

**PUBLICACIONES DERIVADAS DE LAS TESIS DEFENDIDAS EN EL PROGRAMA DE DOCTORADO EN BIOLOGÍA FUNCIONAL Y BIOTECNOLOGÍA EN EL AÑO 2020**

Doctorando	Forgatti Hell, Aline
Tesis	Changes in metabolic profile and defense systems in lichen microalgae with different desiccation tolerance
Director/es	Leonardo M. Casano y Danilo C. Centeno
Fecha lectura	14/09/2020
<p>Centeno DC, <b>Hell AF</b>, Braga MR, Del Campo EM, Casano LM. 2016. Contrasting strategies used by lichen microalgae to cope with desiccation-rehydration stress revealed by metabolite profiling and cell wall analysis. <i>Environmental Microbiology</i> 18: 1546-1560. doi: 10.1111/1462-2920.13249.</p> <p><b>Hell AF</b>, Gasulla F, González-Hourcade M, del Campo EM, Centeno DC and Casano LM. 2019. Tolerance to cyclic desiccation in lichen microalgae is related to habitat preference and involves specific priming of the antioxidant system. <i>Plant and Cell Physiology</i> 60: 1880-1891. doi: 10.1093/pcp/pcz103</p> <p><b>Hell AF</b>, Gasulla F, González-Houcarde M, Pelegrino, MT, Seabra AB, del Campo EM, Casano LM and Centeno DC. 2021. Polyols-related gene expression is affected by cyclic desiccation in lichen microalgae. <i>Environmental and Experimental Botany</i> 185: 104397. doi: <a href="https://doi.org/10.1016/j.envexpbot.2021.104397">https://doi.org/10.1016/j.envexpbot.2021.104397</a></p>	

Doctorando	María González Hourcade
Tesis	Caracterización ultraestructural y bioquímica de la pared celular de microalgas liquénicas sometidas a condiciones de desecación/rehidratación.
Directores	Leonardo M. Casano y Eva M. del campo.
Fecha lectura	03/11/2020

**González-Hourcade M**, Braga MR, del Campo EM, Ascaso C, Patiño C and Casano LM. 2020. Ultrastructural and biochemical analyses reveal cell wall remodelling in lichen forming microalgae submitted to cyclic desiccation–rehydration. *Annals of Botany* 125: 459-469. doi: 10.1093/aob/mcz181.

**González-Hourcade M**, del Campo EM, Braga MR, Salgado A and Casano LM 2020. Disentangling the role of extracellular polysaccharides in desiccation tolerance in lichen-forming microalgae. First evidence of sulfated polysaccharides and ancient sulfotransferase genes. *Environmental Microbiology* 22: 3096-3111. doi: <https://doi.org/10.1111/1462-2920.15043>

**González-Hourcade M**, del Campo EM and Casano LM 2020. The under-explored extracellular proteome of aero-terrestrial microalgae provides clues on different mechanisms of desiccation tolerance in non-model organisms. *Microbial Ecology* 81: 437–453. doi:<https://doi.org/10.1007/s00248-020-01604-8>

Doctorando	Fermín Acosta García
Tesis	Nuevas aproximaciones de vigilancia de la transmisión de <i>Mycobacterium tuberculosis</i> en entornos comunitarios complejos y de otros patógenos relevantes en el entorno nosocomial
Director/es	Darío García de Viedma del Álamo y Laura Pérez García
Fecha lectura	27/11/2020
<p>Perez-Garcia F, Ruiz-Serrano MJ, López-Roa P, <b>Acosta F</b>, Pérez-Lago L, Garcia de Viedma D, Bouza E. 2017. Diagnostic performance of Anyplex II MTB/MDR/XDR for detection of resistance to first and second line drugs in <i>Mycobacterium tuberculosis</i>. <i>Journal of Microbiological Methods</i>. doi: 10.1016/j.mimet.2017.05.006.</p> <p><b>Acosta F</b>, Pérez-Lago L, Ruiz Serrano MJ, Marín M, Kohl TA, Lozano N, Niemann S, Valerio M, Olmedo M, Pérez-Granda MJ, Pérez Pérez MR, Bouza E, Muñoz P, García de Viedma D. 2018. Fast update of undetected <i>Mycobacterium</i> chimaera infections to reveal unsuspected cases. <i>Journal of Hospital Infection</i>. 100(4):451-455. doi: 10.1016/j.jhin.2018.08.018.</p> <p>Domínguez J, <b>Acosta F</b>, Pérez-Lago L, Sambrano D, Batista V, De La Guardia C, Abascal E, Chiner-Oms A, Comas I, González P, Bravo J, Del Cid P, Rosas S, Muñoz P, Goodridge A, García de Viedma D. 2019. Simplified model to survey tuberculosis transmission in countries without systematic molecular epidemiology programs. <i>Emerging Infectious Diseases</i>. 25(3): 507-514. doi: 10.3201/eid2503.181593.</p> <p><b>Acosta F</b>, Agapito J, Cabibbe AM, Cáceres T, Sola C, Pérez-Lago L, Abascal E, Herranz M, Meza E, Klotoe M, Muñoz P, Rossolini GM, Bartoloni A, Tortoli E, Cirillo DM, Gotuzzo E, García de Viedma D. 2019. Exportation of MDR TB to Europe from setting with actively transmitted persistent strains in Peru. <i>Emerging Infectious Diseases</i>. 25(3): 596-598. doi: 10.3201/eid2503.180574.</p>	

