

CURRICULUM VIATE
JORGE HUMBERTO MEDINA-DURÁN

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ResearchGate

https://www.researchgate.net/profile/Jorge_Medina_Duran

Education

- 2019-present Ph.D. student in Ecology and Evolutionary Biology (EEB)
Texas A&M University
Department of Entomology
Advisor: Dr. Hojun Song
- 2017-2019 Universidad Nacional Autónoma de México, M.Sc. Biological Sciences (Systematics)
Dissertation title: Eugregarinas del tracto digestivo de ortópteros del género *Taeniopoda* en México: caracterización morfológica y molecular basada en el gen SSU rDNA/ Eugregarines of the digestive tract of orthopterans from genus *Taeniopoda* in Mexico: morphological and molecular characterization based in the SSU rDNA gene.
Advisor: Dr. Rosaura Mayén-Estrada
- 2011-2016 Universidad Nacional Autónoma de México, B.Sc. Biology.
Dissertation title: Prevalencia y distribución de eugregarinas (Apicomplexa: Eugregarinorida) en el tracto digestivo de *Conocephalus ictus* (Orthoptera: Tettigoniidae) en tres áreas de pastizal inducido en Tlanchinol, Hidalgo, México/ Prevalence and distribution of eugregarines (Apicomplexa: Eugregarinorida) in the digestive tract of *Conocephalus ictus* (Orthoptera: Tettigoniidae) in three areas of induced pastures in Tlanchinol, Hidalgo, Mexico
Advisor: Dr. Rosaura Mayén-Estrada

Languages

Spanish: mother language

English: TOEFL iBT: 99 points = 597 PBT = 247 CBT

Academic ID

ORCID-ID: <https://orcid.org/0000-0001-5393-8535>

Research interests

Taxonomy, systematics and diversity of gregarines (Apicomplexa)

Evolution of parasite-host interactions

Diversity of katydids, locusts, grasshoppers and crickets (Orthoptera)

Study of diversity in a phylogenetic framework

Professional experience

2020 Graduate Teaching Assistant (GTA) of two sections of BIO 112 (Introductory Biology),
Biology Department, Texas A&M University (Fall Semester)

2020 Graduate Teaching Assistant (GTA) of two sections of ENTO 101 (General Entomology),
Entomology Department, Texas A&M University (Spring Semester)

- 2020 Graduate Teaching Assistant (GTA) of one section of FIVS 415 (Practice and Principles of Science & Law), Entomology Department, Texas A&M University (Spring Semester)
- 2019 Graduate Teaching Assistant (GTA) of one section of BIO 111 (Introductory Biology), Biology Department, Texas A&M University (Fall Semester)
- 2019 Instructor of the undergraduate course "Biology of protists and algae", group 5029. 96 h. Biology Department, Faculty of Sciences, National Autonomous University of Mexico.
- 2019 Instructor of the high school courses Chemistry I, Chemistry II, Selected Topics of Chemistry II, and Ecology and Environment. 90 h each. Dirección General de Bachillerato, Universidad Insurgentes.
- 2018 Instructor of the undergraduate course "Biology of protists and algae", group 5027. 96 h. Biology Department, Faculty of Sciences, National Autonomous University of Mexico.
- 2017 Instructor of the undergraduate course "Biology of protists and algae", group 5024. 96 hrs. Biology Department, Faculty of Sciences, National Autonomous University of Mexico.
- 2017 Interim instructor of the undergraduate course "Biology of protists and algae", group 5027. 42 hrs. Biology Department, Faculty of Sciences, National Autonomous University of Mexico.
- 2013-2018 Member of the Project "Taxonomic authorities catalogue of ciliate and heterotrophic flagellate protists", sponsored (\$30,000 USD) by CONABIO (National Commission for the Knowledge and Use of the Biodiversity). Functions: bibliographical research of nomenclatural acts of the protists in Mexico, collection and mapping of geographical records of ciliates and flagellates.

