. Identification of new residues involved in intramolecular signal transmission in a prokaryotic transcriptional repressor. *J. Bacteriol.* 196:588-594. 2014.
- Molina-Santiago, C., A. Daddaoua, S. Fillet, E. Duque, and J.L. Ramos. Interspecies signalling: *Pseudomonas putida* efflux pump TtgGHI is activated by indole to increase antibiotic resistance. *Environ. Microbiol.* 16:1267-1281. 2014.
- Daddaoua, A., C. Molina-Santiago, J. de la Torre, T. Krell and J.-L. Ramos. GtrS and GltR form a two-component system: the central role of 2-ketogluconate in the expression of exotoxin A and glucose catabolic enzymes in *Pseudomonas aeruginosa*. *Nucleic Acids Research* 42:7654–7665. 2014.
- Krell, T, J. Lacal, C. García-Fontana, H. Silva-Jiménez, M. Rico-Jiménez, A. Lugo, J.A. Darias J.L. Ramos. Characterization of molecular interactions using isothermal titration calorimetry. *Methods Mol Biol.* 1149:193-203. 2014.
- Silva-Jiménez, H., A. Ortega, C. García-Fontana, J.L. Ramos, T. Krell. Multiple signals modulate the activity of the complex sensor kinase TodS. *Microb Biotechnol.* 8:103-115. 2015.
- Fernández, M., Z. Udaondo, J.L. Niqui, E. Duque and J.-L. Ramos. Synergic role of the two ars operons in arsenic tolerance in *Pseudomonas putida* KT2440. *Environ. Microbiol. Rep.* 6:483-489. 2014.

- Molina-Santiago, C., Z. Udaondo, J.L. Ramos. Draft whole-genome sequence of the antibiotic-producing soil isolate *Pseudomonas* sp. strain 250. *J. Environ Microbiol Rep.* 7:288-292. 2015.
- Gómez-Lozano, M., R.L. Marvig, C. Molina-Santiago, P.M. Tribelli, J.L. Ramos, S. Molin. Diversity of small RNAs expressed in *Pseudomonas* species. *Environ Microbiol Rep.* 7:227-236. 2015.
- Filloux, A. J.L. Ramos. Preface. *Pseudomonas* methods and protocols. *Methods Mol Biol.* 1149:v. 2014.
- Molina-Santiago, C. J.L. Ramos. Bactericidal and bacteriostatic antibiotics and the Fenton reaction. *Microb Biotechnol.* 7:194-195. 2014.
- Bastiaansen, K.C., A. Ibañez, J.L. Ramos, W. Bitter, M.A. Llamas. The Prc and RseP proteases control bacterial cell-surface signalling activity. *Environ Microbiol.* 16:2433-2443. 2014.
- Thijs, S., P. van Dillewijn, W. Sillen, S. Truyens, M. Holtappels, J. D'Haen, R. Carleer, N. Weyens, M. Ameloot, J.L. Ramos, J. Vangronsveld. Exploring the rhizospheric and endophytic bacterial community of *Acer pseudoplatanus* growing in a TNT-contaminated soil: towards the development of a rhizocompetent TNT-detoxifying plant growth promoting consortium. *Plant Soil* 385:15-36. 2014.
- Molina-Santiago, C. A. Daddaoua, M. Gómez-Lozano, Z. Udaondo, S. Molin, J.L. Ramos. Differential transcriptional response to antibiotics by *Pseudomonas putida* DOT-T1E. *Environ Microbiol.* 17:3251-3262. 2015.
- Espinosa-Urgel, M., L. Serrano, J.L. Ramos and A.M. Fernández-Escamilla. Engineering biological approaches for detection of toxic compounds: A new microbial biosensor based on the *Pseudomonas putida* TtgR repressor. *Mol Biotechnol.* 57:558-564. 2015.
- Fernández, M., M. Porcel, J. de la Torre, M.A. Molina-Henares, A. Daddaoua, M.A. Llamas, A. Roca, V. Carriel, I. Garzón, J.L. Ramos, M. Alaminos, E. Duque. Analysis of the pathogenic potential of nosocomial *Pseudomonas putida* strains. *Frontiers Microbiol.* 6:871. 2015.
- Molina, L., Z. Udaondo, E. Duque, M. Fernández, P. Bernal, J. de la Torre, and J.L. Ramos. Specific gene loci of clinical *Pseudomonas putida* isolates. *Plos One* 11(1). E0147478. 2016.
- Ramos, J.L., Cuenca, M.S., C. Molina-Santiago, Segura, A., Duque, E., Gómez-García, M.R., Udaondo, Z., Roca, A. Mechanism of solvent resistance mediated by interplay of cellular factors in *Pseudomonas putida*. *FEMS Microb. Rev.* 39:355-366. 2015.
- Udaondo, Z., Molina, L., Segura, A., Duque, E., Ramos, J.L. Analysis of the core genome and pangenome of *Pseudomonas putida*. *Environ. Microbiol.*, 18:3268-3283. 2016.
- Molina-Santiago, C., Udaondo, Z., Daddaoua, A., Roca, A., Martín, J., Pérez-Victoria, J., Reyes, F., Ramos, J.L. Efflux pump-deficient mutants as a platform to search microbes that provide antibiotics. *Microb. Biotech.* 8:716-725.
- Cuenca, S., Roca, A., Molina-Santiago, C., Duque E., Armengaud, J., Gómez-García, R., Ramos, J.L. Understanding butanol tolerance and assimilation in *Pseudomonas putida* BIRD-1. *Microbiol. Biotechnol.* 9:100-115. 2016.
- Ramos, JL., Udaondo, Z., Fernández, B., Molina-Santiago, C., Daddaoua, A., Segura, A., Duque, E. First and second generation biochemicals from sugars: Biosynthesis of itaconic acid. *Microb. Biotech.* 9:8-10.
- Pascual, J., Udaondo, Z., Molina, L., Segura, A., Esteve-Núñez, A., Caballero, A., Ramos, J.L., Van Dillewijn, P. Draft genome sequence of *Pseudomonas putida*, a facultative

- anaerobic 2, 4, 6-trinitrotoluenes biotransforming strain. *Genome Announcements* 3(5): e00904-15.
- Silva-Jiménez, H., Ortega, a., García-Fontana, C., Ramos, J.L., Krell, T. Multiple signals modulate the activity of the complex sensor Kinase TodtTodt. *Protein Engineering, Design & selection* 25:159-169. 2015.
  - Fernández-Escamilla, A.M., Fernández-Ballester, G., Morel, B., Casares-Atienza, S., Ramos, J.L. Molecular binding mechanism of TtgR repressor to antibiotics and antimicrobials *PLOS one*. 10(9): e0138469.
  - Tobías-Pizarro, P., Niqui, J.L., Roca, A., Solano, J., Fernández, M., Bastida, F., García, C., Ramos, J.L. Field trial on removal of petroleum-hydrocarbon pollutants using a microbial consortium. *Env. Microbiol. Reports*. 7:85-94. 2015.
  - Tobías-Pizarro, P., Fernández, M., Niqui, J.L., Solano, J., Duque, E., Ramos, J.L., Roca, A. Restoration of a Mediterranean forest after a fire: bioremediation and rhizoremediation field-scale trial. *Microb. Biotech.* 8:77-92. 2015.
  - Nesme, J., J.D. Neufeld, S.N. Agathos, M. Bailey, P. Baldrian, D. Brunel, A. Frostegard, J. Gilbert, T. Heulin, J.K. Jansson, E. Jurkevitch, K. Kruus, G.A. Kowalchuk, A. Lagares, H., Lappin-Scott, P. Lemanceau, D. Lepaslier, I. Mandic.-Mulec, J.C. Murrell, D.D. Myrold, R. Nalin, P. Nannipieri, F. O'Gara, J.J. Parnell, A. Puehler, V. Pylro, J.L. Ramos, L.F.W. Roesch, M. Schlotter, C. Schleper, A. Sczyrba, A. Sessitsch, S. Sjoling, J. Sorensen, S.J. Serensen, C. Tebber, E. Topp, G. Tsiamis, J.D. van Elsas, G. van Keulen, F. Widmer, M. Wagner, T. Zhang, X. Zhang, L. Zhao, Y.-G. Zhu, T.M. Vogel and P. Simonet. Back to the future of soil metagenomics. Perspectives paper in metagenomic. *Frontiers Microbiol.* 7:73. 2011.
  - Cuenca, M.S., Molina-Santiago, C., Gómez-García, R., Ramos, J.L. A *Pseudomonas putida* double mutant deficient in butanol assimilation: a promising step for engineering a biological biofuel production platform. *FEMS Microbiol. Lett.*, 363: fnw018. 2016.
  - Timmis, K.N., Wagner, M., Ramos, J.L., Jetten, M., Orphan, V., Polz, M., Bonfante, P., Gilbert, J., Whitaker, R., Wood, T., Volker, L., Müller, V., Galpern, M., Farewell Wilfred. *EMI Reports* 7:684. 2016.
  - Pascual, J., Blanco, S., García-López, M., García-Salamanca, A., Bursakov, S., Ramos, J.L., van Dillewijn, P. Assessing Bacterial Diversity in the Rhizosphere of Thymus zygis Growing in the Sierra Nevada National Park (Spain) through Culture-Dependent and Independent Approaches. *PlosOne* (11)1: E0146558. 2016.
  - Molina, L., Udaondo, Z., Duque, E., Fernández, M., Molina-Santiago, C., Roca, A., Plesiat, P., Jeannot, K., Ramos, J.L. Antibiotic Resistance Determinants in a *Pseudomonas putida* Strain Isolated from a Hospital. *PlosOne* 9(1): e81604. 2016
  - Fernández, M., Morel, B., Ramos, J.L. and Krell, T. The paralogous Ars1 and Ars2 regulators of *Pseudomonas putida* KT2440 as basis for arsenic biosensor development. *Appl. Environ. Microbiol.* 82:4133-4144. 2016.
  - Marín, A.M., de la Torre, J., Marques-Oliveira, A.R., Barlsson, A., Chubatsu, L., Monteiro, R.A., Pedrosa, F.O., de Souza, E.M., Wassen, R., Duque, E. and Ramos, J.L..Genetic and functional characterization of a novel pathway for degradation of naringenin in *Herbaspirillum seropediaceae* SmR1. *Environ. Microbiol.* 19:1030-1040. 2016.

