***ANEXA 4.1***

Nume Prenume: **Banciu Horia Leonard**

Gradul didactic: Profesor universitar

Instituția unde este titular: Universitatea „Babeș-Bolyai”

Facultatea: Biologie și Geologie

Departamentul: Biologie Moleculară și Biotehnologie

**LISTA**

**lucrărilor ştiinţifice în domeniul disciplinelor din postul didactic**

1. **Teza de doctorat**

Doctor in Biologie al Universității Tehnice Delft, Olanda – 01.11.2004.

Titlul tezei: “Physiology of alkaliphilic sulfur-oxidizing bacteria from soda lakes”.

(<https://repository.tudelft.nl/islandora/object/uuid%3Aaf937601-7857-4326-ae2c-fb6b02ba0b69> )

Conducător științific: Prof. Dr. Gijs J. Kuenen.

Titlul a fost recunoscut de Ministerul Educației, Cercetării și Tineretului din România prin Atestatul Nr. 8472 din 27.04.2005.

1. **Cărţi si capitole în cărţi publicate în ultimii 10 ani**

**1.** Andrei, A.-Ș. Bulzu. P.-A., **Banciu, H.L.** (2020) Blossoms of rot: microbial diversity of saline sapropels. In: Extremophiles as Astrobiological Models. J. Seckbach and H. Stan-Lotter (eds), Series Astrobiology Perspectives on Life of the Universe (Series editors R. Gordon and J. Seckbach), Wiley-Scivener, Beverly, MA, USA, ISBN 978-1119591689, pp.45-82. <https://doi.org/10.1002/9781119593096.ch3>

**2.** Tripon, A.M., Buda, D.M, **Banciu, H.L.**, Cristea, A. (2025). Polyhydroxyalkanoate Synthesis in Halotolerant and Halophilic Members of Halomonadaceae Family. pp 191-220. In: Khare, S., Karan, R., Sinha, R., Hemamalini, R. [eds.]. New Horizons in Halophilic Microbes and Their Enzymes. CRC Press, Boca Raton, FL, USA (in press). ISBN: 978-1-032-67528-2 (Hardcover version), ISBN: 978-1-003-46646-8 (Electronic version), DOI: 10.1201/9781003466468.

