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## Doctoral School of Integrative Biology

### 1. PhD Student:

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### 2. Doctorate

2.1. PhD thesis title: *Thermophilic microbial communities from geothermal environments of Western Plain, Romania*

2.2. PhD coordinator: prof. dr. Nicolae Dragoș

2.3. Date of PhD thesis defense (link from site): 16.03.2018

2.4. Grade: *Summa cum laude*

### 3. Scientific articles published in:

#### 3.1. Impact factor journals (IF, AIS):

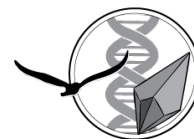
3.1.1. Baricz, A., **Chiriac, C.M.**, Andrei, A.S., Bulzu, P.A., Levei, E.A. et al. (2020). Spatio-temporal insights into microbiology of the freshwater-to-hypersaline, oxic-hypoxic-euxinic waters of Ursu Lake. *Environmental Microbiology* doi:10.1111/1462-2920.14909. IF: 5.147.

3.1.2. Remizovschi, A., Carpa, R., Forray, F.L., **Chiriac, C.**, et al. (2020). Mud volcanoes and the presence of PAHs. *Scientific Reports* doi: 10.1038/s41598-020-58282-2. IF: 4.525; AIS 1.263.

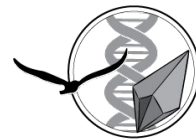
3.1.3. Kust A., Řeháková K., Vrba J., Maicher V., Mareš J., Hrouzek P., **Chiriac M.**, Benedová Z., Tesařová M., Saurav K. 2020. Insight into unprecedented diversity of cyanopeptides in eutrophic ponds using an MS/MS networking approach. *Toxins* 12: 561. doi: 10.3390/toxins12090561. IF: 3.531.

3.1.4. **Chiriac, C.**, Baricz, A., Szekeres, E., Rudi, K., Dragoș, N., Coman, C. (2018). Microbial composition and diversity patterns in deep hyperthermal aquifers from the Western Plain of Romania. *Microbial Ecology* 75(1):38-51. doi: 10.1007/s00248-017-1031-x. IF: 3.611; AIS 0.97.

3.1.5. **Chiriac, C.M**, Szekeres, E., Rudi, K., Baricz, A.I., Hegedus, A., Dragoș, N., Coman, C. 2017. Differences in temperature and water chemistry shape distinct diversity patterns in thermophilic microbial communities. *Applied and Environmental Microbiology* 83(21). pii: e01363-17. doi: 10.1128/AEM.01363-17. IF: 3.96; AIS 1.166.



- 3.1.6.** Szekeres, E., **Chiriac, M.C.**, Baricz, A., Szőke-Nagy, T., Lung, I., Soran, M.L., Rudi, K., Dragoș, N., Coman, C. 2018. Investigating antibiotics, antibiotic resistance genes, and microbial contaminants in groundwater in relation to the proximity of urban areas. *Environmental Pollution* 236:734-744. doi: 10.1016/j.envpol.2018.01.107. IF: 5.714, AIS 1.118.
- 3.1.7.** Coman, C., **Chiriac, C.M.**, Robeson, M., Ionescu, C., Dragoș, N., Barbu-Tudoran, L., Andrei, Ș.A., Banciu, H.L., Sicora, C., Podar, M., 2015. Structure, mineralogy, and microbial diversity of geothermal spring microbialites associated with a deep oil drilling in Romania, *Frontiers in Microbiology*, 6:253. doi: 10.3389/fmicb.2015.00253. IF: 4.259.
- 3.1.8.** Dragoș, N., **Chiriac, C.**, Porav, S., Coman, C., Torok, L., Hegedus, A. 2018. *Desmodesmus tropicus* (Chlorophyta) in Danube Delta – reassessing the phylogeny of the series *Maximi*. *European Journal of Phycology* - accepted for publication. IF: 2.481.
- 3.1.9.** Baricz, A., Teban, A., **Chiriac, C.M.**, Szekeres, E., Farkas, A., Nica, M., Dascalu, A., Oprisan, C., Lavin, P., Coman, C. 2018. Investigating the potential use of an Antarctic variant of *Janthinobacterium lividum* for tackling antimicrobial resistance in a One Health approach. *Scientific Reports* 8:15272. doi: 10.1038/s41598-018-33691-6. IF: 4.525, AIS 1.356.
- 3.1.10.** Szekeres, E., Baricz, A., **Chiriac, M.C.**, Farkas, A., Opris, O., Soran, M.L., Andrei, A.S., Rudi, K., Balcazar, J.L., Dragoș, N., Coman, C. 2017. Abundance of antibiotics, antibiotic resistance genes and bacterial community composition în wastewater effluents from different Romanian hospitals. *Environmental Pollution* 225: 304-315. doi: 10.1016/j.envpol.2017.01.054. IF: 5.714, AIS 1.118.
- 3.1.11.** Andrei, A.-S., Baricz, A., Robeson, M.S., Pausan, M.R., Tamas, T., **Chiriac, C.**, Szekeres, E., Barbu-Tudoran, L., Levei, E.A., Coman, C., Podar, M., Banciu, H.L. 2017. Hypersaline sapropels act as hotspots for microbial dark matter. *Scientific Reports* 7: 6150. IF: 4.525, AIS 1.356.
- 3.1.12.** Farkas, A., Craciunas, C., **Chiriac, C.**, Szekeres, E., Coman, C., Butiuc-Keul, A. 2016. Exploring the role of coliform bacteria in class 1 integron carriage and biofilm formation during drinking water treatment. *Microbial Ecology* 72(4):773-782. doi: 10.1007/s00248-016-0758-0. IF: 3.611, AIS 1.003.



