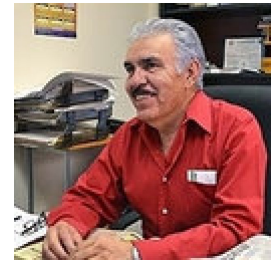


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Research Interests

LÍNEA DE INVESTIGACIÓN

Research outputs

Effect of adding vegetable substrates on penaeus vannamei pre-grown in biofloc system on shrimp performance, water quality and biofloc composition

Peiro-Alcantar, C., Rivas-Vega, M. E., Martínez-Porchas, M., Lizárraga-Armenta, J. A., Miranda-Baeza, A. & Martínez-Córdova, L. R., 1 Nov 2019, In: Latin American Journal of Aquatic Research. p. 784-790 7 p.

Biofilm-forming capacity of two benthic microalgae, *Navicula incerta* and *Navicula* sp., on three substrates (Naviculales: Naviculaceae)

Gómez-Ramírez, A. L., Enriquez-Ocaña, L. F., Miranda-Baeza, A., Esquivel, B. C., Antonio López-Eliás, J. & Martínez-Córdova, L. R., 1 Jun 2019, In: Revista de Biología Tropical. p. 599-607 9 p.

Diversity and bacterial succession of a phototrophic biofilm used as complementary food for shrimp raised in a super-intensive culture

Ortiz-Estrada, Á. M., Gollas-Galván, T., Martínez-Córdova, L. R., Burgos-Hernández, A., Scheuren-Acevedo, S. M., Emerenciano, M. & Martínez-Porchas, M., 15 Apr 2019, In: Aquaculture International. 27, 2, p. 581-596 16 p.

Diversity and bacterial succession of a phototrophic biofilm used as complementary food for shrimp raised in a super-intensive culture

Ortiz-Estrada, Á. M., Gollas-Galván, T., Martínez-Córdova, L. R., Burgos-Hernández, A., Scheuren-Acevedo, S. M., Emerenciano, M. & Martínez-Porchas, M., 15 Apr 2019, In: Aquaculture International. p. 581-596 16 p.

Biofilm consumption shapes the intestinal microbiota of shrimp (*Penaeus vannamei*)

Garibay-Valdez, E., Martínez-Córdova, L. R., Vargas-Albores, F., Gollas-Galván, T., Lago-Leston, A., Calderón, K. & Martínez-Porchas, M., 1 Apr 2019, In: Aquaculture Nutrition. p. 427-435 9 p.

Addition of commercial probiotic in a biofloc shrimp farm of *Litopenaeus vannamei* during the nursery phase: Effect on bacterial diversity using massive sequencing 16S rRNA

Huerta-Rábago, J. A., Martínez-Porchas, M., Miranda-Baeza, A., Nieves-Soto, M., Rivas-Vega, M. E. & Martínez-Córdova, L. R., 15 Mar 2019, In: Aquaculture. p. 391-399 9 p.

Dosage and frequency effects of the microalgae *Dunaliella* sp. on the diet of *Litopenaeus vannamei* challenged with *Vibrio parahaemolyticus*

Medina Félix, D., Campa Córdova, Á. I., López Eliás, J. A., Martínez Córdova, L. R., Preciado, G. F., Cortés Jacinto, E., Luna González, A., Mendoza Cano, F. & Huerta Aldaz, N., 1 Feb 2019, In: Journal of Invertebrate Pathology. p. 14-22 9 p.

Gonadic conditioning and maturation of the queen conch (*Dosinia ponderosa*) fed three microalgae at three temperatures

Villanueva-Gutiérrez, E., Enriquez-Ocaña, L. F., López-Eliás, J. A., Garza-Aguirre, M. D. C., Mazón-Suástegui, J. M. & Martínez-Córdova, L. R., 1 Feb 2019, In: Aquaculture Nutrition. p. 88-96 9 p.

Inferring the functional properties of bacterial communities in shrimp-culture bioflocs produced with amaranth and wheat seeds as fouler promoters

Vargas-Albores, F., Martínez-Córdova, L. R., Gollas-Galván, T., Garibay-Valdez, E., Emerenciano, M. G. C., Lago-Leston, A., Mazorra-Manzano, M. & Martínez-Porchas, M., 1 Feb 2019, In: Aquaculture. p. 107-117 11 p.