1. **Lucrări indexate ISI/BDI publicate în ultimii 10 ani**
2. Baricz, A., Cristea, A., Muntean, V., Teodosiu, G., Andrei, A.-Ş., Molnar, I., Alexe, M., Rakosy-Tican, E., Banciu, H.L. (2015) Culturable diversity of aerobic halophilic archaea (Fam. Halobacteriaceae) from hypersaline, meromictic Transylvanian lakes. Extremophiles, 19 (2): 525-537. https://doi.org/10.1007/s00792-015-0738-1
3. Bartha, L., Sramkó, G., Volkova, P. A., Surina, B., Ivanov, A. L., Banciu, H. L. (2015) Patterns of plastid DNA differentiation in Erythronium (Liliaceae) are consistent with allopatric lineage divergence in Europe across longitude and latitude. Plant Syst Evol, 301 (6): 1747-1758.
4. Coman, C., Chiriac, C.M., Robeson, M.S., Ionescu, C., Dragos, N., Barbu-Tudoran, L., Andrei, A.-S., 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. Front Microbiol, 6: 253.
5. Andrei, A.-Ş., Robeson, M.S., Baricz, A., Coman, C., Muntean, V., Ionescu, A., Etiope, G., Alexe, M., Sicora, C.I., Podar, M., Banciu, H.L. (2015). Contrasting taxonomic stratification of microbial communities in two hypersaline meromictic lakes. ISME J., 9 (12): 2642-2656. https://doi.org/10.1038/ismej.2015.60
6. Banciu, H.L., Muntyan, M.S. (2015). Adaptive strategies in the double-extremophilic prokaryotes inhabiting soda lakes. Curr Opin Microbiol, 25: 73-79. https://doi.org/10.1016/j.mib.2015.05.003
7. Sorokin, D.Y., Banciu, H.L., Muyzer, G. (2015). Functional microbiology of soda lakes. Curr Opin Microbiol, 25: 88-96. https://doi.org/10.1016/j.mib.2015.05.004
8. Bartha, L., Stepanov, N. V., Rukšāns, J., Banciu, H.L., Keresztes, L. (2015). Non-monophyly of Siberian Erythronium (Liliaceae) leads to the recognition of the formerly neglected Erythronium sajanense. J Plant Res, 128 (5): 721-729.
9. Ionescu, M., Rădulescu, A.Z., Oniga, S., Banciu, H.L., Lupan, I. (2015). Inhibition of Streptococcus pneumoniae and Escherichia coli adenylate kinase by 2-amino-4-methyl-n'-arylidenethiazole-5-carbohydrazides. Farmacia, 63 (3): 338-342.
10. Voica, D.M., Bartha, L., Banciu, H.L., Oren, A. (2016). Heavy metal resistance in halophilic Bacteria and Archaea. FEMS Microbiol. Lett. 363(14): fnw146. https://doi.org/10.1093/femsle/fnw146.
11. Andrei, A.Ş., Baricz, A, Păusan, M., Muntean, V., Sicora, C., Alexe, M., Rakosy-Tican, E., Banciu, H.L. (2017) Spatial distribution and molecular diversity of archaeal communities in the extreme hypersaline meromictic Brâncoveanu Lake (Transylvanian Basin, Romania). Geomicrobiol. J., 34 (2):130-138. https://doi.org/10.1080/01490451.2016.1149527
12. Andrei, A.-Ş., Păuşan, M. R., Tămaş, T., Har, N., Barbu-Tudoran, L., Leopold, N., Banciu, H.L. (2017). Diversity and biomineralization potential of the epilithic bacterial communities inhabiting the oldest public stone monument of Cluj-Napoca (Transylvania, Romania). Front Microbiol., 8:372. https://doi.org/10.3389/fmicb.2017.00372.
13. Molnár, I., Besenyei, E., Thieme, R., Thieme, T., Aurori, A., Baricz, A., Banciu, H.L., Rakosy‐Tican, E. (2017). Mismatch repair deficiency increases the transfer of antibiosis and antixenosis properties against Colorado potato beetle in somatic hybrids of Solanum tuberosum + S. chacoense. Pest Manag Sci, 73 (7):1428-1437.
14. Dina, N.E., Leș, A., Baricz, A., Szoke-Nagy, T., Leopold, N., Sârbu, C., Banciu, H.L. (2017) Discrimination of haloarchaeal genera using Raman spectroscopy and robust methods for multivariate data analysis. J Raman Spectrosc., 48 (8): 1122–1126.
15. Andrei, A.Ş., Baricz, A., Robeson, M.S., Păuşan, M.R., Tămaş, 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. Sci. Rep. 7( 1):6150. https://doi.org/10.1038/s41598-017-06232-w.
16. Alexe, M., Șerban, G., Baricz, A., Andrei, A.-Ș., Cristea, A., Battes, K., Cîmpean, M., Momeu, L., Muntean, V., Porav, S.A., Banciu, H.L. (2018). Limnology and plankton diversity of salt lakes from Transylvanian Basin (Romania): A review. J. Limnol., 77(1): 17-34. https://doi.org/10.4081/jlimnol.2017.1657.
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19. Cristea, A., Baricz, A., Leopold, N., Floare, C., Borodi, G., Kacso, I., Tripon, S., Bulzu, P.-A., Andrei, A. Ș., Cadar, O., Levei, E. A., Banciu, H.L. (2018) Polyhydroxybutyrate production by an extremely halotolerant Halomonas elongata strain isolated from the hypersaline meromictic Fără Fund Lake (Transylvanian Basin, Romania). J. Appl. Microbiol., 125 (5), 1343—1357. https://doi.org/10.1111/jam.14029.
20. Bulzu, P.-A., Andrei, A.-Ş., Salcher, M.M., Mehrshad, M., Inoue, K., Kandori, H., Béjà, O., Ghai, R., Banciu, H.L. (2019) Casting light on Asgardarchaeota metabolism in a sunlit microoxic niche. Nat. Microbiol. 4: 1129–1137. https://doi.org/10.1038/s41564-019-0404-y.