- Hernández-Sánchez, V., Molina, L., Ramos, J.L. and Segura, A. New family of biosensors for monitoring BTX in aquatic and edaphic environments. *Microbial Biotechnology* 9:858-867. 2016
- Valdivia, M., Galan, J.L., Laffarga, J. and Ramos J.L. 2016. Biofuels 2020: biorefineries based on lignocellulosic materials. *Microbial Biotechnology*, 9:585-594. 2016
- Timmis, K., Ramos, J.L., de Vos, W., Vlaeminck, S., Prieto, A., Danchin, A., Verstrate, W. and de Lorenzo, V. 2016. *Microbial Biotechnology-2020*. *Microbial Biotech* 9; 529.
- Timmis, K.N., W. M. de Vos, J. L. Ramos, S. E. Vlaeminck, A. Prieto, A. Danchin, W. Verstraete, V. de Lorenzo, S.-Y. Lee, H. Brüssow, J. K. Timmis and B. K. Singh 2017. The Contribution of Microbial Biotechnology to Sustainable Development Goals. *Microbial Biotechnology* 10:948-987.
- Timmis, K.N., de Lorenzo, V., Verstrate, W., Ramos, J.L., Danchin, A., Brüssow, H., Singh, B.J., and J.K. Timmis. 2017. The contribution of microbial biotechnology to economic growth and employment. *Microb. Biotechnol.* 10:981-983.
- Molina-Santiago, C., Udaondo, Z.; Cordero, B.F.; Ramos J.L. 2017. Interspecies cross-talk between co-cultured *Pseudomonas putida* and *Escherichia coli*. *Environ Microbial Reports* 9:441-448.
- Ramos, J.L.; García-Lorente, F.; Valdivia, M.; Duque, E. 2017. Green biofuels and bioproducts: bases for sustainability analysis. *Microb Biotechnol* 10:1111-1113.
- Udaondo, Z., Duque, E. Ramos, J.L. 2018. The pangenome of the genus Clostridium. *Environ. Microbiol.* 19:2588-2603.
- Udaondo, Z., Ramos, J L., Segura, A., Krell, T., Daddaoua, A. 2018. Regulation of carbohydrate degradation pathways in *Pseudomonas* involves a set of transcriptional regulators. *Microb. Biotechnol* 11:442-454
- Duque, E., Daddaoua, A., Cordero, B.F., Udaondo, Z., Molina-Santiago, C., Roca, A., Solano, J., Molina-Alcaide, E., Segura, A. Ramos, J.L. 2018. Ruminal metagenomic libraries as a source of relevant hemicellulolytic enzymes for biofuel production. *Microb. Biotechnol* 11: , en prensa.
- Martín-Mora, D., Fernández, M., Velando, F., Ortega, A., Gavira, J.A., Matilla, M.A., Krell, T. Functional annotation of bacterial signal transduction systems: progress and challenges *Internat. J. Mol. Sci.* 19, pii: E3755 (2018)
- Feng, H., Zhang, N., Fu, R., Liu, Y., Krell, T., Du, W., Shao, J., Shen, Q., Zhang, R. Recognition of dominant attractants by key chemoreceptors mediates recruitment of plant growth-promoting rhizobacteria. *Environ. Microbiol.* doi: 10.1111/1462-2920.14472 (2018)
- Corral-Lugo, A., Matilla, M.A., Martín-Mora, D., Silva Jiménez, H., Mesa Torres, N., Kato, J., Hida, A., Oku, S., Conejero-Muriel, M., Gavira, J.A., Krell, T. High-affinity chemotaxis to histamine mediated by the TlpQ chemoreceptor of the human pathogen *Pseudomonas aeruginosa*. *mbio* 9, e01894-18 (2018)
- Matilla, M.A., Daddaoua, A., Chini, A., Morel, B., Krell, T. An auxin controls bacterial antibiotics production. *Nucleic Acids Res.* 46:11229-11238 (2018)
- Fernández, M., Corral-Lugo, A., Krell, T. The plant compound rosmarinic acid induces a broad quorum sensing response in *Pseudomonas aeruginosa* PAO1. *Environ. Microbiol.* 20:4230-4244 (2018)
- Gavira, J.A., Ortega, A., Martín-Mora, D., Conejero-Muriel, M.T., Corral-Lugo, A., Morel, B., Matilla, M.A., Krell, T. Structural basis for polyamine binding at the dCACHE domain

- of the McpU chemoreceptor from *Pseudomonas putida*. *J. Mol. Biol.* 430, 1950-1963 (2018)
- Udaondo, Z., Ramos, J.L., Segura, A., Krell, T., Daddaoua, A. Regulation of carbohydrate degradation pathways in *Pseudomonas* involves a versatile set of transcriptional regulators. *Microb. Biotechnol.* 11, 442-454 (2018)
  - Krell, T. Exploring the (almost) unknown: archaeal two-component systems. *J. Bacteriol.* pii: JB.00774-17 (2018)
  - Martín-Mora D, Ortega Á, Pérez-Maldonado FJ, Krell T, Matilla MA. The activity of the C4-dicarboxylic acid chemoreceptor of *Pseudomonas aeruginosa* is controlled by chemoattractants and antagonists. *Scientific Reports* 8(1):2102 (2018)
  - Matilla, M.A., Krell, T. The effect of bacterial chemotaxis on host infection and pathogenicity. *FEMS Microbiol. Rev.* 42 (2018)
  - Fernández, M., Ortega, A., Rico-Jiménez, M., Martín-Mora, D., Daddaoua, A., Matilla, M.A., Krell, T. High-throughput screening for identifying chemoreceptor ligands. *Methods Mol. Biol.* 1729:291-301 (2018)
  - Ortega, D.R., Fleetwood, A.D., Krell, T., Harwood, C.S., Jensen, G.J., Zhulin, I.B. Assigning chemoreceptors to chemosensory pathways in *Pseudomonas aeruginosa*. *Proc. Natl. Acad. Sci. USA* 114:12809-14 (2017)
  - Ortega, A., Zhulin, I.B., Krell, T. Sensory Repertoire of Bacterial Chemoreceptors. *Microbiol. Mol. Biol. Rev.* 81 pii: e00033-17 (2017)
  - Daddaoua A, Corral-Lugo A, Ramos JL, Krell T. Identification of GntR as regulator of the glucose metabolism in *Pseudomonas aeruginosa*. *Environ. Microbiol.* 19:3721-3733 (2017).
  - Fernández, M., Matilla, M.A., Ortega, A., Krell, T. Metabolic value chemoattractants are preferentially recognized at broad ligand range chemoreceptor of *Pseudomonas putida* KT2440 *Frontiers in Microbiol.* 8:990, doi: 10.3389/fmicb.2017.00990 (2017)
  - Bardy, S., Briegel, A., Rainville, S., Krell, T. Recent advances and future prospects in bacterial and archaeal locomotion and signal transduction. *J. Bacteriol.* doi: 10.1128/JB.00203-17 (2017)
  - Matilla, M.A., Udaondo, Z., Krell, T., Salmond, G.P. Genome Sequence of *Serratia marcescens* MSU97, a Plant-Associated Bacterium That Makes Multiple Antibiotics. *Genome Announc.* 5(9). pii: e01752-16 (2017)
  - Bueno, E., Robles, E.F., Torres, M.J., Krell, T., Bedmar, E.J., Delgado, M.J., Mesa, S. Disparate response to microoxia and nitrogen oxides of the *Bradyrhizobium japonicum* napEDABC, nirK, and norCBQD denitrification genes. *Nitric Oxide* 68:137-149 (2017)
  - Reyes-Darias, J.A., Krell, T. Riboswitches as Targets for the Development of Anti-Biofilm Drugs *Curr. Top. Med. Chem.* 17, 1945-1953 (2017)
  - Corral Lugo, A., Daddaoua, A., Ortega, A., Morel, B., Díez Peña, A.I., Espinosa-Urgel, M., Krell, T. Purification and characterization of *Pseudomonas aeruginosa* LasR expressed in acyl-homoserine lactone free *Escherichia coli* cultures. *Protein Expr. Purif.* 130: 107-114 (2017)
  - Matilla, M., Krell, T. Chemoreceptor based signal sensing. *Curr. Opin. Biotechnol.* 45:8-14 (2017) artículo de portada
  - López-Farfán, D., Reyes-Darias, J.A., Krell, T. The expression of many chemoreceptor genes depends on the cognate chemoeffector as well as on the growth medium and phase. *Curr. Genetics* 63:457-470 (2017)

- Martín-Mora, D., Ortega, A., Reyes-Darias, J.A., García, V., López-Farfán, D., Matilla, M.A., Krell, T. Identification of a Chemoreceptor in *Pseudomonas aeruginosa* that specifically mediates Chemotaxis towards  $\alpha$ -Ketoglutarate. *Frontiers in Microbiol.* 7:1937 (2016)
- Rico-Jiménez, M., Reyes-Darias, J.A., Ortega, A., Díez Peña, A.I., Morel, B., Krell, T. Two different mechanisms mediate chemotaxis to inorganic phosphate in *Pseudomonas aeruginosa*. *Scientific Reports* 6:28967 (2016)
- Corral-Lugo, A., Daddaoua, A., Ortega, A., Espinosa-Urgel, M., Krell, T. Rosmarinic acid is a homoserine lactone mimic produced by plants that activates a bacterial quorum-sensing regulator. *Science Signaling* 9(409):ra1 (2016)
- Matilla, M.A., Nogellova, V., Morel, B., Krell, T., Salmond, G.P.C. Biosynthesis of the acetyl-CoA carboxylase-inhibiting antibiotic, andrimid in *Serratia* is regulated by Hfq and the LysR-type transcriptional regulator, AdmX. *Environ. Microbiol.* 18:3635-3650 (2016)
- Corral-Lugo, A., de la Torre, J., Matilla, M.A., Fernández, M., Morel, B., Espinosa-Urgel, M., Krell, T. Assessment of the contribution of chemoreceptor-based signaling to biofilm formation. *Environ. Microbiol.* 18:3355-3372 (2016)
- AUTORES/AS: Martín-Mora, D., Reyes-Darias, J.A., Ortega, A., Corral-Lugo, A., Matilla, M.A., Krell, T. McpQ is a specific citrate chemoreceptor that responds preferentially to citrate/metal ion complexes. *Environ. Microbiol.* 18:3284-3295 (2016)
- Fernández, M., Morel, B., Corral-Lugo, A., Krell, T. Identification of a chemoreceptor that specifically mediates chemotaxis towards metabolizable purine derivatives. *Mol. Microbiol.* 99:34-42 (2016)
- Fernández, M., Morel, B., Ramos, J.L., Krell, T. The paralogous ArsR1 and ArsR2 regulators of *Pseudomonas putida* KT2440 as basis for arsenic biosensor development. *Appl. Environ. Microbiol.* 82:4133-44 (2016)
- Fernández, M., Morel, B., Corral-Lugo, A., Rico, M., Martín-Mora, D., López-Farfan, D., Reyes-Darias, J.A., Matilla, M.A., Ortega, A., Krell, T. Identification of ligands for bacterial sensor proteins. *Curr. Genetics* 62:143-7 (2016)
- Matilla, M.A., Alison Drew, A., Udaondo, Z., Krell, T., George P.C. Salmond, G.P.C. Genome sequence of *Serratia plymuthica* A153, a model rhizobacterium for the investigation of the synthesis and regulation of haterumalides, zeamine and andrimid. *Genome Announc.* 4(3) pii: e00373-16 (2016)
- Corral Lugo, A., Daddaoua, A., Ortega, A., Espinosa-Urgel, M., Krell, T. So different and still so similar: The plant compound rosmarinic acid mimics bacterial homoserine lactone quorum sensing signals. *Commun. & Integ. Biol.* 9:2, e1156832 (2016)
- Reyes-Darias, J.A., García, V., Rico-Jiménez, M., Corral-Lugo, A., Krell, T. Identification and Characterization of Bacterial Chemoreceptors Using Quantitative Capillary and Gradient Plate Chemotaxis Assays. *Bio-protocol* 6(8): e1789. DOI: 10.21769/BioProtoc.1789 (2016)
- Reyes-Darias, J.A., García, V., Rico-Jiménez, M., Corral-Lugo, A., Lesouhaitier, O., Juárez-Hernández, D., Yang, Y., Bi, S., Feuilloley, M., Muñoz-Rojas, J., Sourjik, V., Krell T. Specific gamma-aminobutyrate (GABA) chemotaxis in *Pseudomonads* with different lifestyle. *Mol. Microbiol.* 97:488-501 (2015)
- Krell T. Tackling the bottleneck in bacterial signal transduction research: high-throughput identification of signal molecules. *Mol. Microbiol.* 96: 685-8 (2015)