Research publications

A) Refereed publications

Medina-Durán, J. H., Mayén-Estrada, R., Mariño-Pérez, R. & Song, H. 2020. Morphology and Phylogenetic Position of Two New Gregarine Species (Apicomplexa: Eugregarinorida) Parasitizing the Lubber Grasshopper *Taeniopoda centurio* (Drury, 1770) (Insecta: Orthoptera: Romaleidae) in Mexico. *Journal of Eukaryotic Microbiology*. DOI: [10.1111/jeu.12748](https://doi.org/10.1111/jeu.12748).

Mayén-Estrada, R., Olvera-Bautista, F. Y., Reyes-Santos, M., Durán-Ramírez, C. A. & **Medina-Durán, J. H.** 2019. Tintinnids (Ciliophora: Tintinnida) from Mexico: A checklist. *Biologia*. DOI: [10.2478/s11756-019-00354-4](https://doi.org/10.2478/s11756-019-00354-4).

Mayén-Estrada, R., Durán-Ramírez, C. A., Reyes-Santos, M., Vicencio-Aguilar, M. E., Olvera-Bautista, F., **Medina-Durán, J. H.** & Romero-Niembro, V. M. 2015. Geographical distribution of *Balantidium coli* (Ciliophora: Litostomatea: Balantidiidae) in Mexico and Latin America. *Revista Brasileira de Zoociências*. 17(1): 132-139.

B) Non-refereed publications

Medina-Durán, J. H. 2020. On the study of gregarine parasites in Orthoptera. *Metaleptea*. 40(1): 8-9.

Medina-Durán, J. H., Mayén-Estrada, R., Mariño-Pérez, R. & Song, H. 2016. Comparative morphometry of *Leidyana* sp. (Eugregarinorida) and its first record in *Conocephalus ictus* (Orthoptera: Ensifera: Tettigoniidae) from Mexico. *Protistology*. 10(2): 46. (Conference paper).

C) Book chapters

Mayén-Estrada, R., Olvera-Bautista, F., Vicencio-Aguilar, M., **Medina-Durán, J. H.**, Durán-Ramírez, C. A., Reyes-Santos, M. & Romero-Niembro, V. M. *Protistas Heterótrofos*. In: Cano-Santana, Z. (Ed.). *La biodiversidad en Morelos: Estudio de Estado 2*. Comisión Nacional Para el Conocimiento y Uso de la Diversidad (Conabio), Mexico City, Mexico. (In Spanish). IN PRESS.

D) Technical reports

Mayén-Estrada, R., Reyes-Santos, M., Durán-Ramírez, C. A., Medina-Durán, J. H., Olvera-Bautista, J. F. Y., Vicencio-Aguilar, M. E. y Romero-Niembro, V. M. 2020. Protistas ciliados y flagelados heterótrofos. Universidad Nacional Autónoma de México, Facultad de Ciencias. Final Project Report SNIB-CONABIO

Proyecto No. KT003. Ciudad de México. With a supplemental taxonomic list of ciliate protist and heterotrophic flagellates.

E) In preparation

Medina-Durán, J. H. & Mayén-Estrada, R. Gregarine parasites (Apicomplexa: Eugregarinorida) in *Conocephalus ictus* (Orthoptera: Tettigoniidae): gut distribution, parasite burden and prevalence variation. To be sent to: *Zootaxa*.

Congresses (primary author speaker marked with *)

- 2019 Little, D., Foquet, B., **Medina-Durán, J. H.** & Song, H. Analysis of stimulus in the phase-related behavior of *Schistocerca piceifrons*. Entomological Society of America meeting 2019, St. Louis, Missouri, USA.
- 2019* **Medina-Durán, J. H.**, Mayén-Estrada, R., Mariño-Pérez, R. & Song, H. Description of two new species of eugregarines (Apicomplexa: Eugregarinorida) parasitizing the gut of *Taeniopoda centurio* (Orthoptera: Caelifera: Romaleidae). In: Abstracts of the 2019 Entomological Society of America meeting, St. Louis, Missouri, USA.
- 2019 **Medina-Durán, J. H.**, Mayén-Estrada, R., Mariño-Pérez, R. & Song, H. Notes on the morphology and phylogenetic position of two new species parasitizing the gut of the Mexican lubber grasshopper *Taeniopoda centurio*. In: Abstracts of the 13th International Congress of Orthopterology, Agadir, Morocco.
- 2019 Mayén-Estrada, R., Reyes-Santos, M., Durán-Ramírez, C. A., Olvera-Bautista, F. & **Medina-Durán, J. H.** Mexican Tintinnids (Ciliophora: Tintinnida): notes about their species richness. In: Abstracts of the VIII European Congress of Protistology – ISOP Joint meeting, Rome, Italy.
- 2018* **Medina-Durán, J. H.**, Mayén-Estrada, R., Song, H. & Mariño-Pérez, R. Two species of eugregarines parasites of the Mexican Lubber Grasshopper *Taeniopoda centurio*: notes on its morphology and phylogenetic position. In: Abstracts of the 5th Joint Meeting of PSA / ISOP, Vancouver, Canada.
- 2016* **Jorge Humberto Medina-Durán** & Rosaura Mayén-Estrada. Records of eugregarines in *Conocephalus ictus* (Orthoptera: Tettigonidae) with some notes on its prevalence / Registro de eugregarinas en *Conocephalus ictus* (Orthoptera: Tettigonidae) con algunas notas sobre su prevalencia. 63rd In: Abstracts of the Annual Meeting of the Southwestern Association of Naturalists, Mexico City.
- 2016* **Medina-Durán, J. H.**, Mayén-Estrada, R., Mariño-Pérez, R. & Song, H. Comparative morphometry of *Leidyana* sp. (Eugregarinorida) and its first record in *Conocephalus ictus* (Orthoptera: Ensifera: Tettigoniidae) from Mexico. In: Abstracts of Forum Protist 2016, Moscow, Russia.
- 2015 Romero-Niembro, V. M., Mayén-Estrada, R., Vicenio-Aguiar, M., Reyes-Santos, M., González-Palma, C. & **Medina-Durán, J.** Regional and global distribution of ten species of ciliates from Zumpango lake, Mexico. In: Abstracts of the Aquatic Sciences Meeting. Spain.
- 2014* **Jorge Medina-Durán**, Rosaura Mayén-Estrada, Ricardo Mariño-Pérez & Hojun Song. First record of gregarines (Apicomplexa: Eugregarinorida: Hirmocystidae) in *Conocephalus* sp. (Orthoptera: Tettigonidae) from Tlanchinol, Hidalgo, Mexico. In: Abstracts of the 13^o International Congress of Parasitology. Mexico.
- 2014 Romero-Niembro Victor, González-Palma Carlos, López-Mora Ulises, **Medina-Durán Jorge**, Reyes Santos Margarita & Rosaura Mayén-Estrada. Comunidad de ciliados del Lago

Zumpango: Posibles indicadores del estado trófico. In: Abstracts of the VI National Congress of Limnology. Mexico.

2012* **Medina-Durán Jorge Humberto**, Alejo-Salinas María del Rocío, Liévano-Beltrán Luis Arturo, García-León Candy Itzel, Sustaita-Fuentes Berenice, Mayén-Estrada Rosaura & Ponce-Márquez Edith. Estudio taxonómico de protozoos ciliados del lago de Chapultepec, D. F. México. In: Abstracts of the XI National Congress of Microscopy. Mexico.