Amaranth and wheat grains tested as nucleation sites of microbial communities to produce bioflocs used for shrimp culture
Martínez-Córdova, L. R., Vargas-Albores, F., Garibay-Valdez, E., Ortiz-Estrada, Á. M., Porchas-Cornejo, M. A., Lago-Lestón, A. & Martínez-Porchas, M., 1 Dec 2018, In: *Aquaculture*. p. 503-509 7 p.

Functional metagenomics: a tool to gain knowledge for agronomic and veterinary sciences

Vargas-Albores, F., Martínez-Córdova, L. R., Martínez-Porchas, M., Lago-Lestón, A. & Calderon Alvarado, K. D. C., 17 Sep 2018, In: *Biotechnology and Genetic Engineering Reviews*. p. 1 27 p.

Nutritional effect of *Artemia nauplii* enriched with *Tetraselmis suecica* and *Chaetoceros calcitrans* microalgae on growth and survival on the river prawn *Macrobrachium americanum* larvae

Méndez-Martínez, Y., García-Guerrero, M. U., Lora-Vilchis, M. C., Martínez-Córdova, L. R., Arcos-Ortega, F. G., Alpuche, J. J. & Cortés-Jacinto, E., 1 Aug 2018, In: *Aquaculture International*. p. 1001-1015 15 p.

Improving feeding strategies for shrimp farming using fuzzy logic, based on water quality parameters

Bórquez-Lopez, R. A., Casillas-Hernandez, R., Lopez-Elias, J. A., Barraza-Guardado, R. H. & Martinez-Cordova, L. R., 1 May 2018, In: *Aquacultural Engineering*. p. 38-45 8 p.

Effect of different ratios of dietary protein-energy on growth, body proximal composition, digestive enzyme activity, and hepatopancreas histology in *Macrobrachium americanum* (Bate, 1868) prawn juveniles

Méndez-Martínez, Y., García-Guerrero, M. U., Arcos-Ortega, F. G., Martínez-Córdova, L. R., Yamasaki-Granados, S., Pérez-Rodríguez, J. C. & Cortés-Jacinto, E., 2 Feb 2018, In: *Aquaculture*. p. 1-11 11 p.

Chemical characterization and antioxidant activity of sulfated polysaccharides from *Navicula* sp.

Fimbres-Olivarria, D., Carvajal-Millan, E., Lopez-Elias, J. A., Martinez-Robinson, K. G., Miranda-Baeza, A., Martinez-Cordova, L. R., Enriquez-Ocaña, F. & Valdez-Holguin, J. E., 1 Feb 2018, In: *Food Hydrocolloids*. p. 229-236 8 p.

Effect of fishmeal replacement with a vegetable protein mixture on the amino acid and fatty acid profiles of diets, biofloc and shrimp cultured in BFT system

Moreno-Arias, A., López-Elías, J. A., Martínez-Córdova, L. R., Ramírez-Suárez, J. C., Carvallo-Ruiz, M. G., García-Sánchez, G., Lugo-Sánchez, M. E. & Miranda-Baeza, A., 20 Jan 2018, In: *Aquaculture*. p. 53-62 10 p.

Biofilm consumption shapes the intestinal microbiota of shrimp (*Penaeus vannamei*)

Garibay-Valdez, E., Martínez-Córdova, L. R., Vargas-Albores, F., Gollas-Galván, T., Lago-Leston, A., Calderón, K. & Martínez-Porchas, M., 1 Jan 2018, (Accepted/In press) In: *Aquaculture Nutrition*. 25, 2, p. 427-435 9 p.

Detection of the white spot syndrome virus in zooplankton samples collected off the coast of Sonora, Mexico

Porchas-Cornejo, M. A., Álvarez-Ruiz, P., Álvarez-Tello, F. J., Martínez-Porchas, M., Martínez-Córdova, L. R., López-Martínez, J. & García-Morales, R., 1 Jan 2018, In: *Aquaculture Research*. p. 48-56 9 p.

Predictive functional profiles using metagenomic 16S rRNA data: A novel approach to understanding the microbial ecology of aquaculture systems

Ortiz-Estrada, Á. M., Gollas-Galván, T., Martínez-Córdova, L. R. & Martínez-Porchas, M., 1 Jan 2018, In: *Reviews in Aquaculture*.