21. Buda, D.M., Bulzu, P.-A., Barbu-Tudoran, L., Porfire, A., Pătraș, L., Sesărman, A., Tripon, S., Șenilă, M., Ionescu, M.I., Banciu, H.L. (2019) Physiological response to silver toxicity in the extremely halophilic archaeon Halomicrobium mukohataei. FEMS Microbiol. Lett. 366(18): fnz231. https://doi.org/10.1093/femsle/fnz231.
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27. Baricz, A., Chiriac,C.M., Andrei, A.-Ș., Bulzu, P.-A., Levei, E.A., Cadar, O., Battes, K.P. Cîmpean, M., Șenilă, M., Cristea, A., Muntean, V., Alexe, M., Coman, C., Szekeres, E.K., Sicora, C.I., Ionescu, A., Blain, D., O’Neill, W.K., Edwards, J., Hallsworth, J.E., Banciu, H.L. (2021) Spatio‐temporal insights into microbiology of the freshwater‐to‐hypersaline, oxic‐hypoxic‐euxinic waters of Ursu Lake. Environ. Microbiol. 23 (7): 3523-3540. https://doi.org/10.1111/1462-2920.14909 .
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31. Cristea, A., Pustan, M., Bîrleanu, C., Dudescu, C., Floare, C. G., Tripon, A. M., Banciu, H.L. (2022). Mechanical evaluation of solvent casted poly (3-hydroxybutyrate) films derived from the storage polyesters produced by Halomonas elongata DSM 2581T. J Polym Environ, 30 (1), 424-430. https://doi.org/10.1007/s10924-021-02204-4
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33. Banciu, H.L., Gridan, I.M., Zety, A.V., Baricz, A. (2022) Asgard archaea in saline enviornments. Extremophiles. 26:21 https://doi.org/10.1007/s00792-022-01266-z.
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39. Buda, D.M., Szekeres, E.K., Barbu, L, Esclápez, J., Banciu, H.L. Genome-wide transcriptional response to silver stress in extremely halophilic archaeon Haloferax alexandrinus DSM 27206T. BMC Microbiol. 23: 381. https://doi.org/10.1186/s12866-023-03133-z
40. Timmis, K., Hallsworth, J.E., McGenity, T.J., Armstrong, R., Colom, M.F., Karahan, Z.C., ..., Banciu, H.L., ... & Serna, J. G. (2024). A concept for international societally relevant microbiology education and microbiology knowledge promulgation in society. Microb Biotechnol, 17(5), e14456. https://doi.org/10.1111/1751-7915.14456
41. Boukheloua, R., Mukherjee, I., Park, H., Šimek, K., Kasalický, V., Ngochera, M., Grossart, H.-P., Picazo-Mozo, A., Camacho, A., Cabello-Yeves, P. J., Rodriguez-Valera, F., Callieri, C., Andrei, A.-S., Pernthaler, J., Posch, T., Alfreider, A., Sommaruga, R., Hahn, M. W., Sonntag, B., Lopez-Garcia, P., Moreira, D., Jardillier, L., Lepère, C., Biderre-Petit, C., Bednarska, A., Ślusarczyk, M., Tóth, V. R., Banciu, H. L., Kormas, K., Orlic, S., Šantić, D., Muyzer, G., Herlemann, D. P. R., Tammert, H., Bertilsson, S., Langenheder, S., Zechmeister, T., Salmaso, N., Storelli, N., Capelli, C., Lepori, F., Lanta, V., Henriques Vieira, H., Kostanjšek, F., Kabeláčová, K., Chiriac, M.-C., Haber, M., Shabarova, T., Fernandes, C., Rychtecký, P., Znachor, P., Szőke-Nagy, T., Layoun, P., Wong, H. L., Silva Kavagutti, V., Bulzu, P.-A., Salcher, M. M., Piwosz, K., Ghai, R. (2024) Global freshwater distribution of Telonemia protists. ISME J, wrae177, https://doi.org/10.1093/ismejo/wrae177
42. Mircea, C., Drăghici, I., Levei, E.A., Cristea, A., Gridan, I.M., Zety, A.V., Banciu, H.L. (2024). The fungal side of the story: Saprotrophic- vs. symbiotrophic-predicted ecological roles of fungal communities in two meromictic hypersaline lakes from Romania. Microb Ecol 87, 130. https://doi.org/10.1007/s00248-024-02446-4
43. **Lucrări publicate în ultimii 10 anii în reviste şi volume de conferinţe cu referenţi**
44. Banciu H. L. (2018) The Saline Organic-Rich Sediments: A Short Overview, Aerul si Apa: Componente ale Mediului/ Air and Water: Components of the Environment, ISSN 2067-743X, pp 129-135.
45. Bulzu P.-A., Cristea, A., Buda, D.M., Banciu, H.L. (2019) Asgardarchaeota – A Novel Prokaryotic Group discovered in Aquatic Sediments that might shed Light on the Origin and Early Evolution of Eukaryotes. Aerul si Apa: Componente ale Mediului/ Air and Water: Components of the Environment, ISSN 2067-743X, pp 435-446. doi: 10.24193/AWC2019\_43.
46. Buda, D.M., Bulzu P.-A., Cristea, A., Banciu, H.L. (2019) The Saline Aquatic Systems as ‘Natural Reservoirs’ for Microorganisms with Current and Potential Applications. Aerul si Apa: Componente ale Mediului/ Air and Water: Components of the Environment, ISSN 2067-743X, pp. 427-434. doi: 10.24193/AWC2019\_42.
	1. **Brevete obţinute în întreaga activitate**

1. Titlul inventiei „Metodă expediționară de testare in-situ a contaminării cu E. coli și coliformi totali din ape destinate consumului uman”. Numar de inregistrare a brevetului la OSIM: A100050 din data de 07.02.2023. Inventatori desemnati: Stupar Zamfira, Levei Erika, Moldovan Oana Teodora, Skøglund Rannveig Øvrevik si Banciu Horia Leonard. Rezumat publicat ăbn Buletinul Oficial de Proprietate Industrială nr. 8/ 2024, p. 22.

**Data: 01.07.2025 Semnătura:**

E – Brevete (pentru întreaga activitate)