- Reyes Darias, J.A., Yang, Y., Sourjik, V., Krell, T. Correlation between signal input and output in PctA and PctB amino acid chemoreceptor of *Pseudomonas aeruginosa*. *Mol. Microbiol.* 96:513-25 (2015)
- García, V., Reyes-Darias, J.A., Martín-Mora, D., Morel, B., Matilla, M.A., Krell, T. Identification of a chemoreceptor for C2- and C3-carboxylic acids *Appl. Environ. Microbiol.* 81:5449-57 (2015)
- Silva-Jiménez, H., Ortega, A., García-Fontana, C., Ramos, J.L., Krell, T. Multiple signals modulate the activity of the complex sensor kinase TodS. *Microb. Biotechnol.* 8:103-15 (2015)
- Sampedro, I., Parales, R.E., Krell, T., Hill, J.E. *Pseudomonas Chemotaxis FEMS Microbiol Rev.* 39:17-46 (2015)
- García Fontana, C., Corral-Lugo, A. y Krell, T. Specificity of the CheR2 Methyltransferase in *Pseudomonas aeruginosa* is Directed by C-Terminal Pentapeptides in Chemoreceptors. *Science Signaling* 7 (320) ra34 (2014)
- Daddaoua, A., Molina-Santiago, C., la Torre, J.d., Krell, T., Ramos, J.L. GtrS and GltR form a two-component system: the central role of 2-ketogluconate in the expression of exotoxin A and glucose catabolic enzymes in *Pseudomonas aeruginosa*. *Nucleic Acids Res.* 42:7654-65 (2014)
- Krell, T., Lacal, J., García-Fontana, C., Silva-Jiménez, H., Rico-Jiménez, M., Lugo, A.C., Darias, J.A., Ramos, J.L. Characterization of molecular interactions using isothermal titration calorimetry. *Methods Mol. Biol.* 1149:193-203 (2014)
- Darias, J.A., García-Fontana, C., Lugo, A.C., Rico-Jiménez, M., Krell, T. Qualitative and quantitative assays for flagellum-mediated chemotaxis. *Methods Mol. Biol.* 1149:87-97 (2014)
- Mayola, A., Irazoki, O., Martínez, I.A., Petrov, D., Menolascina, F., Stocker, R., Reyes-Darias, J.A., Krell, T., Barbé, J., Campoy, S. RecA Protein Plays a Role in the Chemotactic Response and Chemoreceptor Clustering of *Salmonella enterica*. *PLoS One* 9(8):e105578 (2014)
- Chavarría, M., Durante-Rodríguez, G., Krell, T., Santiago, C., Brezovsky, J., Damborsky, J., de Lorenzo, V. Fructose 1-Phosphate is the one and only physiological effector of the Cra (FruR) regulator of *Pseudomonas putida*. *FEBS OPEN Bio.* 4: 377–386 (2014)
- Ortega-González, M., Sánchez de Medina, F., Molina-Santiago, C., López-Posadas, R., Pacheco, D., Krell, T., Martínez-Augustín, O. y Daddaoua, A. Fructooligosaccharides reduce *Pseudomonas aeruginosa* PAO1 pathogenicity through distince mechanisms. *PLOS One* e85772 (2014)
- Molina-Santiago, C., Daddaoua, A., Fillet, S., Krell, T., Morel, B., Duque, E., Ramos, J.L. Identification of new residues involved in intramolecular signal transmission in a prokaryotic transcriptional repressor. *J. Bacteriol.* 196:588-94 (2014)
- Ortega, A., Krell, T. The HBM domain: Introducing bimodularity to bacterial sensing. *Protein Sci.* 23:332-6 (2014)
- Sevilla, E., Alvarez-Ortega, C., Krell, T., Rojo, F. The *Pseudomonas putida* HskA hybrid sensor kinase responds to redox signals and contributes to the adaptation of the electron transport chain composition in response to oxygen availability. *Environ. Microbiol. Rep.* 5:825-34 (2013)
- Rico-Jiménez, M., Muñoz-Martínez, F., Krell, T., Gavira, J.A. y Pineda-Molina, E. Purification, crystallization and preliminary crystallographic analysis of the ligand

- binding regions of the PctA and PctB chemoreceptors from *Pseudomonas aeruginosa* in complex with amino acids. *Acta cryst. F* 69:1431-5 (2013)
- Daddaoua, A, Krell, T, Ramos, J.L. Transcriptional control by two interacting regulatory proteins: identification of the PtxS binding site at PtxR. *Nucleic Acids Res.* 41(22):10150-6 (2013)
  - García-Fontana, C., Reyes-Darias, J.A., Muñoz-Martínez, F., Alfonso, C., Morel, B., Ramos, J.L., Krell, T. High specificity in CheR methyltransferase function: CheR2 of *Pseudomonas putida* is essential for chemotaxis whereas CheR1 is involved in biofilm formation. *J. Biol. Chem.* 288:18987-99 (2013)
  - Rico-Jiménez, M., Muñoz-Martínez, F., García-Fontana, C., Fernández, M., Morel, B., Ortega, A., Ramos, J.L., Krell, T. Paralogous chemoreceptors mediate chemotaxis towards protein amino acids and the non-protein amino acid gamma-aminobutyrate (GABA). *Mol. Microbiol.* 88: 1230-43 (2013)
  - Sevilla, E., Silva-Jiménez, H., Duque, E., Krell, T., Rojo, F. The *Pseudomonas putida* HskA hybrid sensor kinase controls the composition of the electron transport chain. *Environ. Microbiol. Rep.* 5:291-300 (2013)
  - Krell, T., Lacal, J., Reyes-Darias, J.A., Jiménez-Sánchez, C., Sungthong, R., Ortega-Calvo, J.J. Bioavailability of pollutants and chemotaxis. *Curr. Opin. Biotechnol.* 24, 451-456 (2013)
  - Calderón A, Lázaro-Payo A, Iglesias-Baena I, Camejo D, Lázaro JJ, Sevilla F, Jiménez A. Glutathionylation of Pea Chloroplast 2-Cys Prx and Mitochondrial Prx IIF Affects Their Structure and Peroxidase Activity and Sulfiredoxin Deglutathionylates Only the 2-Cys Prx. *Front Plant Sci.* 2017 Jan 31;8:118. doi: 10.3389/fpls.2017.00118. eCollection 2017.
  - Sevilla F, Camejo D, Ortiz-Espín A, Calderón A, Lázaro JJ, Jiménez A. The thioredoxin/peroxiredoxin/sulfiredoxin system: current overview on its redox function in plants and regulation by reactive oxygen and nitrogen species. *J Exp Bot.* 2015 May;66(10):2945-55. doi: 10.1093/jxb/erv146. Epub 2015 Apr 6. Review.
  - Lázaro JJ, Jiménez A, Camejo D, Iglesias-Baena I, Martí Mdel C, Lázaro-Payo A, Barranco-Medina S, Sevilla F. Dissecting the integrative antioxidant and redox systems in plant mitochondria. Effect of stress and S-nitrosylation. *Front Plant Sci.* 2013 Nov 28;4:460. doi: 10.3389/fpls.2013.00460. eCollection 2013.
  - Serrato AJ, Romero-Puertas MC, Lázaro A, Sahrawy M. 2018. Regulation by S-nitrosylation of the Calvin-Benson cycle fructose-1,6-bisphosphatase in *Pisum sativum*. *Redox Biology.* 14: 409-416. <http://dx.doi.org/10.1016/j.redox.2017.10.008>
  - Ojeda V, Pérez-Ruiz JM, González M, Nájera VA, Sahrawy M, Serrato AJ, Geigenberger P, Cejudo FJ. 2017. NADPH thioredoxinreductase C and thioredoxins act concertedly in seedling development. *Plant Physiology*, 174: 1436-1448. doi: 10.1104/pp.17.00481.
  - Soto-Suárez M, Rojas-González JA, Serrato AJ, Sahrawy M. 2016. Transcriptomic and proteomic profiling of *Arabidopsis* FBPases null mutants cfbp1 and cyfbp reveal different levels of gene and protein regulation in rosettes and roots. *BMC Plant Biology* 16:256. doi: 10.1186/s12870-016-0945-7.
  - Rojas-González JA, Soto-Suárez M, García-Díaz A, Romero-Puertas MC, Sandalio LM, Mérida A, Thormählen I, Geigenberger P, Serrato AJ, Sahrawy M. 2015. Disruption of both chloroplastic and cytosolic FBPases genes results in dwarf phenotype and important starch and metabolite changes in *Arabidopsis thaliana*. *Journal of Experimental Botany* 66(9):2673-2689 doi: 10.1093/jxb/erv062.

- Serrato AJ, Fernández Trijueque J, Barajas-López JdD, Chueca A, Sahrawy M. 2013. Plant thioredoxins: a “one-for-all” redox-signaling system in plants. *Frontiers in Plant Science*, 4:1-10..doi 10.3389/fpls.2013.00463.
- Ragel P, Streb S, Feil R, Sahrawy M, Annunziata MG, Lunn JE, Zeeman S, Mérida A. 2013. Loss of Starch Granule Initiation Has a deleterious Effect on the Growth of *Arabidopsis* Plants Due to an Accumulation of ADP-Glucose1. *PlantPhysiology* 163: 75-85. doi/10.1104/pp.113.223420.

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## BIOQUÍMICA Y BIOLOGÍA MOLECULAR EN CIENCIAS DE LA VIDA

- Ríos-Marco P, Segovia JL, Jiménez-López JM, Marco C, Carrasco MP\*. Lipid efflux mediated by alkylphospholipids in HepG2 cells. *Cell Biochem Biophys*. 66:737-746 (2013).
- Ríos-Marco P, Martín-Fernández M, Soria-Bretones I, Ríos A, Carrasco MP\*, Marco C. Alkylphospholipids deregulate cholesterol metabolism and induce cell-cycle arrest and autophagy in U-87 MG glioblastoma cells. *Biochim Biophys Acta Mol Cell Biol Lipids*. 1831:1322-1334 (2013).
- Schiaffino-Ortega S, López-Cara LC, Ríos-Marco P, Carrasco-Jiménez MP, Gallo MA, Espinosa A, Marco C, Entrena A. New non-symmetrical choline kinase inhibitors. *Bioorg Med Chem*. 21:7146-7154 (2013).
- Serrán-Aguilera L, Nuti R, López-Cara LC, Ríos-Marco P, Carrasco MP, Marco C, Entrena A, Macchiarulo A, Hurtado-Guerrero R. Choline kinase active site provides features for designing versatile inhibitors. *Curr Top Med Chem*. 14:2684-2693 (2014).
- Ruiz B, Figuerola-Conchas A, Ramos-Torrecillas J, Capitán-Cañadas F, Ríos-Marco P, Carrasco MP, Gallo MA, Espinosa A, Marco C, Ruiz C, Entrena A, Hurtado-Guerrero R, Conejo-García A. Discovery of a new binding site on human choline kinase  $\alpha$ 1: design, synthesis, crystallographic studies, and biological evaluation of asymmetrical bispyridinium derivatives. *J Med Chem*. 57:507-515 (2014).
- Marco C, Ríos-Marco P, Jiménez-López JM, Segovia JL, Carrasco MP\*. Antitumoral alkylphospholipids alter cell lipid metabolism. *Anti-Cancer Agents Med Chem*. 14:545-558 (2014).
- Castro-Navas FF, Schiaffino-Ortega S, Carrasco-Jiménez MP, Ríos-Marco P, Marco C, Espinosa A, Gallo MA, Mariotto E, Basso G, Viola G, Entrena-Guadix A, López-Cara LC. New more polar symmetrical bipyridinic compounds: new strategy for the inhibition of choline kinase  $\alpha$ 1. *Future Med Chem*. 7:417-436 (2015).
- Ríos-Marco P, Ríos A, Jiménez-López JM, Carrasco MP\*, Marco C. Cholesterol homeostasis and autophagic flux in perifosine-treated human hepatoblastoma HepG2 and glioblastoma U-87 MG cell lines. *Biochem Pharmacol*. 96:10-19 (2015).