Abascal E, Herranz M, **Acosta F**, Agapito J, Cabibbe AM, Monteserin J, Ruiz Serrano MJ, Gijón P, Fernández-González F, Lozano N, Chiner-Oms A, Cáceres T, Gómez-Pintado P, Acín E, Valencia E, Muñoz P, Comas I, Cirillo DM, Ritacco V, Gotuzzo E, García de Viedma D. 2020. Screening of inmates transferred to Spain reveals a Peruvian prison as a reservoir of persistent *Mycobacterium tuberculosis* MDR strains and mixed infections. *Scientific reports*. 2704 (2020). doi.org/10.1038/s41598-020-59373-w.

Pérez-Lago L, Monteserin J, Paul R, Maus PR, Yokobori N, Herranz M, Sicilia J, **Acosta F**, Fajardo S, Chiner-Oms A, Matteo M, Simboli N, Comas I, Muñoz P, López B, Ritacco V, Garcia de Viedma D. 2021. Recurrences of multidrug-resistant tuberculosis: Strains involved, within-host diversity, and fine-tuned allocation of reinfections. *Transboundary and Emerging Diseases*. <https://doi.org/10.1111/tbed.13982>.

**Acosta F**, Norman A, Sambrano D, Batista V, Mokrousov I, Shitikov E, Jurado J, Mayrena M, Luque O, Garay M, Solis L, Muñoz P, Folkvardsen DB, Lillebaek T, Pérez-Lago L, Goodridge A, Garcia de Viedma D. 2021. Probable long-term prevalence for a predominant *Mycobacterium tuberculosis* clone of a Beijing genotype in Colon, Panama. *Transboundary and Emerging Diseases*. <https://doi.org/10.1111/tbed.13875>.

**Acosta F**, Martínez-Lirola M, Sola-Campoy PJ, Sicilia J, Guerra-Galán T, Maus SR, Muñoz P, Pérez-Lago L, García de Viedma D. 2022. Insights into the Complexity of a Dormant *Mycobacterium tuberculosis* Cluster Once Transmission Is Resumed. *Microbiology spectrum*. 10(1): e01381-21. <https://doi.org/10.1128/spectrum.01381-21>

Doctorando	Gabriela Domínguez Ruiz
Tesis	Obtención de biopolímeros de interés industrial mediante la transformación de residuos lignocelulósicos y ligninas residuales por <i>Streptomyces</i>
Director/es	Manuel Hernández Cutuli y M <sup>a</sup> Eugenia Eugenio Martín
Fecha lectura	12/06/2021

**Dominguez G**, Blanquez A, Borrero-López AM, Valencia C, Eugenio ME, Arias ME, Rodriguez J, Hernández M. (2021). Eco-friendly oleogels from functionalized Kraft lignin with laccase SilA from *Streptomyces ipomoeae*: an opportunity to replace commercial lubricants ACS Sustainable Chemistry and Engineering. 9: 4611–4616. doi.org/10.1021/acssuschemeng.1c00113

Borrero-Lopez AM, Valencia C, **Domínguez,G**, Eugenio ME, Franco JM. (2021). Rheology and adhesion performance of adhesives formulated with lignins from agricultural waste straws subjected to solid-state fermentation. Industrial Crops & Products 171 (2021) 113876. doi.org/10.1016/j.indcrop.2021.113876.

Fajardo C, Blánquez A, **Domínguez G**, Borrero-López AM, Valencia C, Hernández M, Arias ME, Rodríguez J. (2021). Assessment of Sustainability of Bio Treated Lignocellulose-Based Oleogels. Polymers, 13, 267. doi.org/10.3390/polym13020267