

CURRICULUM VITAE

1. PERSONAL INFORMATION

Dr. Thiago Rodrigues de Oliveira
Postdoctoral Researcher
Archaea Biology and Ecogenomics Unit
University of Vienna
Djerassiplatz 1, 1030
Vienna, Austria
Email: thiago.rodrigues@univie.ac.at

Summary of background: archaea microbiology, microbial ecology, environmental microbiology, microbial cell biology, molecular biology, metabolism, protein structure, microscopy.

2. CURRENT POSITION

06/2019 – present, University of Vienna

Postdoctoral researcher where independent molecular microbiology research was conducted in order to characterize novel eukaryogenesis relevant Asgard archaea employing cultivation, cell biology, molecular and genomic methods. Responsible also for supervising Bachelor and Master's students as well as performing teaching activities. **Advisor:** Prof. Christa Schleper.

3. POSITIONS HELD TO DATE

03/2018 – 01/2019, University of Brasília

Temporary Microbiology lecturer responsible for teaching the "Environmental Microbiology" and "Experimental and Environmental Microbiology" courses to Environmental Engineering undergraduate students.

09/2016 – 06/2017, University of Natural Resources and Life Sciences, Vienna

Ernst Mach Scholarship holder working on projects involving the use of *H. volcanii* S-layer proteins in producing biomimetic S-layer supported lipid monolayers and characterization of the lattice formation under different conditions. **Supervisor:** Prof. Bernhard Schuster.

03/2014 – 03/2018, University of Brasília

CAPES doctoral scholarship holder, working on biophysical characterization of *H. volcanii* S-layer proteins and heterologous expression of these proteins for biotechnological applications. Also performed teaching activities in Microbiology courses, as well as supervision of Bachelor and Master's students. **Supervisor:** Prof. Cynthia Maria Kyaw.

02/2013 – 12/2013, Setor Oeste

Substitute high school biology teacher at a public institution, teaching first, second- and third-year students.

4. EDUCATION AND TRAINING

Date	Title of Award	Subject	Awarding Body
27/03/2018	Ph.D.	Molecular Biology	University of Brasília
11/03/2013	MSc.	Molecular Biology	University of Brasília

5. PUBLICATIONS

5.1. Peer-reviewed journals

Rodrigues-Oliveira, T., Wollweber, F., Ponce-Toledo, R.I. *et al.* (2023) Actin cytoskeleton and complex cell architecture in an Asgard archaeon. **Nature** 613, 332–339.

Belmok, A., Rodrigues-Oliveira, T., Lopes, F. A. C., Krüger, R. H., & Kyaw, C. M. (2021). The influence of primer choice on archaeal phylogenetic analyses based on 16S rRNA gene PCR. **Braz. J. Biol.**, 83, 1–8.

Rodrigues-Oliveira T., Souza AA, Kruger R, Schuster B, S, Kyaw CM (2019) Environmental factors influence the *Haloferax volcanii* S-layer protein structure. **PLOS ONE** 14(5): e0216863.

Belmok, A., Rodrigues-Oliveira, T., Lopes, F. A. C., Miranda, H. S., Krüger, R. H., Kyaw, C. M. (2019). Long-Term Effects of Periodical Fires on Archaeal Communities from Brazilian Cerrado Soils. **Archaea**, v. 2019, p. 1–11.

Rodrigues-Oliveira, T., Belmok, A., Vasconcellos, D., Schuster, B., Kyaw, C.M. (2017). Archaeal S-Layers: Overview and Current State of the Art. **Frontiers in Microbiology**, v. 8, p. 1-17.

Rodrigues, T., Belmok, A., Catão, E., Kyaw, C. M. (2016). Archaea in Natural and Impacted Brazilian Environments. **Archaea**, v. 2016, p. 1-14.

Rodrigues, T., Catão, E., Bustamante, M. M. C., Quirino, B. F., Kruger, R. H., Kyaw, C. M. (2014) . Seasonal Effects in a Lake Sediment Archaeal Community of the Brazilian Savanna. **Archaea**, v. 2014, p. 1-9.