- Ríos-Marco P, Marco C, Cueto FJ, Carrasco MP\*, Jiménez-López JM. Pleiotropic effects of antitumour alkylphospholipids on cholesterol transport and metabolism. *Exp Cell Res.* 340:81-90 (2016).
- Schiaffino-Ortega S, Baglioni E, Mariotto E, Bortolozzi R, Serrán-Aguilera L, Ríos-Marco P, Carrasco-Jimenez MP, Gallo MA, Hurtado-Guerrero R, Marco C, Basso G, Viola G, Entrena A, López-Cara LC. Design, synthesis, crystallization and biological evaluation of new symmetrical bisectionic compounds as selective inhibitors of human Choline Kinase  $\alpha$ 1 (ChoK $\alpha$ 1). *Sci Rep.* 6:23793 (2016).
- Ríos-Marco P, Marco C, Gálvez X, Jiménez-López JM, Carrasco MP\*. Alkylphospholipids: An update on molecular mechanisms and clinical relevance. *Biochim Biophys Acta Biomembr.* 1859:1657-1667 (2017)
- Rubio-Ruiz B, Ríos-Marco P, Carrasco-Jiménez MP, Espinosa A, Hurtado-Guerrero R, Marco C, Conejo-García A, Entrena A. Choline kinase inhibition and docking studies of a series of 6-(benzylthio)-9H-purin-9-yl-pyridinium derivatives. *Med Chem Res.* 26: 2809-2815 (2017).
- Schiaffino-Ortega S, Baglioni E, Pérez-Moreno G, Ríos-Marco P, Marco C, González-Pacanowska D, Ruiz-Pérez LM, Carrasco-Jiménez MP, López-Cara LC. 1,2-Diphenoxiethane salts as potent antimalarials. *Bioorg Med Chem Lett.* 28: 2485-2489 (2018).
- Rubbini G, Buades-Martín A, Carrasco-Jiménez MP\*, Viola G, López-Cara LC. Lead optimization-hit expansion of new asymmetrical pyridinium/quinolinium compounds as ChoK $\alpha$ 1 inhibitors. *Future Med Chem.* 10: 1769-1786 (2018).
- Morel B, Carrasco MP, Jurado S, Marco C, Conejero-Lara F. Dynamic micellar oligomers of amyloid beta peptides play a crucial role in their aggregation mechanisms. *Phys Chem Chem Phys.* 20: 20597-20614 (2018).
- Puente-Muñoz V, Paredes JM, Resa S, Vilchez JD, Zitnan M, Miguel D, Girón MD, Cuerva JM, Salto R, Crovetto L. New Thiol-Sensitive Dye Application for Measuring Oxidative Stress in Cell Cultures. *Scientific Reports.* Accepted: 12 December 2018. DOI: 10.1038/s41598-018-38132-y.
- Martín MJ, Manzano M, Bueno-Vargas P, Rueda R, Salto R, Giron MD, Vilchez JD, Cabrera E, Cano A, Castro A, Ramirez-Tortosa C, Lopez-Pedrosa JM. Feeding a slowly digestible carbohydrate diet during pregnancy of insulin-resistant rats prevents the excess of adipogenesis in their offspring. *J Nutr Biochem* 2018; 61: 183-196
- De Los Reyes-Berbel E, Salto-Gonzalez R, Ortega-Muñoz M, Reche-Perez FJ, Jodar-Reyes AB, Hernandez-Mateo F, Giron-Gonzalez MD, Santoyo-Gonzalez F. PEI-NIR Heptamethine Cyanine Nanotheranostics for Tumor Targeted Gene Delivery. *Bioconjug Chem* 2018; 29: 2561-2575
- Herrero-Foncubierta P, Paredes JM, Giron MD, Salto R, Cuerva JM, Miguel D, Orte A. A Red-Emitting, Multidimensional Sensor for the Simultaneous Cellular Imaging of Biothiols and Phosphate Ions. *Sensors (Basel).* 2018; 18: E161
- Ortega-Muñoz M, Giron-Gonzalez MD, Salto-Gonzalez R, Jodar-Reyes AB, De Jesus SE, Lopez-Jaramillo FJ, Hernandez-Mateo F, Santoyo-Gonzalez F. Polyethyleneimine-Coated Gold Nanoparticles: Straightforward Preparation of Efficient DNA Delivery Nanocarriers. *Chem Asian J.* 2016; 11: 3365-3375.
- Giron-Gonzalez MD, Salto-Gonzalez R, Lopez-Jaramillo FJ, Salinas-Castillo A, Jodar-Reyes AB, Ortega-Muñoz M, Hernandez-Mateo F, Santoyo-Gonzalez F. Polyelectrolyte

- Complexes of Low Molecular Weight PEI and Citric Acid as Efficient and Nontoxic Vectors for in Vitro and in Vivo Gene Delivery. *Bioconjug Chem.* 2016; 27: 549-61.
- Manzano M, Giron MD, Vilchez JD, Sevillano N, El-Azem N, Rueda R, Salto R, Lopez-Pedrosa JM. Apple polyphenol extract improves insulin sensitivity in vitro and in vivo in animal models of insulin resistance. *Nutr Metab (Lond).* 2016;13: 32.
  - Girón MD, Vilchez JD, Salto R, Manzano M, Sevillano N, Campos N, Argilés JM, Rueda R, López-Pedrosa JM. Conversion of leucine to  $\beta$ -hydroxy- $\beta$ -methylbutyrate by  $\alpha$ -keto isocaproate dioxygenase is required for a potent stimulation of protein synthesis in L6 rat myotubes. *J Cachexia Sarcopenia Muscle.* 2016; 7: 68-78.
  - Kucinska M, Giron MD, Piotrowska H, Lisiak N, Granig WH, Lopez-Jaramillo FJ, Salto R, Murias M, Erker T. Novel Promising Estrogenic Receptor Modulators: Cytotoxic and Estrogenic Activity of Benzanilides and Dithiobenzanilides. *PLoS One.* 2016; 11: e0145615.
  - Resa S, Orte A, Miguel D, Paredes JM, Puente-Muñoz V, Salto R, Giron MD, Ruedas-Rama MJ, Cuerva JM, Alvarez-Pez JM, Crovetto L. New Dual Fluorescent Probe for Simultaneous Biothiol and Phosphate Bioimaging. *Chemistry.* 2015; 21: 14772-9.
  - Lopez-Jaramillo FJ, Giron-Gonzalez MD, Salto-Gonzalez, R, Hernandez-Mateo F, Santoyo-Gonzalez F. In vitro and in vivo evaluation of novel cross-linked saccharide based polymers as bile acid sequestrants. *Molecules* 2015; 20: 3716-29.
  - Salto R, Vilchez JD, Girón MD, Cabrera E, Campos N, Manzano M, Rueda R, López-Pedrosa JM.  $\beta$ -Hydroxy- $\beta$ -Methylbutyrate (HMB) Promotes Neurite Outgrowth in Neuro2a Cells. *PLoS One.* 2015; 10: e0135614.
  - Girón MD, Vilchez JD, Shreeram S, Salto R, Manzano M, Cabrera E, Campos N, Edens NK, Rueda R, López-Pedrosa JM.  $\beta$ -Hydroxy- $\beta$ -Methylbutyrate (HMB) Normalizes Dexamethasone-Induced Autophagy-Lysosomal Pathway in Skeletal Muscle. *PLoS One.* 2015 Feb 6;10(2):e0117520. doi: 10.1371/journal.pone.0117520.
  - Giron-Gonzalez MD, Morales-Portillo A, Salinas-Castillo A, Lopez-Jaramillo FJ, Hernandez-Mateo F, Santoyo-Gonzalez F, Salto-Gonzalez, R. Engineered Glycated Amino Dendritic Polymers as Specific Nonviral Gene Delivery Vectors Targeting the Receptor for Advanced Glycation End Products. *Bioconjugate Chem.* 2014, 25, 1151-1161.
  - Salto R, Vilchez JD, Cabrera E, Guinovart JJ, Girón MD. Activation of ERK by sodium tungstate induces protein synthesis and prevents protein degradation in rat L6 myotubes. *FEBS Letters* 2014, 588, 2246-2254.
  - Paredes JM, Girón MD, Ruedas-Rama MJ, Orte A, Crovetto L, Talavera EM, Salto R, Alvarez-Pez JM. Real-Time Phosphate Sensing in Living Cells using Fluorescence Lifetime Imaging Microscopy (FLIM) *Journal of Physical Chemistry B* 2013, 117, 8143-8149.
  - Pérez-Jiménez A, Rufino-Palomares EE, Fernández-Gallego N, Ortúño-Costela MC, Reyes-Zurita FJ, Peragón J, García-Salguero L, Mokhtari K, Medina PP, Lupiáñez JA. Target molecules in 3T3-L1 adipocytes differentiation are regulated by maslinic acid, a natural triterpene from Olea europaea. *Phytomedicine.* 2016 Nov 15;23(12):1301-1311.
  - Mokhtari K, Rufino-Palomares EE, Pérez-Jiménez A, Reyes-Zurita FJ, Figuera C, García-Salguero L, Medina PP, Peragón J, Lupiáñez JA. Maslinic Acid, a Triterpene from Olive, Affects the Antioxidant and Mitochondrial Status of B16F10 Melanoma Cells Grown under Stressful Conditions. *Evid Based Complement Alternat Med.* 2015;2015:272457.