Proteomic profiling of integral membrane proteins associated to pathogenicity in *Vibrio parahaemolyticus* strains

Pérez-Acosta, J. A., Martínez-Porchas, M., Elizalde-Contreras, J. M., Leyva, J. M., Ruiz-May, E., Gollas-Galván, T., Martínez-Córdova, L. R. & Huerta-Ocampo, J. Á., 1 Jan 2018, In: *Microbiology and Immunology*. p. 14-23 10 p.

Taxonomic profile of bacterial communities detected with 16S-rRNA in mature phototrophic and heterotrophic marine biofilms used for aquaculture

Martínez-Córdova, L. R., Martínez-Porchas, M., Vargas-Albores, F., Miranda-Baeza, A., Coelho-Emerenciano, M., Porchas-Cornejo, M. A., Cortes-Jacinto, E. & Mazonra-Manzano, M. Á., 1 Jan 2018, In: *Ciencias Marinas*. p. 251-266 16 p.

Bacterial biota of shrimp intestine is significantly modified by the use of a probiotic mixture: a high throughput sequencing approach

Vargas-Albores, F., Porchas-Cornejo, M. A., Martínez-Porchas, M., Villalpando-Canchola, E., Gollas-Galván, T. & Martínez-Córdova, L. R., 1 Dec 2017, In: Helgoland Marine Research.

High-resolution detection of bacterial profile of ocean water, before and after being used by shrimp farms

Porchas-Cornejo, M. A., Martínez-Porchas, M., Vargas-Albores, F., Gollas-Galvan, T., Martínez-Córdova, L. R., Vazquez-Euan, R. & Peña-Messina, E., 1 Oct 2017, In: Aquaculture International. p. 1833-1843 11 p.

Survival of *Litopenaeus vannamei* shrimp fed on diets supplemented with *Dunaliella* sp. is improved after challenges by *Vibrio parahaemolyticus*

Medina Félix, D., López Elías, J. A., Campa Córdova, Á. I., Martínez Córdova, L. R., Luna González, A., Cortes Jacinto, E., Huerta Aldaz, N., Cano Mendoza, F. & Burboa Zazueta, M. G., 1 Sep 2017, In: Journal of Invertebrate Pathology. p. 118-123 6 p.

Bacterial diversity studied by next-generation sequencing in a mature phototrophic *Navicula* sp.-based biofilm promoted into a shrimp culture system

Martínez-Córdova, L. R., Martínez-Porchas, M., Porchas-Cornejo, M. A., Gollas-Galván, T., Scheuren-Acevedo, S., Arvayo, M. A., López-Elías, J. A. & López-Torres, M. A., 1 May 2017, In: Aquaculture Research. 48, 5, p. 2047-2054 8 p.

From microbes to fish the next revolution in food production

Martínez-Córdova, L. R., Martínez-Porchas, M., Emerenciano, M. G. C., Miranda-Baeza, A. & Gollas-Galván, T., 3 Apr 2017, In: Critical Reviews in Biotechnology. p. 287-295 9 p.

Replacement of fishmeal by vegetable meal mix in the diets of *Litopenaeus vannamei* reared in low-salinity biofloc system: effect on digestive enzymatic activity

Moreno-Arias, A., López-Elías, J. A., Miranda-Baeza, A., Rivas-Vega, M. E., Martínez-Córdova, L. R. & Ramírez-Suárez, J. C., 1 Apr 2017, In: Aquaculture Nutrition. p. 236-245 10 p.

Effect of dietary protein content on growth rate, survival and body composition of juvenile cauque river prawn, *Macrobrachium americanum* (Bate 1868)

Méndez-Martínez, Y., Yamasaki-Granados, S., García-Guerrero, M. U., Martínez-Córdova, L. R., Rivas-Vega, M. E., Arcos-Ortega, F. G. & Cortés-Jacinto, E., 1 Mar 2017, In: Aquaculture Research. p. 741-751 11 p.

Larval and post-larval growth, spat production and off-bottom cultivation of the smooth venus clam *Chionista fluctifraga*

Castillo-Durán, A., Hoyos-Chairez, F., Arreola-Lizárraga, J. A., Martínez-Córdova, L. & Chávez-Villalba, J., 1 Sep 2016, In: Aquaculture Research. p. 2851-2860 10 p.

