Giant barrel sponges in diverse habitats: a story about the metabolome

Bayona Maldonado, L.M.

Curriculum Vitae

Lina Maria Bayona Maldonado was born in Bogotá, Colombia, on the 6th of June 1990. She started her bachelor in Chemistry in Colombian National University in 2007. During her bachelor Prof. Dr. Freddy Ramos offered her the opportunity of an internship working with marine cyanobacteria that resulted in a newfound love for marine natural products. After finishing her bachelor in 2012 she started her Master in Chemistry in the same university studying the potential of marine cyanobacteria for the discovery of new cytotoxic compounds. After finishing her master, she started working as a lecturer in the Sabana University (Chia, Colombia), teaching organic chemistry and biochemistry. Teaching was one of the most enriching experiences she ever had and to continue this path she decided to move forward in her academic career and apply for a Ph.D. position. In 2016, she received a scholarship from the Colombian government that allowed her to start her Ph.D. under the supervision of Prof. Dr. Peter Klinkhamer, Prof. Dr. Nicole de Voogd, and Dr. Young Choi to continue the study of marine natural products, this time from a metabolomics perspective. Her work concerning the changes in the metabolome of giant barrel sponges under diverse environmental conditions is described in this thesis.

List of publications

Research papers

Bayona, L.M., Kim, M-S., Swierts, T., Hwang, G.S., de Voogd, N.J., & Choi, Y. H. (2021) Metabolic variation in Caribbean giant barrel sponges: influence of age and sea-depth. *Submitted*

Bayona, L. M., de Voogd, N.J., & Choi, Y.H. (2021) Recent progress in marine organism metabolomics: towards a better understanding of the role of metabolites. *Submitted*

Bayona, L. M., van Leeuwen, G., Erol, Ö., Swierts, T., van der Ent, E., de Voogd, N. J., & Choi, Y. H. (2020). Influence of Geographical Location on the Metabolic Production of Giant Barrel Sponges (*Xestospongia* spp.) Revealed by Metabolomics Tools. ACS Omega, 5(21), 12398–12408. https://doi.org/10.1021/acsomega.0c01151

Bayona, L. M., Videnova, M., & Choi, Y. H. (2018). Increasing Metabolic Diversity in Marine Sponges Extracts by Controlling Extraction Parameters. Marine Drugs, 16(10). https://doi.org/10.3390/md16100393

Liu, X., Ahlgren, S., Korthout, H. A. A. J., Salomé-Abarca, L. F., **Bayona, L. M.**, Verpoorte, R., & Choi, Y. H. (2018). Broad range chemical profiling of natural deep eutectic solvent extracts using a high performance thin layer chromatography–based method. Journal of Chromatography A, 1532, 198–207. https://doi.org/10.1016/j.chroma.2017.12.009

Book Chapter

Bayona, L. M., Verpoorte, R., Klinkhamer, P. G. L., & Choi, Y. H. (2019). Thin-Layer Chromatography | Metabolomics. In P. Worsfold, C. Poole, A. Townshend, & M. Miró (Eds.), Encyclopedia of Analytical Science (Third Edition) (pp. 59–75). Oxford: Academic Press. https://doi.org/10.1016/B978-0-12-409547-2.14400-2