5.2. Articles in press

Greening, C., Cabotaje, PR, Alvarado L.E.V, Leung, P.M., Land, H., Rodrigues-Oliveira, T., *et al.* (2024) Unique minimal and hybrid hydrogenases are active from anaerobic archaea. **Cell**

5.3. Submitted articles

Rodrigues-Oliveira, T., Hager, K., Monserrat-Diez, M., Bauer, P., Ponce-Toledo, R., Glatzel, S., Schleper, C. Exploring the Ecological Diversity and Distribution of Asgard Archaea Across Selected European Aquatic Environments. **Frontiers in Microbiology**

5.4. Articles in preparation

Ponce-Toledo, R., Rodrigues-Oliveira, T., Wollweber, F., White, M., Pilhofer, M., Erdmann, S., Schleper, C. The social life of an Asgard archaeon

Wollweber, F., Xu, J., Ponce-Toledo, R., Rodrigues-Oliveira, T., Malit, J.J.L., Kokhanovska, A., Wiczorek, M., Schleper, C., Pilhofer, M. Mini-microtubules in Asgard archaea

Bauer, P., Rodrigues-Oliveira, T., Hager, K., Zechmeister, T., Schleper, C., Glatzel, S. Seasonal change of diurnal cycle of CO₂ and CH₄ fluxes per each pathway of a subsaline reed ecosystem under the influence of drought

5.5. Book chapters

Rodrigues-Oliveira, T., Belmok, A., Kyaw, C.M. . Northern blot: detecção de RNA por hibridização em membranas. [*Northern blot: RNA detection through membrane hybridization*] In: Marlene Teixeira De-Souza; Marcelo Macêdo Brígido; Andréa Queiroz Maranhão. (Org.). **Técnicas Básicas em Biologia Molecular**. 2ed. Brasília: Editora UnB, 2016, v. 2, p. 265-272.

Belmok, A., Rodrigues-Oliveira, T., Kyaw, C.M. . Southern Blot: detecção de fragmentos de DNA imobilizados em membranas. [*Southern blot: detection of DNA fragments immobilized on membranes*] In: Marlene Teixeira De-Souza; Marcelo de Macêdo Brígido; Andréa Queiroz Maranhão. (Org.). **Técnicas Básicas em Biologia Molecular**. 2ed. Brasília: Editora UnB, 2016, v. 2, p. 231-250.

5.6. Abstracts in International Conferences

Rodrigues-Oliveira, T.; Wollweber, F.; Ponce-Toledo, R. ; Xu, J. ; Hager, K.; Pilhofer, M.; Schleper, C. (2023) Cultivated Lokiarchaea from Shallow Estuarine Sediments Reveal an Actin Cytoskeleton and Complex Cell Walls in Asgard Archaea. In: GRC Archaea: Ecology, Metabolism and Molecular Biology, Mount Snow, United States of America.

Rodrigues-Oliveira, T.; Wollweber, F.; Ponce-Toledo, R. ; Xu, J. ; Rittmann, S. ; Klingl, A. ; Pilhofer, M. ; Schleper, C. (2022) Complex cytoskeleton and cell architecture in an Asgard archaeon. In: Molecular Biology of Archaea 7, 2022, Frankfurt, Germany. Molecular Biology of Archaea 7 Abstract Book.

Rodrigues-Oliveira, T.; Souza, A.A.; Kruger, R.; Schuster, B.; Freitas, S.M.; Kyaw, C.M (2018) Changes on the *Haloferax volcanii* S-layer protein structure according to environmental factors. In: Molecular biology of archaea: From mechanisms to ecology, 2018, Vienna, Austria. Molecular Biology of Archaea 6 Abstract Book.

Belmok, A. ; Rodrigues, T. ; Miranda, H. S. ; Kruger, R. H. ; Kyaw, C. M. (2014) Análise da diversidade de Archaea em solos de Cerrado sensu stricto submetidos ou não a queimadas bienais. [*Archaeal diversity analyses in Cerrado sensu stricto soils submitted to biennial fires*] In: XXII Congresso Latinoamericano de Microbiología y 4 Congreso Colombiano de Microbiología, Cartagena, Colombia.