***Navicula* sp. Sulfated polysaccharide gels induced by Fe(III): Rheology and microstructure**

Fimbres-Olivarría, D., López-Elías, J. A., Carvajal-Millán, E., Márquez-Escalante, J. A., Martínez-Córdova, L. R., Miranda-Baeza, A., Enríquez-Ocaña, F., Valdéz-Holguín, J. E. & Brown-Bojórquez, F., 1 Aug 2016, In: International Journal of Molecular Sciences.

***Navicula* sp. Sulfated Polysaccharide Gels Induced by Fe(III): Rheology and Microstructure**

Fimbres-Olivarría, D., López-Elías, J. A., Carvajal-Millán, E., Márquez-Escalante, J. A., Martínez-Córdova, L. R., Miranda-Baeza, A., Enríquez-Ocaña, F., Valdéz-Holguín, J. E., Brown-Bojórquez, F. & Enríquez Ocaña, L. F., 30 Jul 2016, In: International Journal of Molecular Sciences. 17, 8

Physiological and immune response of *Litopenaeus vannamei* undergoing the acute phase of the necrotizing hepatopancreatitis disease and after being treated with oxytetracycline and FF

Martínez-Córdova, L. R., Gollas-Galván, T., Garibay-Valdez, E., Valenzuela-Gutiérrez, R., Martínez-Porchas, M., Porchas-Cornejo, M. A., Sánchez-Paz, A. & Mendoza-Cano, F., 1 Jul 2016, In: Latin American Journal of Aquatic Research. p. 525-534 10 p.

Improvement of survival and immune response in *Litopenaeus vannamei* infected with white spot syndrome virus and fed diets enriched with carotene

López-Elías, J. A., Medina-Félix, D., Campa-Córdova, Á. I., Martínez-Córdova, L. R., Hernández-López, J., Mendoza-Cano, J. F. & Rivas-Vega, M. E., 1 May 2016, In: Latin American Journal of Aquatic Research. p. 305-312 8 p.

Development of a Model to Simulate Nitrogen Dynamics in an Integrated Shrimp-Macroalgae Culture System with Zero Water Exchange

Sánchez-Romero, A., Miranda-Baeza, A., Rivas-Vega, M. E., López-Elías, J. A., Martínez-Córdova, L. R. & Tejeda-Mansir, A., 1 Feb 2016, In: Journal of the World Aquaculture Society. p. 129-138 10 p.

Physiological and sanitary condition of the white clam *Dosinia ponderosa* collected from a coastal area impacted by shrimp farm effluent

Martínez-Porchas, M., Scheuren-Acevedo, S. M., Martínez-Córdova, L. R., Gollas-Galvan, T., Barraza-Guardado, R. H., Enríquez-Ocaña, F., Cortés-Jacinto, E. & Porchas-Cornejo, M. A., 1 Feb 2016, In: Aquaculture International. p. 243-256 14 p.

Physical and chemical characteristics of lyophilized biofloc produced in whiteleg shrimp cultures with different fishmeal inclusion into the diets

Arias-Moscoso, J. L., Cuevas-Acuña, D. A., Rivas-Vega, M. E., Martínez-Córdova, L. R., Osuna-Amarilas, P. & Miranda-Baeza, A., 1 Jan 2016, In: Latin American Journal of Aquatic Research. p. 769-778 10 p.

Effect of the addition of an aqueous extract of the San Pedro Daisy *Lasianthaea podocephala*, in the culture of the Pacific white shrimp, *Litopenaeus vannamei*, under laboratory conditions

Villanueva-Gutiérrez, E., Martínez-Córdova, L. R., Martínez-Porchas, M. & Arvayo, M. A., 1 Nov 2015, In: Latin American Journal of Aquatic Research. p. 904-911 8 p.

Proximate Composition of Bioflocs in Culture Systems Containing Hybrid Red Tilapia Fed Diets with Varying Levels of Vegetable Meal Inclusion

López-Elías, J. A., Moreno-Arias, A., Miranda-Baeza, A., Martínez-Córdova, L. R., Rivas-Vega, M. E. & Márquez-Ríos, E., 2 Jan 2015, In: North American Journal of Aquaculture. 77, 1, p. 102-109 8 p.

