

**Progress Report Publication List**  
(P20-GM103642 & P30-GM149367)

1. Martínez NAP, Arnaldi MR, Santiago-Rodríguez TM, Rodríguez-Fernández IA. (2026) Microbiota-Based Interventions Differentially Rescue Gut and Social Behavior Phenotypes in a *Drosophila* Autism-like Model. *bioRxiv*. 12: 2026.01.09.698713. doi: 10.64898/2026.01.09.698713.
2. Mendoza-Dasilva MV, Rodríguez-Rivera L, Rodríguez-Fernández IA. (2025) Determination of minimum inhibitory and lethal concentrations of two lactic acid bacteria *Lactiplantibacillus plantarum* reveals strain-specific antibiotic resistance. *MicroPubl Biol*. 16; 10.17912/micropub.biology.001615. doi: 10.17912/micropub.biology.001615.
3. Quiñones-Sánchez CL, Bilbao-Del Valle JL, Urdaneta-Colon MA, Santiago-Rodríguez TM, Rodríguez-Fernández IA. (2025) Optimizing Tissue Lysis and DNA Extraction Protocols to Enhance Bacterial Diversity Profiling in the *Drosophila melanogaster* Gut Microbiome. *bioRxiv* [Preprint]. 2025 Nov 15:2025.11.15.688634. doi: 10.1101/2025.11.15.688634.PMID: 41292709
4. Miranda-Negrón Y, Acevedo-Figueroa CJ, Ramos-Lugo G, Medina-Feliciano J, García-Arrarás JE. (2025) Echinoderm Radial Glia-Like Cells Express Vertebrate Glial Markers. *J Comp Neurol*. Oct;533(10):e70096. doi: 10.1002/cne.70096.PMID: 41081449
5. Cáceres-Chacón M, Martínez-Guzmán O, Haddock-Martínez HA, Figueroa-Pérez A, Rodríguez-Rosado S, Suárez-Pérez J, Ramos-Sánchez RY, Godoy-Vitorino F, Sierra-Mercado D. (2025) Exposure to the herbicide glyphosate leads to inappropriate threat responses and alters gut microbial composition. *Front. Toxicol*. 7:1704231. Doi: 10.3389/ftox.2025.1704231
6. Mendez-Santacruz LL, Bittman-Soto XS, Molina-Nieves A, Maldonado-Vlaar CS, Peterson-Peguero E. (2025) Pharmacological inhibition of NMDA receptors reduces migration and viability in triple-negative inflammatory breast cancer cell lines. *Discov Oncol*.; 16(1):1764. doi: 10.1007/s12672-025-03604-x.PMID: 41021117
7. Orta Rivera AM, Landrau Correa LA, Schiavone-Chamorro SL, Rankins M, Pérez Otero MV, Benjamín-Rivera JA, Vega Aponte JA, Ebenki VB, Vargas Figueroa AI, Astashkin AV, Fernández-Vega L, Tinoco AD. (2025) Elucidating the High Affinity Copper(II) Complexation by the Iron Chelator Deferasirox Provides Therapeutic and Toxicity Insight. *ChemMedChem*;20(7):e202400937. doi: 10.1002/cmdc.202400937. Epub 2025 Jan 8.PMID: 39714988
8. Pagán-Rivera LH, Godoy-Vitorino F, Meléndez-Vázquez NM, Ocasio-Rivera SE, Santiago-Gascot ME, Santiago JM, Salgado I, González V, Martínez-Guzmán O, Cáceres-Chacón M, Torrado-Tapias A and Miranda JD. (2025) The Effect of Cefazolin on the Gut Microbiome of Female Rats After Spinal Cord Injury. *Microorganism*. 13
9. Reyes-Maldonado, Roberto; Ramírez, Alonso; Marie, Bruno (2025) The Neuromuscular system of *Chironomus vitellinus* (Diptera: Chironomidae). *BioRxiv* (preprint)
10. Negrón, Luis M; Vázquez-Rosa, Edwin; Belfleur, Luxene; Díaz, Tanya L; Madera-Soto, Bismark; Vega, Irving E; Rivera, José M (2025) Guanosine-Based Supramolecular Particles for Enhanced Drug and Gene Delivery in Cell Culture. *ACS applied bio materials*. 8(7); 5625-5633.