- Reyes-Zurita FJ, Rufino-Palomares EE, García-Salguero L, Peragón J, Medina PP, Parra A, Cascante M, Lupiáñez JA. Maslinic Acid, a Natural Triterpene, Induces a Death Receptor-Mediated Apoptotic Mechanism in Caco-2 p53-Deficient Colon Adenocarcinoma Cells. *PLoS One*. 2016 Jan 11;11(1):e0146178.
- Rufino-Palomares EE, Reyes-Zurita FJ, García-Salguero L, Peragón J, de la Higuera M, Lupiáñez JA..NADPH production, a growth marker, is stimulated by maslinic acid in gilthead sea bream by increased NADP-IDH and ME expression. *Comp Biochem Physiol C Toxicol Pharmacol*. 2016 Sep;187:32-42.
- Peragón J, Rufino-Palomares EE, Muñoz-Espada I, Reyes-Zurita FJ, Lupiáñez JA. A New HPLC-MS Method for Measuring Maslinic Acid and Oleanolic Acid in HT29 and HepG2 Human Cancer Cells. *Int J Mol Sci*. 2015 Sep 9;16(9):21681-94.
- Rufino-Palomares EE, Reyes-Zurita FJ, García-Salguero L, Mokhtari K, Medina PP, Lupiáñez JA, Peragón J. Maslinic acid, a triterpenic anti-tumoural agent, interferes with cytoskeleton protein expression in HT29 human colon-cancer cells. *J Proteomics*. 2013 May 27;83:15-25. doi: 10.1016/j.jprot.2013.02.031. Epub 2013 Mar 13.
- Coira IF, Rufino-Palomares EE, Romero OA, Peinado P, Metheetrairut C, Boyero-Corral L, Carretero J, Farez-Vidal E, Cuadros M, Reyes-Zurita FJ, Lupiáñez JA, Sánchez-Cespedes M, Slack FJ, Medina PP. Expression inactivation of SMARCA4 by microRNAs in lung tumors. *Hum Mol Genet*. 2015 Mar 1;24(5):1400-9. doi: 10.1093/hmg/ddu554. Epub 2014 Oct
- Coutinho F, Castro C, Rufino-Palomares E, Ordóñez-Grande B, Gallardo MA, Oliva-Teles A, Peres H. Dietary glutamine supplementation effects on amino acid metabolism, intestinal nutrient absorption capacity and antioxidant response of gilthead sea bream (*Sparus aurata*) juveniles. *Comp Biochem Physiol A Mol Integr Physiol*. 2016 Jan;191:9-17. doi: 10.1016/j.cbpa.2015.09.012. Epub 2015 Sep 28.
- Reyes-Zurita FJ, Rufino-Palomares EE, Medina PP, Leticia García-Salguero E, Peragón J, Cascante M, Lupiáñez JA. Antitumour activity on extrinsic apoptotic targets of the triterpenoid maslinic acid in p53-deficient Caco-2 adenocarcinoma cells. *Biochimie*. 2013 Nov;95(11):2157-67. doi: 10.1016/j.biochi.2013.08.017. Epub 2013 Aug 20.
- Parra A, Martin-Fonseca S, Rivas F, Reyes-Zurita FJ, Medina-O'Donnell M, Rufino-Palomares EE, Martinez A, Garcia-Granados A, Lupiáñez JA, Albericio F. Solid-phase library synthesis of bi-functional derivatives of oleanolic and maslinic acids and their cytotoxicity on three cancer cell lines. *ACS Comb Sci*. 2014 Aug 11;16(8):428-47. doi: 10.1021/co500051z. Epub 2014 Jun 18.
- Palomino-Morales R, Torres C, Perales S, Linares A, Alejandre MJ. Inhibition of extracellular matrix production and remodeling by doxycycline in smooth muscle cells. *J Pharmacol Sci*. 2016 Dec;132(4):218-223. doi: 10.1016/j.jphs.2016.03.008. Epub 2016 Mar 25.
- Palomino-Morales R, Perales S, Torres C, Linares A, Alejandre MJ. Effect of HMG-CoA Reductase Inhibition on Vascular Smooth Muscle Cells Extracellular Matrix Production: Role of RhoA. *Curr Vasc Pharmacol*. 2016;14(4):345-52.
- Torres C, Linares A, Alejandre MJ, Palomino-Morales RJ, Delgado JR, Perales S. Interplay Between Gemcitabine and Erlotinib Over Pancreatic Adenocarcinoma Cells. *Pancreas*. 2016 Feb;45(2):269-80. doi: 10.1097/MPA.0000000000000452.
- Torres C, Linares A, Alejandre MJ, Palomino-Morales RJ, Caba O, Prados J, Aránega A, Delgado JR, Irigoyen A, Martínez-Galán J, Ortúño FM, Rojas I, Perales S. Prognosis

Relevance of Serum Cytokines in Pancreatic Cancer. *Biomed Res Int.* 2015;2015:518284. doi: 10.1155/2015/518284.

- Torres C, Linares A, Alejandre MJ, Palomino-Morales R, Martin M, Delgado JR, Martinez J, Perales S. The potential role of the glycoprotein osteoactivin/glycoprotein nonmetastatic melanoma protein B in pancreatic cáncer. *Pancreas.* 2015 Mar;44(2):302-10. doi: 10.1097/MPA.0000000000000250.
- Caba O, Prados J, Ortiz R, Jiménez-Luna C, Melguizo C, Alvarez PJ, Delgado JR, Irigoyen A, Rojas I, Pérez-Florido J, Torres C, Perales S, Linares A, Aránega A. Transcriptional profiling of peripheral blood in pancreatic adenocarcinoma patients identifies diagnostic biomarkers. *Dig Dis Sci.* 2014 Nov;59(11):2714-20. doi: 10.1007/s10620-014-3291-3. Epub 2014 Jul 29.
- Torres C, Perales S, Alejandre MJ, Iglesias J, Palomino RJ, Martin M, Caba O, Prados JC, Aránega A, Delgado JR, Irigoyen A, Ortúño FM, Rojas I, Linares A. Serum cytokine profile in patients with pancreatic cáncer. *Pancreas.* 2014 Oct;43(7):1042-9. doi: 10.1097/MPA.0000000000000250.
- Aranda CJ, Ocón B, Arredondo-Amador M, Suárez MD, Zarzuelo A, Chazin WJ, Martínez-Augustin O, Sánchez de Medina F. Calprotectin protects against experimental colonic inflammation in mice. *Br J Pharmacol.* 2018 Oct;175(19):3797-3812. doi: 10.1111/bph.14449.
- Rivero-Gutiérrez B, Gámez-Belmonte R, Suárez MD, Lavín JL, Aransay AM, Olivares M, Martínez-Augustin O, Sánchez de Medina F, Zarzuelo A. A symbiotic composed of *Lactobacillus fermentum* CECT5716 and FOS prevents the development of fatty acid liver and glycemic alterations in rats fed a high fructose diet associated with changes in the microbiota. *Mol Nutr Food Res.* 2017 Aug;61(8). doi: 10.1002/mnfr.201600622.
- Hernández-Chirlaque C, Aranda CJ, Ocón B, Capitán-Cañadas F, Ortega-González M, Carrero JJ, Suárez MD, Zarzuelo A, Sánchez de Medina F, Martínez-Augustin O. Germ-free and Antibiotic-treated Mice are Highly Susceptible to Epithelial Injury in DSS Colitis. *J Crohns Colitis.* 2016 Nov;10(11):1324-1335.
- López-Posadas R, Mascaraque C, González R, Suárez MD, Zarzuelo A, Martínez-Augustin O, Sánchez de Medina F. The Bisphosphonate Pamidronate is an Intestinal Antiinflammatory Agent in Rat and Mouse Experimental Colitis. *Inflamm Bowel Dis.* 2016 Nov;22(11):2549-2561.
- Ocón B, Aranda CJ, Gámez-Belmonte R, Suárez MD, Zarzuelo A, Martínez-Augustin O, Sánchez de Medina F. The glucocorticoid budesonide has protective and deleterious effects in experimental colitis in mice. *Biochem Pharmacol.* 2016 Sep 15;116:73-88. doi: 10.1016/j.bcp.2016.07.010.
- Capitán-Cañadas F, Ocón B, Aranda CJ, Anzola A, Suárez MD, Zarzuelo A, de Medina FS, Martínez-Augustin O. Fructooligosaccharides exert intestinal anti-inflammatory activity in the CD4+ CD62L+ T cell transfer model of colitis in C57BL/6J mice. *Eur J Nutr.* 2016 Jun;55(4):1445-54. doi: 10.1007/s00394-015-0962-6.
- Mascaraque C, González R, Suárez MD, Zarzuelo A, Sánchez de Medina F, Martínez-Augustin O. Intestinal anti-inflammatory activity of apigenin K in two rat colitis models induced by trinitrobenzenesulfonic acid and dextran sulphate sodium. *Br J Nutr.* 2015 Feb 28;113(4):618-26. doi: 10.1017/S0007114514004292.
- Mascaraque C, Aranda C, Ocón B, Monte MJ, Suárez MD, Zarzuelo A, Marín JJ, Martínez-Augustin O, de Medina FS. Rutin has intestinal antiinflammatory effects in the

- CD4+ CD62L+ T cell transfer model of colitis. *Pharmacol Res.* 2014 Dec;90:48-57. doi: 10.1016/j.phrs.2014.09.005.
- Mascaraque C, Suárez MD, Zarzuelo A, Sánchez de Medina F, Martínez-Augustin O. Active hexose correlated compound exerts therapeutic effects in lymphocyte driven colitis. *Mol Nutr Food Res.* 2014 Dec;58(12):2379-82. doi: 10.1002/mnfr.201400364. 2.
  - Mascaraque C, Suárez MD, Zarzuelo A, Sánchez de Medina F, Martínez-Augustin O. Active hexose correlated compound exerts therapeutic effects in lymphocyte driven colitis. *Mol Nutr Food Res.* 2014 Dec;58(12):2379-82. doi: 10.1002/mnfr.201400364. Capitán-Cañadas F, Ortega-González
  - M, Guadix E, Zarzuelo A, Suárez MD, de Medina FS, Martínez-Augustin O. Prebiotic oligosaccharides directly modulate proinflammatory cytokine production in monocytes via activation of TLR4. *Mol Nutr Food Res.* 2014 May;58(5):1098-110. doi: 10.1002/mnfr.201300497.
  - Ortega-González M, Capitán-Cañadas F, Requena P, Ocón B, Romero-Calvo I, Aranda C, Suárez MD, Zarzuelo A, Sánchez de Medina F, Martínez-Augustin O. Validation of bovine glycomacropeptide as an intestinal anti-inflammatory nutraceutical in the lymphocyte-transfer model of colitis. *Br J Nutr.* 2014 Apr 14;111(7):1202-12. doi: 10.1017/S0007114513003590.
  - Ortega-González M, Ocón B, Romero-Calvo I, Anzola A, Guadix E, Zarzuelo A, Suárez MD, Sánchez de Medina F, Martínez-Augustin O. Nondigestible oligosaccharides exert nonprebiotic effects on intestinal epithelial cells enhancing the immune response via activation of TLR4-NF $\kappa$ B. *Mol Nutr Food Res.* 2014 Feb;58(2):384-93. doi: 10.1002/mnfr.201300296.
  - Martínez-Moya P, Romero-Calvo I, Requena P, Hernández-Chirlaque C, Aranda CJ, González R, Zarzuelo A, Suárez MD, Martínez-Augustin O, Marín JJ, de Medina FS. Dose-dependent antiinflammatory effect of ursodeoxycholic acid in experimental colitis. *Int Immunopharmacol.* 2013 Feb;15(2):372-80. doi: 10.1016/j.intimp.2012.11.017
  - Daddaoua A, Martínez-Plata E, Ortega-González M, Ocón B, Aranda CJ, Zarzuelo A, Suárez MD, de Medina FS, Martínez-Augustin O. The nutritional supplement Active Hexose Correlated Compound (AHCC) has direct immunomodulatory actions on intestinal epithelial cells and macrophages involving TLR/MyD88 and NF- $\kappa$ B/MAPK activation. *Food Chem.* 2013 Feb 15;136(3-4):1288-95. doi: 10.1016/j.foodchem.2012.09.039.
  - Ocón B, Anzola A, Ortega-González M, Zarzuelo A, Suárez MD, Sánchez de Medina F, Martínez-Augustin O. Active hexose-correlated compound and *Bifidobacterium longum* BB536 exert symbiotic effects in experimental colitis. *Eur J Nutr.* 2013 Mar;52(2):457-66. doi: 10.1007/s00394-012-0347-z.
  - Cuadros M, Cano C, López FJ, Blanco A, Concha A. Expression profiling of breast tumors based on HER2 status defines migration related genes.
  - Pablo Palma, Carlos Cano, Raquel Conde, Ana Comino, Pablo Bueno, J. Antonio Ferrón, Marta Cuadros. Expression profiling of rectal tumors defines response to neoadjuvant treatment related genes. *PlosOne* 9 (11), 2014.
  - Conde-Muñoz R, Cuadros M, Zambudio N, Segura-Jiménez I, Cano C, Palma P. Predictive Biomarkers to Chemoradiation in Locally Advanced Rectal Cancer. *BioMed Research International* 92143, 2015. Review.

