

Academic Staff Resume

Name: Marta Filipa Simões
Title: Assistant Professor
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Academic Qualification:

Postgraduate Certificate in Teaching in Higher Education (PGCTHE)
Ph.D. in Chemical and Biological Engineering
Master in Clinical Microbiology
Bachelor in Biotechnological Engineering

Research Area

Astrobiology
Astromycology
Microbiology
Applied Mycology
Planetary Protection

Working Experience (selected)

Postdoctoral fellow at State Key Laboratory of Lunar and Planetary Sciences, Macau University of Science and Technology, Taipa, Macau S.A.R., China.

Associate tutor and Junior Research Fellow at Biology Department, Edge Hill University, Ormskirk, United Kingdom.

Postdoctoral fellow at Computational Bioscience Research Center (CBRC), King Abdullah University of Science and Technology (KAUST), Saudi Arabia.

Curator at Micoteca da Universidade do Minho (MUM), Center of Biological Engineering, University of Minho, Braga, Portugal.

Researcher for the EU project EMbaRC – European Consortium of Microbial Resources Centres (www.embarc.eu/project.html), at University of Minho, Braga, Portugal.

Professional Society Membership

International Society for Extremophiles (Ordinary member, ISE)

Microbiology Society, UK (Member No. 20003466)

Society for Applied Microbiology, UK (sfam; Member No. 201328)

Portuguese Association of Researchers and Students in the United Kingdom (PARSUK, Effective member No. 1354)

Astrobiology Society of Asia-Pacific (ASAP; since Jun 2020 until the present)

Origins of Life Early-career Network (OoLEN; since Jan 2021 until the present)

Academic Publication

Journal Articles (selected):

Zhang, H., **Simões, M.F.** (2021). Species Recognition of *Aspergillus Conidia* Using Convolutional Neural Networks in Scanning Electron Microscopy Imagery. *International Journal of Pharma Medicine and Biological Sciences* (accepted in doi: 10.18178/ijpmbs).

Méndez, A., Rivera-Valentín, E.G., Schulze-Makuch, D., Filiberto, J., Ramírez, R., Wood, T.E., Dávila, A., McKay, C., Ceballos, K.O., JusinoMaldonado, M., Torres-Santiago, N., Heller, R., Byrne, P., Malaska, M.J., Nathan, E., **Simões, M.F.**, Antunes, A., Martínez-Frías, J., Carone, L., Izenberg, N.R., Atri, D., Chitty, H.I.C., Nowajewski-Barra, P., Rivera-Hernández, F., Brown, C., Lynch, K., Catling, D., Zuluaga, J.I., Salazar, J.F.,

Chen, H., González, G., Jagadeesh, M.K., Haqq-Misra, J. (2021). Habitability Models for Planetary Sciences. *Astrobiology*, 21, 8. DOI: 10.1089/ast.2020.2342.

Simões, M.F.* & Antunes, A. (2021). Microbial pathogenicity in space. *Pathogens*, 10(4): 450, doi: 10.3390/pathogens10040450.

Simões, M.F.*, Ottoni, C.A., & Antunes, A. (2020). Mycogenic metal nanoparticles for the treatment of mycobacteriosis. *Antibiotics*, 9(9): 569; doi.org/10.3390/antibiotics9090569.

Simões, M.F.*, Ottoni, C.A., & Antunes, A. (2020). Biogenic metal nanoparticles: a new approach to detect life on Mars? *Life*, 10(3), 28; doi:10.3390/life10030028

DasSarma, P., Antunes A., **Simões, M.F.**, & DasSarma, S. (2020) Earth's Stratosphere and Microbial Life. *Current Issues in Molecular Biology*, 38:197-244, doi: 10.21775/cimb.038.197.

Rodriguez, R., Santos, C., **Simões, M.F.**, Soares, C., Santos, C., & Lima, N. (2019). Polyphasic, including MALDI-TOF MS, evaluation of freeze-drying long-term preservation on *Aspergillus* (section Nigri) strains. *Microorganisms*, 7(291): 1-17, doi:10.3390/microorganisms7090291.

Broomfield, A., & **Simões, M.F.** (2019). *Penicillium* spp. strains as a possible weapon to fight microbial infections. *Access Microbiology*, 1(1A), doi:10.1099/acmi.ac2019.po0249

Simões, M.F., Maiorano, A.E., Santos, J.G., Peixoto, L., Souza, R.F.B., Neto, A.O., Brito, A.G., & Ottoni, C.A. (2019). Microbial fuel cell-induced production of fungal laccase to degrade the anthraquinone dye remazol brilliant blue R. *Environmental Chemistry Letters*, 17(3): 1413–1420, doi.org/10.1007/s10311-019-00876-y.

Ottoni, C.A., **Simões, M.F.**, Santos, J.G., Peixoto, L., Martins, C.R., Silva, B.P., Neto, A.O., Brito, A.G., & Maiorano, A.E., (2018). Application of microbial fuel cell technology for vinasse treatment and bioelectricity generation. *Biotechnology Letters*, doi:10.1007/s10529-018-2624-2.