11. Calle-Schuler, Steven A; Santana-Cruz, Alexis E; Kmecová, Lucia; Hampel, Stefanie; Seeds, Andrew M (2025) A comprehensive mechanosensory connectome reveals a somatotopically organized neural circuit architecture controlling stimulus-aimed grooming of the *Drosophila* head. *BioRxiv* (preprint)
12. Lloret Torres, Mario E; Rivas Jiménez, Arellys; Tosado Rodríguez, Eduardo L; Cardona Jordan, Kiara; Lay Rivera, Xiany X; Peña Señoriz, Yaren L; Capella Muñiz, Joseph L; Dieppa Rodríguez, Marieliz; Ruiz Bolívar, Daniel F; González Del Toro, Jovangelis; Florian Alsina, John A; Colón Rivera, Paola A; Garcia Colon, Jose O; Roche-Lima, Abiel; Velázquez-Marrero, Cristina (2025) Comparative mRNA profile analysis from NAc of adolescent male mice after binge-like alcohol exposure eliciting deficits in context fear extinction learning. *PlosOne*, 20(6) e0322576
13. Ortiz-Gomez V and Maldonado-Hernandez, R (2025) Challenges and opportunities: Interplay between infectious disease and antimicrobial resistance in medical device surface applications. *ACS Omega*. 10(21); 20968-20983.
14. Rivera A, Bracho-Rincón D, Miller MW. Localization of Cholecystokinin / Sulfakinin Neuropeptides in *Biomphalaria glabrata*, an Intermediate Host for Schistosomiasis. *J Comp Neurol*. 2025 Jan;533(1):e70016. doi: 10.1002/cne.70016. PMID: 39825709; PMCID: PMC11841659.

15. Cardona-Quiñones, Roberto A; Ramírez-Rivera, Edicer; Álvarez-Torres, Edwin; Salem-Hernández, Saily A; Vargas-Pérez, Noel J; De Jesús-Rojas, Wilfredo (2025) A Pilot Study of Primary Ciliary Dyskinesia: Sleep-Related Disorders and Neuropsychiatric Comorbidities. *J. Clinical Medicine*. 14(4).
16. Cunningham CR, Dimopoulos YP, García-Quiñones IM, Milton DR, Delgado-Vélez M, Cho WC, Prieto VG, Lasalde-Dominicci JA, Ballester LY, Aung PP. Nicotinic Acetylcholine Receptor Expression in Merkel Cell Carcinoma Is Associated With Clinical and Histopathologic Parameters. *J Cutan Pathol*. 2025 Jan 15. doi: 10.1111/cup.14773. Epub ahead of print. PMID: 39814046.
17. Lloret-Torres M & Barreto-Estrada JL (2025) LF-DBS of the ventral striatum shortens persistence for morphine place preference and modulates BDNF expression in the hippocampus. *Behavioral brain research*. Feb. 4:477:115300. Doi: 10.1016/j.bbr.2024.115300
18. Pagan-Rivera LH, Ocasio-Rivera SE, Godoy-Vitorino F, Miranda JD (2024) Spinal Cord Injury: pathophysiology, possible treatments and the role of the gut microbiota. *Frontiers in Microbiology*. Dec. 18, 2024. DOI: 10.3389/fmicb.2024.1490855
19. Daraishka Pérez-Caraballo, Grace Torres , Sthephanie Estrada , Yaritza Inostroza-Nieves, Dinely Pérez , Pedro Ferchmin , Yamixa Delgado, Yancy Ferrer-Acosta. Neuroprotection and activation of anti-inflammatory and plasticity mechanisms by PLC- $\beta$  inhibition after cholinergic hyperstimulation in hippocampal slices and microglial cells” *IBRO Neuroscience Reports*. Accepted 20 November 2024, Available online 21 November 2024. <https://doi.org/10.1016/j.ibneur.2024.11.011>
20. Cardona-Jordan KM, Lay-Rivera XX, Cartagena-López E, Bracho-Rincón, DL, González-Bermejo R, Alvarado-Monefeldt GL, Gonzalez Del Toro JP, Esquilín-Rodríguez CJ, Lloret-Torres M, Velázquez-Marrero C (2024) Sex Differences in contextual extinction learning after single binge-like EtOH Exposure in Adolescent C57BL/6J Mice. *bioRxiv*. Oct. 6. Doi: 10.1101/2024.10.25.620195
21. Delgado Y, Torres-Sanchez A, Perez D, Torres G, Estrada S, Ortiz-Alvelo N, Vega J, Santos L, Torres A, Madera BA, Ferrer-Acosta Y (2024) Deferasirox’s Anti-Chemoresistance and Anti-Metastatic Effect on Non-Small Cell Lung Carcinoma. *Biomedicine*. 12(10), p. 2272. Bio: 10.3390/biomedicines12102272.