### 3.2. IDB journals:

**3.2.1. Chiriac, C.,** Baricz, A., Coman, C. 2018. Draft genome sequence of *Janthinobacterium* sp. Strain ROICE36, a putative secondary metabolite-synthesizing bacterium isolated from Antarctic Snow. *Microbiology Resource Announcements* 6(15):e01553-17. doi: 10.1128/genomeA.01553-17.

**3.2.2. Szekeres, E.,** Dragoș, N., Porav, A.S., Baricz, A., **Chiriac, C.,** Szoke-Nagy, T., Coman, C. (2015). Evaluation of bio-resources: monitoring *Arthrospira* growth in supplemented brackish water. *Studia UBB Biologia* 60: 45-48.

**3.2.3. Baricz, A., Chiriac, C.,** Bulzu, P.A., Cristea, A., Keresztes, Z., Zsolt, G., Tămaș, T., Alexe, M., Banciu, H.L. (2019) Patterns of prokaryotic diversity in sediments of brackish to hypersaline salt lakes in Romania. *Studia UBB Biologia* 64: 96.

**3.2.4. Chiriac, C.M.,** Barbu-Tudoran, L., Baricz, A., Szekeres, E., Szőke-Nagy, T., Dragoș, N., Coman, C. 2015. Bacterial diversity in a microbial mat colonizing a man-made geothermal spring from Romania. *Studia UBB Biologia* 60: 5-22.

### 3.3. Other journals:

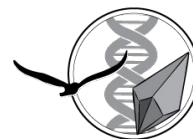
**3.3.1. Chirac, C.,** Szekeres, E., 2016. The metagenomic approach for microbial diversity investigation and antibiotic resistance evaluation in environmental samples, in *Methodological guide for monitoring antibiotics and antibiotic resistance in the environment*, (ed.) Coman, C., Cluj-Napoca, Accent, 155-190.

**3.3.2. Baricz, A., Szőke-Nagy, T., Szekeres, E., Chirac, C.,** 2016. Method for nucleic acid extraction, in *Methodological guide for monitoring antibiotics and antibiotic resistance in the environment*, (ed.) Coman, C., Cluj-Napoca, Accent, 41-62.

### 4. Scientific conferences/symposia (please mention the author/s, title of the conference/symposium, year, country, link)

#### 4.1. International:

**4.1.1. Chiriac, C.M.,** Hegedűs, A., Coman, C., Szekeres, E., Drugă, B., Adaptive evolution to climate change in fresh water cyanobacteria, 6th Fresh Blood for Fresh Water Conference, Tihany, Hungary, April 2019 – poster  
([https://www.researchgate.net/profile/Anett\\_Endredi/publication/335543073\\_Abstracts\\_of\\_the\\_6](https://www.researchgate.net/profile/Anett_Endredi/publication/335543073_Abstracts_of_the_6))



[th Fresh Blood for Fresh Water Conference/links5d6ce0d5299bf1808d5eb7d1/ Abstracts-of-the-6th-Fresh-Blood-for-Fresh-Water-Conference.pdf](#)).

**4.1.2.** Szekeres, E., Coman, C., Baricz, A.I., **Chiriac, C.M.**, Hegedűs, A., Dragoș, N., Evaluating the microbial community shift in brackish water *Arthrospira* cultures, 10th European Workshop on the Molecular Biology of Cyanobacteria, Cluj-Napoca, Romania, August 2017 – poster ([http://www.ccbjb.ro/10EWMBC/docs/abstract\\_book.pdf](http://www.ccbjb.ro/10EWMBC/docs/abstract_book.pdf)).