Grants (\$3,507 USD)

2020 Texas Ecological Laboratory (\$2029 USD)
2018 Orthopterists' Society, Ted Cohn Research Fund (\$1478 USD)

Awards and Scholarships (\$32,300 USD)

2019 Excellence Fellowship, College of Agriculture and Life Sciences, Texas A&M University. \$14,190 USD/12 months.
2018 Holz-Conner Travel Award to assist to PSA/ISOP Joint Meeting, Vancouver, Canada. International Society of Protistologists. \$1000 USD.
2018 Programa de Apoyos a los Estudios de Posgrado PAEP. Universidad Nacional Autónoma de México. \$900 USD.
2017-2018 Scholarship to conduct master's degree studies at Posgrado en Ciencias Biológicas (24 months) in National Autonomous University of Mexico. Sponsored by CONACYT (National Council of Science and Technology). 600 USD/month.
2016 Holz-Conner Travel Award to assist to Forum Protist 2016, Moscow, Russia (\$1500 USD).
2014 Registration grant for 13th International Congress of Parasitology (\$340 USD).

Manuscript Review Service

Studies on Neotropical Fauna and Environment
Parasite Journal

Jury member

Jury member of the undergraduate dissertation "Detección de *Trypanosoma* sp. en murciélagos de "Los Tuxtlas", Veracruz, México" of Javier Juárez Gabriel to obtain the degree of Bachelor of Sciences (Biology), Universidad Nacional Autónoma de México. 2020.

Invited talks and seminars

2019 **Medina-Durán, J. H.**, Mayén-Estrada, R., Mariño-Pérez, R. & Song, H. Description of two new species of eugregarines (Apicomplexa: Eugregarinorida) parasitizing the gut of *Taeniopoda centurio* (Orthoptera: Caelifera: Romaleidae). Invited speaker in the Organized Meeting "Orthopteroids: Small Orders, Big Ideas". Entomological Society of America meeting 2019, St. Louis, Missouri, USA.
2019 **Medina-Durán, J. H.** Laboratory practice with insect's parasites of phylum Apicomplexa. Organizers: MSc. Mireya Ramírez Ballesteros and MSc. Jazmín Aristeo Hernández. Faculty of Sciences, National Autonomous University of Mexico. March 26th
2015 R. Mayén-Estrada, M. Reyes-Santos, M. Vicencio-Aguilar. C. Durán-Ramírez, V. Romero-Niembro, **J. Medina-Durán** & F. Olvera-Bautista. Plenary Talk "Diversity and perspectives in the study of Ciliates in Mexico". Autonomous University of Queretaro, Faculty of Natural Sciences.
2015 **Medina-Durán, J. H.** Laboratory of hiperamastigines and gregarinids in insects. Organizer: Dr. Dalila Frago Tejas. Faculty of Sciences, National Autonomous University of Mexico. May 25th.

2015 **Medina-Durán, J. H.** Phylum Apicomplexa with emphasis in parasites of insects.
Organizers: MSc. Carlos Durán-Ramírez and MSc. Noé Becerra-Lobato. Faculty of Sciences,
National Autonomous University of Mexico. May 11th.

2014 **Medina-Durán, J. H.** Laboratory practice with insect's parasites of phylum Apicomplexa.
Organizers: Dr. Dalila Frago Tejas and MSc. Carlos Alberto Durán Ramírez. Faculty of
Sciences, National Autonomous University of Mexico. May 12th.

Academic short-term visits

2018 Department of Entomology, Texas A&M University, College Station, Texas, USA. Working
with Dr. Hojun Song and Dr. Ricardo Mariño-Pérez in molecular procedures to obtain the
SSU rDNA gene of eugregarines.

2014 Department of Biology, University of Central Florida, Orlando, Florida, USA. Working with
Dr. Hojun Song and Ricardo Mariño-Pérez. "Relationship between endoparasitic
Apicomplexa and their grasshoppers hosts (Insecta: Orthoptera)". Revision of material
previously collected in Mexico, isolation of gregarines within the digestive tract of fixed
specimens of Orthoptera.