22. Villalobos-Santos JC, Carrasquillo-Rivera M, Rodriguez-Cordero JA, Quesada O and Lasalde-Dominicci JA (2024) Insights into crystallization of neuronal nicotinic  $\alpha 4\beta 2$  receptor in polarized lipid matrices. *Crystals*. 14(1), 889. Doi: [org/10.3390/cryst14100889](https://doi.org/10.3390/cryst14100889).
23. Colón-Mercado JM, Torrado-Tapias AI, Salgado IK, Santiago JM, Rivera SEO, Bracho-Rincon DP, Rivera LHP, Miranda JD. (2024) The sexually dimorphic expression of glutamate transporters and their implication in pain after spinal cord injury. *Neural Regen Res*. Sep. 24. doi: 10.4103/NRR.NRR-D-24-00035
24. Cordero Padilla K, Alvarado Monefeldt G, Guervarez Galan A, Marrero HG, Lloret-Torres ME, Velazquez-Marrero C (2024) BK Zero isoform HEK293 stably transfected cell line differing 3’ UTRs to assess miR-9 regulation. *PLoS One*. 19(3): e0298966. Doi: 10.1371/journal.pone.0298966.
25. Dominicci-Cotto C, Vazquez M and Marie B (2024) The wingless planar cell polarity pathway is essential for optimal activity-dependent synaptic plasticity. *Frontiers in synaptic neurosc*. 16, 1322771. Doi: 10.3389/fnsyn.2024.1322771
26. Torres-Sanchez A, Torres G, Estrada S, Perez D, Garcia C, Milian M, Velazquez E, Molina V, Delgado Y (2024) Unraveling the impact of six pentacyclic triperpenes regulating metabolic pathways on lung carcinoma cells. *Pharmaceutical*. May 28: 17(6), p. 694. Doi: 10.3390/ph17060694
27. Vassjo LO and Miller MW (2024) A conserved gastropod withdrawal circuit in *Biomphalaria glabrata*, an intermediate host for schistosomiasis. *J. Neurophysiol*. Doi: 10.1152/jn.00390.2023. PMID: 38478883 Online ahead of print.
28. Valdes-Fernandez BN, Ruiz-Jimenez C, Armina-Rodriguez A, Mendez LB, Espino AM. (2024) *Fasciola hepatica* GST mu-class suppresses the cytokine storm induced by *E. coli*-lipopolysaccharide, whereas it modulates the dynamic of peritoneal macrophages in a mouse model and suppresses the classical activation of macrophages. *Microbiol. Spectr*. 12(1): e0347523. doi: 10.1128/spectrum.03475-23. PMID: 38018982
29. Prieto-Costas LA, Rivera-Cordero G, Rivera Jose M (2023) Quantifying and modulating protein encapsulation in guanosine-based supramolecular particles. *Bioconjugate Chemistry*. Nov. 15, 34(11), p. 2112-2122.
30. Van Belleghem SM, Ruggieri AA, Concha C, Livraghi L, Hebberecht L, Santiago Rivera E, Ogilvie JG, Hanly JJ, Warren IA, Planas S, Ortiz-Ruiz Y, Reed R, Lewis JJ, Jiggins CD, Counterman BA, McMilan WO and Papa R (2023) High level of novelty under the hood of convergent evolution. *Science*. 379 (6636): 1043-1049.

31. Maldonado-Hernández R, Quesada O, González-Feliciano JA, Baerga-Ortiz A, Lasalde-Dominicci JA. Identification of the native *Torpedo californica* nicotinic acetylcholine receptor's glycan composition after a multi-step sequential purification method using MALDI-ToF MS. *Proteomics*. 2023 Oct 30:e2300151. doi: 10.1002/pmic.202300151. Epub ahead of print. PMID: 37904306.