- Sánchez P, Torres JM, Castro B, Frias JF, and Ortega E. Effects of metoclopramida on mRNA levels of steroid 5alpha-Reductase isozymes in prostate of adult rat. *J Physiol Biochem* 69(1) 133-140, 2013
- Osorio A, Ortega E, Torres JM, Sánchez P, and Ruiz-Requena E. Biochemical markers of vascular calcification in elderly hemodialysis patients. *Mol Cell Biochem* 374 (1-2), 21-27, 2013
- Sánchez, Pilar; Torres, Jesús; Castro, Beatriz; Olmo, Asunción; del Moral, Raimundo; Ortega Esperanza. Expression of steroid 5 $\alpha$ -reductase isozymes in prostate of adult rats after environmental stress. *FEBS J* 280 (1), 93-101, 2013
- Sánchez, P; Torres, JM; Castro, B; Del Moral, R, Luna JD and Ortega, E. Steroid 5 $\alpha$ -reductase in adult rat brain after neonatal dihydrotestosterone administration. *Neurochem Res* 38(3) 557-563, 2013.
- Castro B, Sánchez, P; Torres, JM; Preda, O; Del Moral, R, and Ortega, E. Bisphenol A exposure during adulthood alters expresión of aromatase and steroid 5 $\alpha$ -reductase isozymes in rat prostate. *Plos One* 8(2), e55905-12, 2013
- Dadhich RK, Barrionuevo FJ, Real FM, Lupiañez DG, Ortega E, Burgos M, Jiménez R. Identification of live germ-cell desquamation as a major mechanism of seasonal testis regression in mammals. A study in the Iberian mole (*Talpa occidentalis*). *Biol Reprod* 88/4, 101-115, 2013.
- C Perez-Laso,E Ortega, JL Martin, MA Perez-Izquierdo F Gómez, S Segovia, Del Cerro MC. Maternal care interact with prenatal stress in altering sexual dimorphism in male rats. *Horm Behav* ;64(4):624-633, 2013
- Sánchez, P; Castro B; Torres, JM; Preda, O; Del Moral, R, and Ortega, E. Bisphenol A Modifies the Regulation Exerted by Testosterone on 5  $\alpha$  -Reductase Isozymes in Ventral Prostate. *Biomed Res Int*. 13/629235, 2013.
- Castro B, Sánchez, P; Torres, JM; and Ortega, E. Effects of adult exposure to Bisphenol A on genes involved in the physiopathology of rat prefrontal cortex. *Plos One* 8(9):e73584-92., 2013.
- Aparicio VA1, Tassi M2, Nebot E1, Camiletti-Moirón D1, Ortega E3, Porres JM1, Aranda P1. High-Intensity Exercise May Compromise Renal Morphology in Rats. *Int J Sports Med.* ;35(8):639-44, 2014.
- Sánchez, Pilar; Castro, Beatriz; Torres, Jesús; Ortega, Esperanza. Effects of different ethanol-administration regimes on mRNA and protein levels of steroid 5 $\alpha$ -Reductase isozymes in prefrontal cortex of adolescent male rats. *Psychopharmacology* ;231(17):3273-80, 2014.
- Massoud D1, Barrionuevo FJ, Ortega E, Burgos M, Jiménez R. The testis of greater white-toothed shrew *Crocidura russula* in Southern European populations: A case of adaptive lack of seasonal involution? *J Exp Zool B Mol Dev Evol*. I;322(5):304-15. 2014
- Castro B1, Sánchez P1, Miranda MT2, Torres JM3, Ortega E4. Identification of dopamine- and serotonin-related genes modulated by bisphenol A in the prefrontal cortex of male rats. *Chemosphere* Jun 30;139:235-239. doi: 10.1016/j..2015.06.061. 2015.
- Del Cerro MC, Ortega E, Gómez F, Segovia S, Pérez-Laso C. Environmental prenatal stress eliminates brain and maternal behavioral sex differences and alters hormone levels in female rats. *Horm Behav*. I;73:142-7, 2015.
- Castro B1, Sánchez P1, Torres JM3, Ortega E4.- Bisphenol A, Bisphenol F and Bisphenol S affect differently 5a-reductase expression and dopamine-serotonin systems in the

prefrontal cortex of juvenile female rats. Environmental Research 281-287, 2015 DOI I information:10.1016/j.envres.2015.07.001

- Carmen Pérez-Laso, Sebastián Cerdan, Carme Junque, Angel Gómez , Esperanza Ortega E, Mireia Mora, Carlos Avendaño, Esther Gómez-Gil, María Cruz Rodriguez del Cerro and Antonio Guillamon. Effects of Adult Female Rat Androgenization on Brain Morphology and Metabolomic Profile. Cerebral Cortex. 2017; 1-8 doi 10.1093/cercor/bhw163
  - Sánchez P, Serrano-Falcón C, Torres JM, Serrano S, Ortega E.5 $\alpha$ -Reductase isozymes and aromatase mRNA levels in plucked hair from young women with female pattern hair loss. Arch Dermatol Res. 2018 ;310(1):77-83 (2018). doi: 10.1007/s00403-017-1798-0. Epub 2017 Nov 28.
  - Castro B, Sánchez P, Torres JM, Ortega E. Effects of perinatal exposure to bisphenol A on the intraprostatic levels of aromatase and 5 $\alpha$ -reductase isozymes in juvenile rats. Food Chem Toxicol. 2018 May;115:20-25. doi: 10.1016/j.fct.2018.02.060. Epub 2018 Feb 28.
- 
- Eijkelkamp N\*, Linley JE\*, Torres JM, Bee L., Dickenson AH, Gringhuis M., Minett MS, Hong GS, Lee E, Oh U, Ishikawa Y, Zwartkuis FJ, Cox JJ, Wood JN. A role for Piezo 2 in exchange protein activated by cAMP1-dependent mechanical allodynia. Nat. Commun. 4:1682. doi: 10.1038/ncomms2673, 2013.
  - Habib AM, Matsuyama A, Okorokov AL, Santana-Varela S, Bras JT, Aloisi AM, Emery EC, Bogdanov YD, Follenfant M, Gossage SJ, Gras M, Humphrey J, Kolesnikov A, Le Cann K, Li S, Minett MS, Pereira V, Ponsolles C, Sikandar S, Torres JM, et al.,. A novel human pain insensitivity disorder caused by a point mutation in ZFHX2. Brain. 141(2):365-376, 2018
  - Herrera, A, Cuadros. M, Rodríguez, MI Rodríguez-Perales S, Torres R, Estecio MR, Coira IF, Saiz M, Carmona-Saez P, Medina PP✉. Long non-coding RNA FENDRR and FOXF1 gene: new biomarkers in lung cancer. Oncotarget 2017 (Q1, IF=5.2) doi.org/10.18632/oncotarget.22154
  - Conde-Muiño R, Cano C, Sanchez-Martín V, Herrera A, Comino A, Medina PP✉, Palma P, Cuadros M. Preoperative chemo radiotherapy for rectal cancer: The sensitizer role of miR-375 and c-Myc association. 2017 Jul 19. Oncotarget 2017 (Q1, IF=5.2) doi.org/10.18632/oncotarget.19393
  - Cuadros Marta, Sánchez Martín Victoria, Herrera Antonio, Baliñas C, Boyero Laura, Peinado Paola, Joel Martín-Padrón, Medina PP✉. BRG1 regulation by miR-155 in human leukemia cell lines. Clin Transl Oncol. 2017 Mar 1. doi.org/10.1007/s12094-017-1633-2
  - Paola Peinado, Antonio Herrera, Carlos Baliñas, Joel Martín-Padrón, Laura Boyero, Marta Cuadros, Isabel F. Coira, Maria I. Rodriguez, Fernando J Reyes-Zurita, Eva E. Rufino-Palomares, Jose Antonio Lupiáñez and Medina PP✉. Long non-coding RNAs as cancer biomarkers. Capítulo de libro. Libro: Cancer and Non-coding-RNAs, ISBN: 9780128110225. Published Date: 1st October 2017. doi.org/10.1016/B978-0-12-811022-5.00006-1

- The oleanolic acid derivative, 3-O-succinyl-28-O-benzyl oleanolate, induces apoptosis in B16-F10 melanoma cells via the mitochondrial apoptotic pathway. Fernando J. Reyes-Zurita, Marta Medina-O'Donnell, Rosa M. Ferrer-Martin, Eva E. Rufino-Palomares, Samuel Martin-Fonseca, Francisco Rivas, Antonio Martínez, Andrés García-Granados, Amalia Pérez-Jiménez, Leticia García-Salguero, Juan Peragón, Khalida Mokhtari, Medina PP, Andrés Parra and José A. Lupiáñez RSC Adv., 2016, 6, 93590-93601. doi.org/10.1039/C6RA18879F
- Target molecules in 3T3-L1 adipocytes differentiation are regulated by maslinic acid, a natural triterpene from *Olea europaea*. Pérez-Jiménez A, Rufino-Palomares E, Fernández-Gallego N., Ortúñoz-Costela MC, Reyes-Zurita FJ, Peragón J, García-Salguero L, Mokhtari K, Medina PP, Lupiáñez JA. Phytomedicine. Volume 23, Issue 12, 15 November 2016, Pages 1301–1311. doi.org/10.1016/j.phymed.2016.07.001
- Fernando J. Reyes-Zurita, Eva E. Rufino-Palomares, Leticia García-Salguero, Medina P.P., Juan Peragón and José A. Lupiáñez. Maslinic acid, a natural triterpene, induces a death receptor-mediated apoptotic mechanism in Caco-2 p53-deficient colon adenocarcinoma cells. Plos One, doi.org/10.1371/journal.pone.0146178, January 11, 2016
- Coira IF, Rufino-Palomares EE, Romero OA, Paola Peinado, Chanatip Methetrairut, Boyero-Corral L, Carretero J, Farez-Vidal E, Cuadros M., Reyes-Zurita F, Lupiáñez JA, Sánchez-Cespedes M., Slack FJ, Medina PP✉. Expression inactivation of SMARCA4 by microRNAs in lung tumors. 2015 Human Molecular Genetics, Mar 1;24(5):1400-9. doi:10.1093/hmg/ddu554. PMID: 25355421.
- Khalida Mokhtari, Eva E. Rufino-Palomares, Amalia Pérez-Jiménez, Fernando J. Reyes-Zurita, Celery Figuera, Leticia García-Salguero, Medina P.P., Juan Peragón and José A. Lupiáñez. Maslinic acid, a triterpene from olive, affects the antioxidant and mitochondrial status of B16F10 melanoma cells grown under stressful conditions. Evidence-Based Complementary and Alternative Medicine. July 2015. PMID: 26236377
- Eva E. Rufino-Palomares, Amalia Pérez-Jiménez, Fernando J Reyes-Zurita, Leticia García-Salguero, Khalida Mokhtari, Antonio Herrera, Medina P.P, Juan Peragón, José A Lupiáñez. Anti-cancer and Anti-angiogenic Properties of Various Natural Pentacyclic Tri-terpenoids and Some of their Chemical Derivatives. Current Organic Chemistry, 19(10): 919-947. Volume 19, Issue 10, 2015. doi: 10.2174/1385272819666150119225952
- Schiaffino-Ortega S, Baliñas C, Cuadros M, Medina PP✉. SWI/SNF proteins as target in cancer therapy. Journal of Hematology & Oncology 2014, 7:81 J Hematol Oncol. 2014 Nov 13;7(1):81. PMID: 25391308.
- Catalogado como Highly accessed article al recibir más de mil visitas en menos de un mes tras su publicación. Ha sido el artículo más visitado de la revista durante 2014.
- Rufino-Palomares EE, Reyes-Zurita FJ, Lupiáñez JA, Medina PP✉. MicroRNAs as oncogenes and tumor Suppressors. Chapter #14 of the Book "MicroRNAs in Medicine" edited by Charles H. Lawrie. ISBN: 978-1-118-30039-8. Wiley Ed. January, 2014. DOI: 10.1002/9781118300312.ch14
- Muñoz-Lopez M, Medina PP, Garcia-Perez JL. Wip1 regulates genomic fluidity on cancer. Cancer Cell. 2013 Oct 14;24(4):405-7. PMID:24135277
- Palma P, Cuadros M, Conde-Muñoz R, Olmedo C, Cano C, Segura-Jimenez I, Blanco A, Bueno P, Ferron JA, Medina P. Microarray Profiling of Mononuclear Peripheral Blood