Rodrigues, T.; Catão, E. C. P.; Bustamante, M. M. C.; Kyaw, C. M. (2012) Estudo da riqueza de membros do domínio Archaea em sedimentos de lagoas do cerrado por caracterização de genes de rRNA 16S. [*A study of archaeal richness in Cerrado lake sediments using rRNA 16S genes as markers*] In: XXI Congresso Latino Americano de Microbiologia, Santos, Brazil.

6. AWARDS

EMBO Workshop Molecular Biology of Archaea Travel Award, EMBO, 2018 - €300,00

Ernst Mach Grant Award, OeAD - Österreichischer Austauschdienst, 2016 - €8.460,00

Best V Molecular Biology Program Symposium Posters, University of Brasília, 2015

CAPES PhD degree scholarship, 2014 – R\$105.600,00 (Approx. €21.000,00)

CAPES Master's degree scholarship, 2011 – R\$28.800,00 (Approx. €5.760,00)

7. REFEREE FOR SCIENTIFIC JOURNALS

Current Research in Biotechnology
Frontiers in Microbiology
Revista Ciência e Saúde Animal
International Journal of Systematic and Evolutionary Microbiology

8. PREVIOUS AND CURRENT COOPERATION PARTNERS (alphabetic order)

Prof. Andreas Klingl, Ludwig Maximilians University of Munich, Germany
Prof. Chris Greening, Monash University, Australia
Prof. Dietmar Pum, University of Natural Resources and Life Sciences Vienna, Austria
Prof. Filipa Sousa, University of Vienna, Austria
Prof. Finn Werner, University College London, United Kingdom
Dr. Luciano Paulino da Silva, Brazilian Agricultural Research Corporation, Brazil
Prof. Martin Pilhofer, ETH Zürich, Switzerland
Prof. Mercedes Bustamante, University of Brasília, Brazil
Prof. Ricardo Henrique Kruger, University of Brasília, Brazil
Prof. Silvia Bulgheresi, University of Vienna, Austria
Dr. Simon Rittmann, Arkeon GmbH, Austria
Prof. Sonia Maria de Freitas, University of Brasília, Brazil
Prof. Sonja Verena Albers, University of Freiburg, Germany
Prof. Stephan Glatzel, University of Vienna, Austria
Prof. Susanne Erdmann, Max Planck Institute for Marine Microbiology, Germany
Prof. Uwe Sleytr, University of Natural Resources and Life Sciences Vienna, Austria

9. INTERNATIONAL SCIENTIFIC TALKS

Big Bang Microbes! – Workshop on Cultivation of the Uncultivables, Cologne, Germany, 2023
GRC Archaea: Ecology, Metabolism and Mol. Biology, Mount Snow, USA, 2023, *keynote*
EMBO Workshop: Molecular biology of archaea, Frankfurt, Germany, 2022

10. MENTORING AND SUPERVISION OF STUDENTS

Theda Schöchtner, Bachelor in Biology, University of Vienna, 2024. Co-supervisor
Karin Hager, Master's in Molecular Microbiology, Microbial Ecology and Immunobiology, University of Vienna, 2023. Co-supervisor
Lucas Batista, Bachelor in Biology - University of Brasília, 2018. Co-supervisor
Letícia de Velasco Araújo, Bachelor in Biology - University of Brasília, 2015. Co-supervisor
Aline B. de Araújo Dias, Bachelor in Biology - University of Brasília, 2014. Co-Supervisor

11. LANGUAGES

Portuguese (native language)
English, Thomas Jefferson Language School
German, Sprachenzentrum of the University of Vienna (Common European Framework of Reference for Languages level B1).

12. REFERENCES

Prof. Christa Schleper. Head of Department, University of Vienna, Austria. Postdoc Advisor. Contact: christa.schleper@univie.ac.at
Prof. Bernhard Schuster. Full Professor, University of Natural Resources and Life Sciences Vienna, Austria. PhD Supervisor. Contact: bernhard.schuster@boku.ac.at
Prof. Cynthia Maria Kyaw. Full Professor, University of Brasília, Brazil. Master's and PhD supervisor. Contact: malta@unb.br