**4.1.3.** Szekeres, E., Baricz, A.I., **Chiriac, C.M.**, Coman, C., Antibiotic resistance in hospital wastewater microbiota, ICAR2016, Torremollinos, Spain, June 2016 – poster (<https://medimeetings.com/microbiology-and-immunology/iv-international-conferenceon-antimicrobial-research-icar2016.html>).

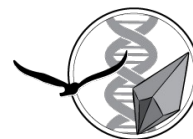
**4.1.4.** Szekeres, E., Andrei, S.A., Szőke-Nagy, T., **Chiriac, C.M.**, Baricz, A.I., Dragoș, N., Coman, C., Environmental filtering reduces antibiotic resistance genes abundance in urban wastewater treatment plants, BioMicroWorld, Barcelona, Spain, October 2015 – poster (<https://10times.com/biomicroworld>).

**4.1.5.** Szekeres, E., Dragoș, N., Porav A.S., Baricz, A.I., **Chiriac, C.M.**, Szőke-Nagy, T., Coman, C. Evaluation of bio-resources: Monitoring *Arthrospira* growth in supplemented brackish water, International Conference: Molecular Biology – Current Aspects and Prospects, Cluj-Napoca, Romania, November 2015 – poster (<http://icmb.conference.ubbcluj.ro/en/>).

**4.1.6.** **Chiriac, C.M.**, Szekeres, E., Baricz, A.I., Rudi, K., Coman, C., Antibiotic resistance and prokaryotic diversity in surface waters - a human activity impact perspective, ICAR2016, Torremollinos, Spain, iunie 2016 – poster (<https://medimeetings.com/microbiology-and-immunology/iv-international-conferenceon-antimicrobial-research-icar2016.html>).

**4.1.7.** **Chiriac, C.M.**, Szekeres, E., Baricz, A.I., Szőke-Nagy, T., Andrei, S.A., Coman, C., Evaluation of antibiotic resistance genes in human impacted environments: a preliminary step for an environmental protection strategy, BioMicroWorld, Barcelona, Spain, October 2015 – poster (<https://10times.com/biomicroworld>).

**4.1.8.** Andrei, A.S., Baricz, A., **Chiriac, C.**, Szekeres, E., Coman, C., Banciu, H., Composition and diversity of microbial communities in hypersaline sapropels, SAME14 Aquatic Microbial Ecology, Uppsala, Sweden, August 2015 – poster ([https://www.researchgate.net/publication/319279365\\_OVERVIEW\\_Progress\\_and\\_perspctives\\_in\\_aquatic\\_microbial\\_ecology\\_highlights\\_of\\_the\\_SAME\\_14\\_Uppsala\\_Sweden\\_2015](https://www.researchgate.net/publication/319279365_OVERVIEW_Progress_and_perspctives_in_aquatic_microbial_ecology_highlights_of_the_SAME_14_Uppsala_Sweden_2015)).



**4.1.10. Chiriac, C.M.,** Baricz, A., Szekeres, E., Szóke-Nagy, T., Dragoș, N., Coman, C., A perspective on the ecological functions of antibiotics in natural environments, International Congress of Cell Biology and the 33st Annual Scientific Session of the Romanian Society for

Cell Biology - June 2015, Baia Mare, Romania – oral presentation ([http://www.snbc.ro/pages/Annual\\_meeting.html](http://www.snbc.ro/pages/Annual_meeting.html)).

**4.1.11. Szóke-Nagy T., Baricz A., Chiriac C., Szekeres E., Coman C., Dragoș N.,** Identification of gene encoding squalene synthase-like 1 in five *Botryococcus terribilis* AICB strains 1, International Congress of Cell Biology and the 33st Annual Scientific Session of the Romanian Society for Cell Biology - June 2015, Baia Mare, Romania – oral presentation ([http://www.snbc.ro/pages/Annual\\_meeting.html](http://www.snbc.ro/pages/Annual_meeting.html)).

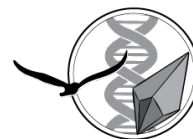
**4.1.12. Baricz, A., Chiriac, C., Bulzu, P.A., Cristea, A., Keresztes, Z.G., Tamas, T., Mircea, A., Banciu, H.** Patterns of prokaryotic diversity in sediments of brackish to hypersaline salt lakes in Romania. Halophiles 2019 International Conference. Cluj-Napoca, Romania, June 2019 – poster (<http://www.halophiles.eu/halophiles-2019-final-program/>).

**4.1.13. Chiriac, C., Dragoș, N., Hegedus, A., Baricz, A., Szekeres, E., Coman, C.** Bioinformatics applications in molecular microbiology. Workshop - Perspectivele bioinformaticii in Romania (engl. Workshop -Bioinformatics' perspectives in Romania). Cluj-Napoca, Romania, November 2017 – oral presentation.