More details in: → <https://scholar.google.co.uk/citations?user=sm5g6nsAAAAJ&hl=en&oi=sra>;
→ <https://orcid.org/0000-0002-8767-9487>; → www.researchgate.net/profile/Marta_Simes;
→ www.linkedin.com/in/martafilipasimoes

Books & Book Chapters:

Otoni, C., **Simões, M. F.**, Santos, J.G., Peixoto, L., Souza, R., Neto, F.B., Almir O., Brito, A.G., Maiorano, A.E. (2018). Biotratamento de vinhaça sintética e geração de eletricidade utilizando uma célula a combustível microbiana. In: Alberdan Silva Santos, Avanços Científicos e Tecnológicos em Bioprocessos, Ponta Grossa: Athena Editora, pp. 163-171. (ISBN: 978-85-85107-47-5).

Antunes, A., **Simões, M.F.**, Crespo-Medina, M., Vetriani, C. & Shimane, Y. (2016). *Salinisphaera*, In: Whitman, William (ed). Bergey's Manual of Systematics of Archaea and Bacteria. John Wiley & Sons. (ISBN 9781118960608).

Antunes, A., **Simões, M.F.**, Grötzinger, S. W., Eppinger, J., Bragança, J. & Bajic, V. B. (2016). Bioprospecting Archaea: focus on extreme halophiles, In: Bioprospecting. Springer: Berlin, pp. 81-112. (ISBN: 978-3-319-47933-0 (Print) 978-3-319-47935-4 (Online)).

Simões, M.F., Pereira, L., Santos, C. & Lima, N. (2013). Chapter 5, Polyphasic identification and preservation of fungal diversity: concepts and applications. In: Springer. (Org.). Management of Microbial Resources in the Environment. Management of Microbial Resources in the Environment. (Malik, A., Grohmann, E. & Alves, M. Eds.), Springer, The Netherlands, pp. 91-117. (ISBN 978-94-007-5930-5).

Posters presented in international conferences (selected):

Simões, M.F., Otoni, C.A. & Antunes, Quinto Congreso Internacional de Astrobiología (V CIAB), A. (2020). Biogenic Metal Nanoparticles as Potential Alternative Biosignatures. organised by Universidad del Atlántico and Instituto de Astrobiología de Colombia, 11-14 November.

Simões, M.F., Rocha, H., da Moura, A. & Antunes, A. (2019). Fungal diversity in the salterns of the islands of Maio, Boavista and Sal (Cabo Verde). Congress of Microbiology and Biotechnology' 19 – Microbiotec'19, 5-7 December, Coimbra, Portugal.

McCulloch, B., Rocha, H., Loftus, P., Kelbrick, M., **Simões, M.F.**, da Moura, A. & Antunes, A. (2019). Genomic-based exploration of novel microbial isolates from hypersaline locations in Cabo Verde. Congress of Microbiology and Biotechnology' 19 – Microbiotec'19, 5-7 December, Coimbra, Portugal.

da Moura, A., McCulloch, B., Rowson, J., Rocha, H., **Simões, M.F.** & Antunes, A. (2019). Cabo Verde hypersaline environments: analysis, survey and exploration (the CHASE project). Congress of Microbiology and Biotechnology' 19 – Microbiotec'19, 5-7 December, Coimbra, Portugal.

Dias, T. & **Simões, M.F.** (2019). Isolation and Antibacterial analysis of Filamentous Fungi from Roudsea Wood and Mosses National Nature Reserve. 8th Congress of European Microbiologists - FEMS 2019. July 7-11, Glasgow, Scotland.

Simões, M.F. (2019). Active engagement through quiz activity in Higher Education classes. 2019 SOLSTICE eLearning and CLT Conference. June 5-6, Edge Hill University, Ormskirk, UK.

McCulloch, B., Rowson, J., da Moura, A., Rocha, H., **Simões, M.F.** & Antunes, A. (2019). Metabolic Profiling and Environmental Characterisation of Salterns in the Islands of Cabo Verde. Microbiology Society Annual Conference 2019. April 8–11, ICC Belfast, UK.

Panitz, C., Beblo-Vranesevic, Cortesão, M., Raboow, E., Moeller, R. & the **ICEXPOSE Research Team** (2018). Ice Exposure of Microorganisms. EANA 2018, 18th European Astrobiology Network Association Conference. September 24-28, Berlin, Germany.

D'Arcy, J., McCulloch, B., Kelbrick, M., **Simões, M.F.** & Antunes, A. (2018). Differential tolerance to salinity and metals of microbial strains from different pools of the Anderton brine springs (UK). 12th Edition of the International Congress on Extremophiles (Extremophiles2018). September 16-20, Ischia, Italy.

Bromfield, A., Leighton, H. & **Simões, M.F.** (2018). Differential effects of extreme environmental conditions on filamentous fungi. 12th Edition of the International Congress on Extremophiles (Extremophiles2018). September 16-20, Ischia, Italy.