- Cells Identifies Novel Candidate Genes Related to Chemoradiation Response in Rectal Cancer. *PLoS One*. 2013 Sep 5;8(9), PMID: 24040155.
- Reyes-Zurita FJ, Rufino-Palomares EE, Medina PP, Leticia García-Salguero E, Peragón J, Cascante M, Lupiáñez JA. Antitumour activity on extrinsic apoptotic targets of the triterpenoid maslinic acid in p53-deficient Caco-2 adenocarcinoma cells. *Biochimie*. 2013 Aug 20. PMID: 23973282
  - Rufino-Palomares EE, Reyes-Zurita, FJ, García-Salguero L., Mokhtari K; Medina PP, Lupiáñez JA, Peragón J. Maslinic acid, a triterpenic anti-tumoural agent, interferes with cytoskeleton protein expression in HT29 human colon-cancer cells". *J Proteomics*. 2013 May 27;83:15-25. PMID: 23499989.
  - López-Viseras, M.E., Fernández, B., Hilfiker, S., González, C.S., González, J.L., Calahorro, A.J., Colacio, E. and Rodríguez-Díéguez, A. (2014) In vivo potential antidiabetic activity of a novel zinc coordination compound based on 3-carboxy-pyrazole. *J. Inorg. Biochem.* 131, 64-67.
  - Gómez-Suaga, P., Fdez, E., Fernández, B., Martínez-Salvador, M., Blanca Ramírez, M., Madero-Pérez, J., Rivero-Ríos, P., Fuentes, J.M. and Hilfiker, S. (2014) Novel insights into the neurobiology underlying LRRK2-linked Parkinson's disease. *Neuropharmacol.* 85C, 45-56.
  - Rivero-Ríos, P., Gómez-Suaga, P., Fdez, E. and Hilfiker, S. (2014) Upstream deregulation of calcium signaling in Parkinson's disease. *Frontiers Mol. Neurosci.* 17 June 2014 | doi: 10.3389/fnmol.2014.00053.
  - Gómez-Suaga, P., Rivero-Ríos, P., Fdez, E., Blanca Ramírez, M., Ferrer, I., Aistui, A., López de Munain, A. and Hilfiker, S. (2014) LRRK2 delays degradative receptor trafficking by impeding late endosomal budding through decreasing Rab7 activity. *Hum. Mol. Genet.* 23, 6779-6796.
  - Hilfiker, S. (2014) Autophagy researchers. *Autophagy* 10, 1149-1152. Rivero-Ríos, P., Gómez-Suaga, P., Fernández, B., Madero-Pérez, J., Schwab, A.J., Ebert, A.D. and Hilfiker, S. (2015) Alterations in late endocytic trafficking related to the pathobiology of LRRK2-linked Parkinson's disease. *Biochem. Soc. Trans.* 43, 390-395.
  - Rivero-Ríos, P., Fernández, B., Madero-Pérez, J. and Hilfiker, S. (2015) Targeting the autophagy/lysosomal degradation pathway in Parkinson's disease. *Curr. Neuropharmacol.* 14, 238-249.
  - Klionsky, D.J. and >2000 others (2016) Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy* 12, 1-222.
  - Ferndández, B., Fdez, E., Gómez-Suaga, P., Gil, F., Molina-Villalba, I., Ferrer, I., Patel, S., Churchill, G.C. and Hilfiker, S. (2016) Iron overload causes endolysosomal deficits modulated by NAADP-regulated 2-pore channels and RAB7A. *Autophagy* 12, 1487-1506.
  - Rivero-Ríos, P., Fernández, B., Madero-Pérez, J., Lozano, M.R. and Hilfiker, S. (2016) Two-pore channels and Parkinson's disease: where's the link? *Messenger* 5, 67-75.
  - Blanca Ramírez, M., Madero-Pérez, J., Rivero-Ríos, P., Martínez-Salvador, M., Lara Ordóñez, A.J., Fernández, B., Fdez, E. and Hilfiker, S. (2017) LRRK2 and Parkinson's disease: from lack of structure to gain of function. *Curr. Protein Pept. Sci.* 18, 677-686.
  - Blanca Ramírez, M., Lara Ordóñez, A.J., Fdez, E. and Hilfiker, S. (2017) LRRK2: from kinase to GTPase to microtubules and back. *Biochem. Soc. Trans.* 45, 141-146.
  - Madero-Pérez, J., Fdez, E., Fernández, B., Lara Ordóñez, A.J., Blanca Ramírez, M., Romo Lozano, M., Rivero-Ríos, P. and Hilfiker, S. (2017) Cellular effects mediated by

- pathogenic LRRK2: homing in on Rab-mediated processes. *Biochem. Soc. Trans.* 45, 147-154.
- Fernández, B., Ferrer, I., Gil, F. and Hilfiker, S. (2017) Biomonitorization of iron accumulation in the substantia nigra from Lewy body disease patients. *Toxicol. Rep.* 4, 188-193.
  - Blanca Ramírez, M., Lara Ordóñez, A.J., Fdez, E., Madero-Pérez, J., Gonnelli, A., Drouyer, M., Chartier-Harlin, M.C., Taymans, J.M., Bubacco, L., Greggio, E. and Hilfiker, S. (2017) GTP binding regulates cellular localization of Parkinson's disease-associated LRRK2. *Hum. Mol. Genet.*, 26, 2747-2767.
  - Madero-Pérez, J., Fdez, E., Fernández, B., Lara Ordóñez, A.J., Blanca Ramírez, M., Gómez-Suaga, P., Waschbuesch, D., Lobbestael, E., Baekelandt, V., Nairn, A.C., Ruiz-Martínez, J., Aistau, A., López de Munaín, A., Lis, P., Comptdaer, T., Taymans, J.-M., Chartier-Harlin, M.-C., Beilina, A., Gonnelli, A., Cookson, M.R., Greggio, E. and Hilfiker, S. Parkinson disease-associated mutations in LRRK2 cause centrosomal defects via Rab8a phosphorylation. *Mol. Neurodegener.* 2018 Jan23;13(1):3.
  - Madero-Pérez, J., Fernández, B., Lara Ordóñez, A.J., Fdez, E., Lobbestael, E., Baekelandt, V. and Hilfiker, S. RAB7L1-mediated relocalization of LRRK2 to the Golgi complex causes centrosomal deficits via Rab8a. *Front. Mol. Neurosci.* 2018, doi:10.3389/fnmol.2018.00417.
  - López-Viseras, M.E., Fernández, B., Hilfiker, S., González, C.S., González, J.L., Calahorro, A.J., Colacio, E. and Rodríguez-Díéguez, A. (2014) In vivo potential antidiabetic activity of a novel zinc coordination compound based on 3-carboxy-pyrazole. *J. Inorg. Biochem.* 131, 64-67.
  - Gómez-Suaga, P., Fdez, E., Fernández, B., Martínez-Salvador, M., Blanca, Ramírez, M., Madero-Pérez, J., Rivero-Ríos, P., Fuentes, J.M. and Hilfiker, S. (2014) Novel insights into the neurobiology underlying LRRK2-linked Parkinson's disease. *Neuropharmacol.* 85C, 45-56.
  - Rivero-Ríos, P., Gómez-Suaga, P., Fdez, E. and Hilfiker, S. (2014) Upstream deregulation of calcium signaling in Parkinson's disease. *Frontiers Mol. Neurosci.* 17 June 2014 | doi:10.3389/fnmol.2014.00053.
  - Gómez-Suaga, P., Rivero-Ríos, P., Fdez, E., Blanca Ramírez, M., Ferrer, I., Aistau, A., López de Munain, A. and Hilfiker, S. (2014) LRRK2 delays degradative receptor trafficking by impeding late endosomal budding through decreasing Rab7 activity. *Hum. Mol. Genet.* 23, 6779-6796.
  - Hilfiker, S. (2014) Autophagy researchers. *Autophagy* 10, 1149-1152. Rivero-Ríos, P., Gómez-Suaga, P., Fernández, B., Madero-Pérez, J., Schwab, A.J., Ebert, A.D. and Hilfiker, S. (2015) Alterations in late endocytic trafficking related to the pathobiology of LRRK2-linked Parkinson's disease. *Biochem. Soc. Trans.* 43, 390-395.
  - Rivero-Ríos, P., Fernández, B., Madero-Pérez, J. and Hilfiker, S. (2015). Targeting the autophagy/lysosomal degradation pathway in Parkinson's disease. *Curr. Neuropharmacol.* 14, 238-249.
  - Klionsky, D.J. and >2000 others (2016) Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy* 12, 1-222.
  - Ferndández, B., Fdez, E., Gómez-Suaga, P., Gil, F., Molina-Villalba, I., Ferrer, I., Patel, S., Churchill, G.C. and Hilfiker, S. (2016) Iron overload causes endolysosomal deficits modulated by NAADP-regulated 2-pore channels and RAB7A. *Autophagy* 12, 1487-1506.

- Rivero-Ríos, P., Fernández, B., Madero-Pérez, J., Lozano, M.R. and Hilfiker, S. (2016) Two-pore channels and Parkinson's disease: where's the link? *Messenger* 5, 67-75.
- Blanca Ramírez, M., Madero-Pérez, J., Rivero-Ríos, P., Martínez-Salvador, M., Lara Ordóñez, A.J., Fernández, B., Fdez, E. and Hilfiker, S. (2017) LRRK2 and Parkinson's disease: from lack of structure to gain of function. *Curr. Protein Pept. Sci.* 18, 677-686.
- Blanca Ramírez, M., Lara Ordóñez, A.J., Fdez, E. and Hilfiker, S. (2017) LRRK2: from kinase to GTPase to microtubules and back. *Biochem. Soc. Trans.* 45, 141-146.
- Madero-Pérez, J., Fdez, E., Fernández, B., Lara Ordóñez, A.J., Blanca Ramírez, M., Romo Lozano, M., Rivero-Ríos, P. and Hilfiker, S. (2017) Cellular effects mediated by pathogenic LRRK2: homing in on Rab-mediated processes. *Biochem. Soc. Trans.* 45, 147-154.
- Fernández, B., Ferrer, I., Gil, F. and Hilfiker, S. (2017) Biomonitorization of iron accumulation in the substantia nigra from Lewy body disease patients. *Toxicol. Rep.* 4, 188-193.
- Blanca Ramírez, M., Lara Ordóñez, A.J., Fdez, E., Madero-Pérez, J., Gonnelli, A., Drouyer, M., Chartier-Harlin, M.C., Taymans, J.M., Bubacco, L., Greggio, E. and Hilfiker, S. (2017) GTP binding regulates cellular localization of Parkinson's disease-associated LRRK2. *Hum. Mol. Genet.*, 26, 2747-2767.
- Madero-Pérez, J., Fdez, E., Fernández, B., Lara Ordóñez, A.J., Blanca Ramírez, M., Gómez-Suaga, P., Waschbuesch, D., Lobbestael, E., Baekelandt, V., Nairn,A.C., Ruiz-Martínez, J., Aistui, A., López de Munaín, A., Lis, P., Comptaer, T., Taymans, J.-M., Chartier-Harlin, M.-C., Beilina, A., Gonnelli, A., Cookson, M.R., Greggio, E. and Hilfiker, S. Parkinson disease-associated mutations in LRRK2 cause centrosomal defects via Rab8a phosphorylation. *Mol. Neurodegener.* 2018 Jan23;13(1):3.
- Madero-Pérez, J., Fernández, B., Lara Ordóñez, A.J., Fdez, E., Lobbestael, E., Baekelandt, V. and Hilfiker, S. RAB7L1-mediated relocalization of LRRK2 to the Golgi complex causes centrosomal deficits via Rab8a. *Front. Mol. Neurosci.* 2018, doi:10.3389/fnmol.2018.00417.
- Mercedes Gómez-Morales, Miguel Cámara-Pulido, María Teresa Miranda-León, Abel Sánchez-Palencia, Laura Boyero, José Antonio Gómez-Capilla, and María Esther Fárez-Vidal. Differential immunohistochemical localization of desmosomal plaque-related proteins in non-small cell lung cancer. *Histopathology*. 63(1): 103-113. (2013)
- Laura Boyero, Abel Sánchez-Palencia, Mª Teresa Miranda-León, Fernando Hernández-Escobar, Jose Antonio Gómez-Capilla, and Mª Esther Fárez-Vidal. Survival, Classifications, And Desmosomal Plaque Genes In Non-Small Cell Lung Cancer. *International Journal of Medical Sciences*. 10(9): 1166-1173. (2013)
- Mercedes Zafra-Ceres, Tomás de Haro, Esther Farez-Vidal, Isabel Blancas, Jose A. Gómez-Capilla, Carolina Gómez-Llorente. Influence Of CYP2D6 Polymorphisms On Serum Levels Of Tamoxifen Metabolites In Spanish Women With Breast Cancer. 10(7): 932-937 (2013)
- Verdugo F, Castillo A, Simonian K, Castillo F, Farez-Vidal E, D'Addona A. Periodontopathogen and Epstein-Barr Virus-Associated Periapical Periodontitis May Be the Source of Retrograde Infectious Peri-Implantitis. *Clinical Implant Dentistry and Related Research*. 17 (1): 199-207. 2015
- Isabel F. Coira, Eva E. Rufino-Palomares, Octavio A Romero, Paola Peinado, Chanatip Metheetrairut, Laura Boyero-Corral, Julian Carretero , Esther Farez-Vidal, Marta Cuadros, Fernando J. Reyes-Zurita, Jose A.Lupiáñez, Montse Sánchez-Cespedes, Frank

- J. Slack and Pedro P Medina. Expression inactivation of SMARCA4 by microRNAs in lung tumors. *Human Molecular Genetics*. Mar 1; 24 (5): 1400-9. (2015). DOI:10.1093/hmg/ddu554. PMID: 25355421.
- María del Mar Valenzuela-Membrives, Francisco Perea-García, Abel Sánchez-Palencia, Francisco Ruiz-Cabello, Mercedes Gómez-Morales, María Teresa Miranda-León, Inmaculada Galindo-Angel and María Esther Fárez-Vidal. Progressive changes in composition of lymphocytes in lung tissues from patients with non-small-cell lung cancer. *Oncotarget*.7(44): 71608-71619. (2016).
  - Lima-Cabello E; Morales-Santana S; Leon J; Alché JD; Clemente A; Alché V; Jiménez-López JC. Narrow-leaved lupin (*Lupinusangustifolius L.*) seed  $\beta$ -conglutins reverse the induced insulin resistance in pancreatic cells. *Food Funct.* 2018 Oct 17;9(10):5176-5188. doi: 10.1039/c8fo01164h.
  - García-Rubio J; León J; Redruello-Romero A; Pavón E; Cózar A; Tamayo F; Caba-Molina M; Salmeron J; CarazoA. Cytometric analysis of adipose tissue reveals increments of adipocyte progenitor cells after weight loss induced by bariatric surgery. *Sci Rep.* 2018 Oct 12;8(1):15203. doi: 10.1038/s41598-018-33488-7.
  - Josefa León López; Carmen Calderón Soto; Matías Pérez Sánchez; Belén Feriche; Xavier Iglesias; Diego Chaverri; Ferran A Rodríguez. Oxidative stress in elite athletes training at moderate altitude and at sea level. *Eur J Sport Sci.* 2018 Jul;18(6):832-841. doi: 10.1080/17461391.2018.1453550.
  - Casado J; Iñigo-Chaves A; Jiménez-Ruiz SM; Ríos-Arrabal S; Carazo-Gallego Á; González-Puga C; Núñez MI; Ruíz-Extremera Á; Salmerón J; León J. AA-NAT, MT1 and MT2 Correlates with Cancer Stem-Like Cell Markers in Colorectal Cancer: Study of the Influence of Stage and p53 Status of Tumors. *Int J Mol Sci.* 2017 Jun 11;18(6). pii: E1251. doi: 10.3390/ijms18061251
  - Ruiz-Extremera A; Pavón-Castillero EJ; Florido M; Muñoz de Rueda P; Muñoz-Gámez JA; Casado J; Carazo A; Quiles R; Jiménez-Ruiz SM; Gila A; Luna JD; León J; Salmerón J. Influence of HLA class I, HLA class II and KIRs on vertical transmission and chronicity of hepatitis C virus in children. *PLoS One.* 2017 Feb 22;12(2):e0172527. doi: 10.1371/journal.pone.0172527. eCollection 2017.
  - Artacho Cordón F; León J; Sáez JM; Fernández MF; Martín-Olmedo P; Olea N; Arrebola JP. Contribution of Persistent Organic Pollutant Exposure to the Adipose Tissue Oxidative Microenvironment in an Adult Cohort: A Multipollutant Approach. *Environ Sci Technol.* 2016 Dec 20;50(24):13529-13538.
  - Artacho-Cordón F, Ríos-Arrabal S, Olivares-Urbano MA, Storch K, Dickreuter E, Muñoz-Gámez JA, León J, Calvente I, Torné P, Salinas Mdel M, Cordes N, Núñez MI. Valproic acid modulates radiation-enhanced matrixmetalloproteinase activity and invasion of breast cancer cells. *Int J Radiat Biol.* 2015;91(12):946-56. doi: 10.3109/09553002.2015.1087067.
  - Molina-Carballo A; Justicia-Martínez F; Moreno-Madrid F; Cubero-Millán I; Machado-Casas I; Moreno-García L; León J; Luna-Del-Castillo JD; Uberos J; Muñoz-Hoyos A. Differential responses of two related neurosteroids to methylphenidate based on ADHD subtype and the presence of depressive symptomatology. *Psychopharmacology (Berl).* 2014 Sep;231(17):3635-45. doi: 10.1007/s00213-014-3514-5.
  - León J; Casado J; Jiménez Ruiz SM; Zurita MS; González-Puga C; Rejón JD; Gila A; Muñoz de Rueda P; Pavón EJ; Reiter RJ; Ruiz-Extremera A; Salmerón J. Melatonin reduces endothelin-1 expression and secretion in colon cancer cells through the

- inactivation of FoxO-1 and NF- $\kappa$ B. *J Pineal Res.* 2014 May;56(4):415-26. doi: 10.1111/jpi.12131.
- Ruiz-Extremera A; Muñoz-Gámez JA; Abril-Molina A; Salmerón-Ruiz MA; Muñoz-de-Rueda P; Pavón-Castillero EJ; Quiles-Pérez R; Carazo A; Gila A; Jimenez-Ruiz SM; Casado J; Martín AB; Sanjuán-Núñez L; Ocete-Hita E; Viota JL; León J; Salmerón J. Variation of transaminases, HCV-RNA levels and Th1/Th2 cytokine production during the post-partum period in pregnant women with chronic hepatitis C. *PLoS One.* 2013 Oct 10;8(10):e75613. doi: 10.1371/journal.pone.0075613. eCollection 2013.
  - Martín-Guerrero SM; Leon J; Quiles-Perez R; Belmonte L; Ruiz-Extremera A; Salmeron J; Martin-Oliva D; Muñoz-Gamez JA. Expression and Single Nucleotide Polymorphism of Poly (ADP-Ribose) Polymerase-1 in Gastrointestinal Tumours: Clinical Involvement. *Curr Med Chem.* 2017;24(20):2156-2173. doi: 10.2174/0929867324666170316115039.
  - Ríos-Arrabal S; Artacho-Cordón F; Leon J; Román-Marinetto E; Salinas-Asensio MM; Calvente I; Nuñez MI. Involvement of free radicals in breast cancer. *Springerplus.* 2013 Aug 27;2:404. doi: 10.1186/2193-1801-2-404.
  - Artacho-Cordón F; Salinas-Asensio Mdel M; Calvente I; Ríos-Arrabal S; León J; Román-Marinetto E; Olea N; Núñez MI. Could radiotherapy effectiveness be enhanced by electromagnetic field treatment?. *Int J Mol Sci.* 2013 Jul 17;14(7):14974-95. doi: 10.3390/ijms140714974.
  - Eijkamp N\*, Linley JE\*, Torres JM, Bee L., Dickenson AH, Gringhuis M., Minett MS, Hong GS, Lee E, Oh U, Ishikawa Y, Zwartkuis FJ, Cox JJ, Wood JN. A role for Piezo 2 in exchange protein activated by cAMP1-dependent mechanical allodynia. *Nat. Commun.* 4:1682. doi: 10.1038/ncomms2673, 2013
  - Habib AM, Matsuyama A, Okorokov AL, Santana-Varela S, Bras JT, Aloisi AM, Emery EC, Bogdanov YD, Follenfant M, Gossage SJ, Gras M, Humphrey J, Kolesnikov A, Le Cann K, Li S, Minett MS, Pereira V, Ponsolles C, Sikandar S, Torres JM, et al.,. A novel human pain insensitivity disorder caused by a point mutation in ZFHX2. *Brain.* 141(2):365-376, 2018