**4.1.14. Chiriac, C., Baricz, A., Coman, C.** Draft genome sequence of *Janthinobacterium* sp. Strain ROICE36, isolated from snow samples collected from the King George Island, Antarctica. Aquatic Biodiversity International Conference. Sibiu, Romania, September 2017 – poster (<http://sites.conferences.ulbsibiu.ro/abic/2019/>).

**4.1.15. Chiriac, C., Itcus, C., Purcarea, C., Dragos, N., Rudi, K., Avramescu, S.M., Fierascu, I., Barbu-Tudoran, L., Tusa, I., Sidoroff, M.E., Coman, C.** Microbial community structure in different snow types from King George Island, Antarctica. SCAR Open Science Conference. Kuala Lumpur, Malaysia, August 2016 – oral presentation (<https://www.scar.org/library/conferences/scar-open-science-conferences/xxxiv-scar-and-osc-kl-malaysia-aug2016/>).

**4.1.16. Chiriac, C.M., Robeson, M., Ionescu, C., Dragoș, N., Barbu-Tudoran, L., Andrei, Ș.A., Banciu, H.L., Sicora, C., Podar, M., Coman, C.,** A study concerning the microbial diversity of three geothermal spring microbialites from a deep oil drilling in Ciocăia, Romania, Metabarcoding Workshop: Two days with DNA metabarcoding in Cluj-Napoca. Romania, May



2015 – oral presentation (<http://odyssee.granturi.ubbcluj.ro/two-days-with-dna-metabarcoding-in-cluj-napoca-romania/>).

**4.1.17.** Coman, C., **Chiriac, C.M.**, Robeson, M.S., Ionescu, C., Dragos, N., Barbu-Tudoran, L., Andrei, A.S., Banciu, H.L., Sicora, C. Modern carbonate deposits from an artificial thermal environment in Romania as possible analogues of ancient stromatolites. 18th Evolutionary Biology Meeting. Marseille, France, September 2014 – oral presentation (<http://aeeb.fr/18th-evolutionary-biology-meeting-at-marseilles/>).

#### **4.2. National:**

**4.2.1. Chirac, C.**, Szekeres, E., Baricz, A., Rudi, K., Coman, C., Noi perspective privind diversitatea microbiană a izvoarelor termale din Câmpia de Vest a României – o abordare metagenomică, BIOTA-BIODiversity, Tradition and Actuality, II Edition, Cluj-Napoca, Romania, March 2016 – oral presentation.

**4.2.2** Szekeres, E., Baricz, A.I., Chiriac, C.M., Szőke-Nagy, T., Andrei, S.A, Coman, C. Antibiotics and antibiotic resistant microorganisms: anthropic impact on natural environments, “Kolozsvári Biológus Napok”, Cluj-Napoca, Romania, April 2016 – oral presentation (<https://adoc.pub/17-kolozsvari-biologus-napok-17-th-biology-dayskivonatfzet.html>).

#### **5. Projects/Grants:**

##### **5.1. Scientific projects/grants:**

**5.1.1.** *Postdoctoral grant 2021-2023 – “Programul 1 – Dezvoltarea sistemului național de cercetare-dezvoltare”, Executive Agency for Higher Education, Research, Development and Innovation Funding, Ministry of National Education, Romania. Grant No. PD 177/2020.*

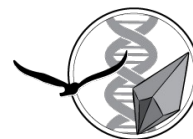
**5.1.2.** *Postdoctoral grant 2019-2021 – “Program for the Support of Perspective Human Resources”, Czech Academy of Sciences, Grant No. L200961953.*

**5.1.3.** *Mobility grant 2019 - BC Grant Programme “Incorporation of the Biology Centre of the CAS into the European Research Area”, Czech Academy of Sciences.*

**5.1.4.** *PhD Scholarship 2015-2016 - “Quality, excellence, transnational mobility in doctoral research”, Grant No. POSDRU/187/1.5/S/155383.*



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5.1.5. Mobility grant 2019– “Proiecte de mobilitate pentru cercetători”, Executive Agency for Higher Education, Research, Development and Innovation Funding, Ministry of National Education, Romania. Grant No. PN-III-P1-1.1-MC-2019-0789.

### 6. Visibility (links):

6.1. **Google Scholar:** <https://scholar.google.com/citations?user=b4ltgkkAAAAJ&hl=ro>

6.2. **ResearchGate:** [https://www.researchgate.net/profile/Cecilia\\_Chiriac2](https://www.researchgate.net/profile/Cecilia_Chiriac2)

6.3. **Brainmap ID:** U-1700-037D-7601

6.4. **Scopus Author ID:** 56589710800

6.5. **ResearcherID:** R-7093-2017

Date 18.03.2021

Signature: