



JESÚS MORÓN-LÓPEZ

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P [ABD-2020-2020](https://pubmed.ncbi.nlm.nih.gov/ABD-2020-2020)

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PERSONAL INFORMATION

Sex MALE | Date of birth 24 / 06 / 1988 | Nationality SPANISH

PROFILE

Expertise in microbial ecology, molecular genetics, monitoring, harmful algae blooms and water treatment.

EDUCATION AND TRAINING

PhD
2015 - 2019

Hydrology and Management of Water Resources

University of Alcalá and Institute IMDEA Water, Madrid, Spain.

Title: Recycled-Membrane Biofilm Reactor (R-MBfR). A sustainable biological alternative for microcystin removal.

Master's in Science
2012 - 2014

Molecular Genetics and Biotechnology

University of Seville, Spain.

Bachelor's degree
2006-2012

Biology (five-years degree)

University of Seville, Spain.

Scholarships
2011-2012

Erasmus Programme

University of Coimbra, Portugal.

WORK EXPERIENCE

Postdoctoral Researcher
2021-Currently

European Regional Centre for Ecohydrology of the Polish Academy of Sciences (ERCE PAS) (Poland)

Postdoctoral researcher in ALGICYDA Project.

Research on the isolation, identification and characterization of algicidal bacteria as a potential factor controlling the occurrence of freshwater toxic cyanobacterial blooms.

Assistant Professor
2019 - 2021

Okayama University (Japan)

Postdoctoral researcher in MACH Project, a binational project between Japan and Chile.

Research on the interaction between harmful algae (red tide) and marine bacteria. Understanding mechanisms involved in this interaction for harmful algae bloom forecast systems.

Research Assistant
2014 - 2019

IMDEA Water (Spain)

Studies about toxic cyanobacterial blooms in freshwater ecosystems. Prediction, control and removal.

Teaching in the Master's in Science in Hydrology and Water Resources Management at University of Alcalá, Madrid, Spain.

Internship 2013	Institute of Plant Biochemistry and Photosynthesis (IBVF - CSIC) (Spain) Characterization of an exopolysaccharide-producing cyanobacterium isolated from a biofilm.
Internship 2012	University of Coimbra (Portugal) Research on Nematology.
Internship 2009-2010	University of Seville. (Spain) Research on Biodiversity and Aquatic Ecology.

PROJECTS

Postdoctoral Researcher 2021-Currently	ALGICYDA: Isolation, identification and characterization of algicidal bacteria as a potential factor controlling the occurrence of freshwater toxic cyanobacterial blooms Granted by the Polish State Committee for Scientific Research, the National Science Centre (NSC) (No. 2019/33/B/NZ8/02093).
Postdoctoral Researcher 2019 - 2021	MACH: Development of harmful algal bloom monitoring methods and forecast system for sustainable aquaculture and coastal fisheries in Chile (Monitoring of algae in Chile) (https://www.mach-satreps.org/en/project/) Granted by SATREPS: Science and Technology Research Partnership for Sustainable Development Program (No. 989459). Japan Science and Technology Agency (JST) and Japan International Cooperation Agency (JICA).
Research Assistant and Coordinator 2019 - 2021	CianoMOD: Development of a predictive model for the management of algae and cyanobacterial proliferation in surface waters using remote sensing techniques and data acquisition systems Granted by the Spanish Ministry for the Ecological Transition and the Demographic Challenge. Fundación Biodiversidad, Spain.
Research Member 2017- 2021	LIDA Network: Laccases immobilization for Aromatic Compound Degradation in Wastewater Iberoamerican network of Science and Technology for Development
Research Assistant and Coordinator 2016 - 2019	CianoAlert: Smart Alert against cyanobacterial harmful algae blooms Granted by the Spanish Ministry of Economy, Industry and Competitiveness (RC-2016-5087-2)
Research Assistant 2015 - 2019	INREMEM: Innovation and Recycling of Membranes for Water Treatment. Granted by the Spanish Ministry of Economy and Competitiveness (CTM2015-65348-C2-1-R)

SCIENTIFIC PUBLICATIONS (9)

Morón-López, Jesús, Rodríguez-Sánchez, M.C., Carreño, F., Vaquero, J., Pompa-Pernía, A. G., Mateos-Fernández, M. and Pascual Aguilar, J. A., "Implementation of Smart Buoys and Satellite-Based Systems for the Remote Monitoring of Harmful Algae Bloom in Inland Waters," in *IEEE Sensors Journal*, **2021**, vol. 21, no. 5, pp. 6990-6997. Doi: 10.1109/JSEN.2020.3040139.