Extracurricular Formation

2019 Open Source for Open Science (OSOS). Program of Ecology and Evolutionary Biology.
Texas A&M University. August 30th-September 1st

2018 Course "Cuidados y correcto uso del microscopio". Imparted by Dr. Maria Edith Ponce-
Marquez and Dr. Fabiola Ramirez Corona. Department of Comparative Biology, Faculty of
Sciences, National Autonomous University of Mexico.

2018 Course "Mapa Digital INEGI V. 6.3.0". Instituto Nacional de Estadística y Geografía,
National Autonomous University of Mexico. 20 hrs. June 18th-22nd.

2017 Course "Introduction to the evolutive study of the diversity through the use of
phylogenies". Programa de Actualización y Superación Docente (PASD), Dirección General
de Asuntos del Personal Académico, National Autonomous University of Mexico. 20 hrs.
June 12th-16th.

2015 Course "Multivariate analysis: Principles and practical applications". Imparted by Daniel
Díaz Espinoza de los Monteros MSc. National University Autonomous of Mexico. Fall
Semester.

2014 Workshop "Natural History of the Microscopic Ecosystem". Imparted by Jordi Catalán, Ph.
D. In VI National Congress of Limnology, Institute of Sea Sciences and Limnology, National
Autonomous University of Mexico. November 12th. Mexico City, Mexico.

2014 Course "Orchids: cares, reproduction form seeds and flowering". Solaris and Culture
House of the Autonomous University of the Mexico State. February 22nd.

2013 Course "Information System Biótica v. 5.0". Atended in the headquarters of CONABIO
(National Comision for the Knowledge and Use of Biodiversity). March 11th-15th. D. F.,
Mexico.

Colloquium organizer and acknowledgments

2018 Support in the organization and logistic of IX Student Colloquium of Investigations with
Protists. VI, Faculty of Sciences, National Autonomous University of Mexico. May 26th.

- 2017 Support in the organization and logistic of IX Student Colloquium of Investigations with Protists. VI, Faculty of Sciences, National Autonomous University of Mexico. May 25th.
- 2014 Support in the organization and logistic of VI Student Colloquium of Investigations with Protists. VI, Faculty of Sciences, National Autonomous University of Mexico. May 20th.
- 2014 Assistant to the “Jornada Universitaria de Orientación Vocacional”. General Direction of Orientation and Educative Services of the Secretary of Community Services. March 21st, 2014.
- 2012 “Local de Excelencia” to Faculty of Sciences in the Area “The Professional Studies in the UNAM”. 16th Exposure of Vocational Orientation “Al Encuentro del Mañana”. October 4-11, 2012.
- 2012 Participant of the 16th Exposure of Vocational Orientation: “Al encuentro del mañana”. General Direction of Orientation and Educative Services of the Secretary of Community Services. October 4-11, 2012.

Field Experience

+20 field campaigns for the recollection and sampling of marine invertebrates, protists, algae and insects with duration from 3 to 21 days in 17 states of Mexico. Visited States: Baja California Sur, Hidalgo, Veracruz, Puebla, Estado de México, Mexico City, Querétaro, San Luis Potosí, Jalisco, Coahuila, Michoacán, Oaxaca, Baja California Sur, Yucatán, Tlaxcala, Guerrero and Nayarit.
Texas, EUA (insects)

Affiliations

- 2019-present Member of the Entomological Society of America
 2016-2019 Member of the Southwestern Association of Naturalists
 2016-present Member of the International Society of Protistologists.
 2018-present Member of the Orthopterists’ Society

Informatic experience

Software: R code, bash shell Unix, Photoshop, Corel Draw, Inkscape, Geneious, Microsoft Office Suite, LibreOffice, CIPRES
 Operative Systems: Windows, Linux

Personal interests

Sports: Biking, judo, hiking
 Hobbies: camping, breeding insects, drawing, traveling