Growth and biochemical composition of *navicula* sp. Cultivated at two light intensities and three wavelengths

Fimbres-Olivarria, D., López-Elías, J. A., Martínez-Córdova, L. R., Carvajal-Millán, E., Enríquez-Ocaña, F., Valdéz-Holguín, E. & Miranda-Baeza, A., 1 Jan 2015, In: Israeli Journal of Aquaculture - Bamidgah. p. 1-7 7 p.

Inclusion of two differently pH-autolysis hydrolysates of squid coproduct in diets of shrimp cultured under indoor and outdoor conditions

Arias-Moscoso, J. L., Ezquerro-Brauer, M., Martínez-Córdova, L. R., Martínez-Porchas, M. & Moreno-Arias, A., 1 Jan 2015, In: Aquaculture Nutrition. p. 750-754 5 p.

Microbial-based systems for aquaculture of fish and shrimp: An updated review

Martínez-Córdova, L. R., Emerenciano, M., Miranda-Baeza, A. & Martínez-Porchas, M., 1 Jan 2015, In: Reviews in Aquaculture. p. 131-148 18 p.

Las amenazas exóticas a la industria ostrícola del Golfo de California.

Enríquez-Espinoza, T. L., Grijalva Chon, J. M., Castro Longoria, R., López Torres, M. A., Chávez-Villalba, J. & Martínez Córdova, L. R., 2015, Panorama Acuicola Magazine, 20, 4, p. 34-40.

Bioremediation of Aquaculture Effluents

Martínez-Porchas, M., Martínez-Córdova, L. R., López-Elías, J. A. & Porchas-Cornejo, M. A., 23 Jun 2014, *Microbial Biodegradation and Bioremediation*. 14 p.

Evaluation of the productive and physiological responses of *Litopenaeus vannamei* infected with WSSV and fed diets enriched with *Dunaliella* sp

Medina-Félix, D., López-Elías, J. A., Martínez-Córdova, L. R., López-Torres, M. A., Hernández-López, J., Rivas-Vega, M. E. & Mendoza-Cano, F., Mar 2014, In: Journal of Invertebrate Pathology. 117, 1, p. 9-12 4 p.

Gene expression responses of white shrimp (*Litopenaeus vannamei*) infected with necrotizing hepatopancreatitis bacterium

Figueroa-Pizano, M. D., Peregrino-Uriarte, A. B., Yepiz-Plascencia, G., Martínez-Porchas, M., Gollas-Galván, T. & Martínez-Córdova, L. R., 15 Jan 2014, In: Aquaculture. p. 165-170 6 p.

Bio-filtration capacity, oxygen consumption and ammonium excretion of *Dosinia ponderosa* and *Chione gnidia* (Veneroida: Veneridae) from areas impacted and non-impacted by shrimp aquaculture effluents

Ramos-Corella, K., Martínez-Córdova, L. R., Enríquez-Ocaña, L. F., Miranda-Baeza, A. & López-Elías, J. A., 1 Jan 2014, In: Revista de Biología Tropical. p. 969-976 8 p.

Effect of shrimp farm effluent on water and sediment quality parameters off the coast of sonora, mexico

Barraza-Guardado, R. H., Martínez-Córdova, L. R., Enríquez-Ocaña, L. F., Martínez-Porchas, M., Miranda-Baeza, A. & Porchas-Cornejo, M. A., 1 Jan 2014, In: Ciencias Marinas. p. 221-235 15 p.

Effect of using autotrophic and heterotrophic microbial-based-systems for the pre-grown of *Litopenaeus vannamei*, on the production performance and selected haemolymph parameters

de Jesús Becerra-Dorame, M., Martínez-Córdova, L. R., Martínez-Porchas, M., Hernández-López, J., López-Elías, J. A. & Mendoza-Cano, F., 1 Jan 2014, In: Aquaculture Research. p. 944-948 5 p.

Evaluation of the productive and physiological responses of *Litopenaeus vannamei* infected with WSSV and fed diets enriched with *Dunaliella* sp

Medina-Félix, D., López-Elías, J. A., Martínez-Córdova, L. R., López-Torres, M. A., Hernández-López, J., Rivas-Vega, M. E. & Mendoza-Cano, F., 1 Jan 2014, In: Journal of Invertebrate Pathology. p. 9-12 4 p.