Yarimizu, K., Fujiyoshi, S., Kawai, M., Norambuena-subiabre, L., Cascales, E-K, Rilling, J-I, Vilugrón, J., Cameron, H., Vergara, K., **Morón-López, Jesús**, Acuña, J. J., Gajardo, G., Espinoza-González, O., Guzmán, L., Jorquera, M.A., Nagai, S., Pizarro, G., Riquelme, C., Ueki, S. and Maruyama, F., "Protocols for Monitoring Harmful Algal Blooms for Sustainable Aquaculture and Coastal Fisheries in Chile", in *International Journal of Environmental Research and Public Health*, **2020**, 17, 7642. Doi:10.3390/ijerph17207642

Morón-López, Jesús, Nieto-Reyes, L., Molina, S. and Lezcano, M.A., “Exploring microcystin-degrading bacteria thriving on recycled membranes during a cyanobacterial bloom”, in *Science of the Total Environment*, **2020**. 736, 139672. Doi.org/10.1016/j.scitotenv.2020.139672

Morón-López, Jesús and Molina, S., “Optimization of Recycled-Membrane Biofilm Reactor (R-MBfR) as a sustainable biological treatment for microcystins removal”, in *Biochemical Engineering Journal*, **2020**. 153, 107422. Doi.org/10.1016/j.bej.2019.107422

Morón-López, Jesús, Nieto-Reyes, L., Aguado, S., El-Shehawy, R., Molina, S., “Recycling of end-of-life reverse osmosis membranes for membrane biofilms reactors (MBfRs). Effect of chlorination on the membrane surface and gas permeability”, in *Chemosphere*, **2019**. 231, 103 – 112. Doi.org/10.1016/j.chemosphere.2019.05.108

Morón-López, Jesús, Nieto-Reyes, L., Senán-Salinas, J., Molina, S., El-Shehawy, R., ”Recycled desalination membranes as a support material for biofilm development: A new approach for microcistina removal during water treatment”, in *Science of the Total Environment*, **2019**. 64, 785 – 793. Doi.org/10.1016/j.scitotenv.2018.07.435

Morón-López, Jesús, Nieto-Reyes, L., El-Shehawy, R., “Assessment of the influence of key abiotic factors on the alternative microcystin degradation pathway(s) (*mlr*): A detailed comparison with the *mlr* route (*mlr**)”, in *Science of the Total Environment*, **2017**.599 - 600, 1945 – 1953. Doi:10.1016/j.scitotenv.2017.04.042

Lezcano, M.A., **Morón-López, Jesús**, Agha, R., López-Heras, I., Nozal, L., Quesada, A., El-Shehawy, R, “Presence or absence of *mlr* genes and nutrient concentrations co-determine the microcystin biodegradation efficiency of a natural bacterial community”, in *Toxins*, **2016**, 8, 318. Doi:10.3390/toxins8110318

Fonseca, L., J. M. S. Cardoso, **Morón-López, Jesús**, Abrantes, I, “Morphometrical and molecular characterization of *Bursaphelenchus* species isolated from *Pinus pinaster* bark (2014)”, in *Forest Pathology*, **2014**. 44 131–136. Doi: 10.1111/efp.12077

PATENTS

El-Shehawy, R., Lezcano, M.A. and **Morón-López, Jesús**, “Method for degrading Microcystins in an aqueous medium. European Patent Office”, EP 3406706 (in progress). Applicant/Proprietor: Fundación IMDEA Agua

CONGRESS

Oral Speech 2019	Real-time and remote monitoring for algae and cyanobacteria in As Conchas Reservoir VI Iberian Congress and II Iberoamerican Congress of Cyanotoxins, Murcia, Spain
Oral Speech 2019	Recycled-Membrane Biofilm Reactor based on end-of-life reverse osmosis membranes as a novel low-cost alternative for microcystins removal VII International Conference on Sustainable Solid Waste Management. Heraklion, Crete, Greece
Oral Speech 2017	Smart alert against harmful algae blooms for water industry. CianoAlert VI Iberian Congress and II Iberoamerican Congress of Cyanotoxins, Lugo, Spain

DISSEMINATION

Scientific disseminator 2020	Science and Innovation Week Knowledge Foundation, Madri+d, Spain
Scientific disseminator 2019	Madrid Science and Innovation Fair Knowledge Foundation, Madri+d, Spain
Scientific disseminator 2014 - 2017	European Researcher’s Night Coordination entity: The Madrimasd Knowledge Foundation, Spain