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33. Gabriel O. Rodríguez-Vázquez, Adriana O. Diaz-Quiñones, Nataliya Chorna, Iris K. Salgado-Villanueva, Jing Tang, Walter I. Silva Ortiz, Héctor M. Maldonado (2023) Synergistic interactions of cytarabine-adavosertib in leukemic cell lines proliferation and metabolomic endpoints. *Biomedicine & Pharmacotherapy*. 166, 115352
34. Vicente-Rodríguez LC, Torres-Arroyo AC, Hernandez-Vazquez A, Rosa-Casillas MR, Bracho-Rincon DP, Mendez de Jesus, P, Behra ML, Habib MR, Zhou X, Rosenthal, JJ, Miller MW (2023) The FMRF-NH2 gated sodium channel of *Biomphalaria glabrata*: Localization and expression following infection by *Schistosoma mansoni*. *Plos Neglected Tropical Diseases*. June 2023, 1-28 <https://doi.org/10.1371/journal.pntd.001249>
35. Orestes Quesada, Joel E. González-Nieves, José Colón, Rafael Maldonado-Hernández, Carol González-Freire, Jesús Acevedo-Cintrón, Irvin D. Rosado-Millán, José A. Lasalde-Dominicci (2023) Assessment of Purity, Functionality, Stability, and Lipid Composition of Cyclofos-nAChR-Detergent Complexes from *Torpedo californica* Using Lipid Matrix and Macroscopic Electrophysiology. *The Journal of Molecular Membranes*. <https://doi.org/10.1007/s00232-023-00285-x>
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38. Katharina Eichler, Stefanie Hampel, Adrián Alejandro-García, Steven A. Calle-Schuler, Alexis Santana-Cruz, Lucia Kmecova, Jonathan M. Blagburn, Eric D. Hoopfer, and Andrew M. Seeds (2024) Somatotopic organization among parallel sensory pathways that promote a grooming sequence in *Drosophila*. *eLife* Apr 18, 12 doi: 10.7554/eLife. 87602 PMID: 36798384
39. Zally Torres-Martinez, Daraishka Pérez, Grace Torres, Stephanie Estrada, Clarissa Correa, Natasha Mederos, Kimberly Velazquez, Betzaida Castillo, Kai Griebenow, and Yamixa Delgado (2023) A Synergistic pH-Responsive Serum Albumin-Based Drug Delivery System Loaded with Doxorubicin and Pentacyclic Triterpene Betulinic Acid for Potential Treatment of NSCLC. *BioTech (Basel)*. 2023 Mar; 12(1): 13. doi: 10.3390/biotech12010013 PMID: 36810440
40. Sabeva N, Pagan OR, Ferrer-Acosta Y, Eterovic VA and Ferchmin PA (2022) In vivo evaluation of the acute systemic toxicity of (1S, 2E, 4R, 6R, 7E, 11E)-Cembratriene-4,6-diol (4R) in Sprague Dawley Rats. *Nutraceutical*. 2, 60-70.
41. Fernando Vera-Urbina, María F. Dos Santos-Torres, Filipa Godoy-Vitorino and Bianca A. Torres-Hernández (2022) The Gut Microbiome May Help Address Mental Health Disparities in Hispanics: A Narrative Review. *Microorganisms*, 10; p. 763-778
42. Yancy Ferrer-Acosta, Sergio Rodriguez-Massó, Dinely Pérez, Vesna A. Eterovic, P.A. Ferchmin, and Antonio Henrique Martins (2022) Memantine has a nicotinic neuroprotective pathway in acute hippocampal slices after an NMDA insult. *Toxicol In Vitro*. 84: 105453. doi: 10.1016/j.tiv.2022.105453 PMID: 35944748
43. Angelo A Ruggieri, Luca Livraghi, James J Lewis, Elizabeth Evans, Francesco Cicconardi, Laura Hebberecht, Yadira Ortiz-Ruiz, Stephen H Montgomery, Alfredo Ghezzi, José Arcadio Rodriguez-Martinez, Chris D Jiggins, W Owen McMillan, Brian A Counterman, Riccardo Papa, Steven M Van Belleghem (2022) A butterfly pan-genome reveals that a large amount of structural variation underlies the evolution of chromatin accessibility. *Genome Res* 32(10):1862-1875. doi:10.1101/gr.276839.122. PMID: 36109150 PMID: 36109150
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45. Dominguez-Martinez, I., Joaquin-Ovalle, F., Ferrer-Acosta, Y., & Griebenow, K. H. (2022). Folate-Decorated Cross-Linked Cytochrome c Nanoparticles for Active Targeting of Non-Small Cell Lung Carcinoma (NSCLC). *Pharmaceutics*, 14(3), 490.
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