



Europass Curriculum Vitae



Personal information

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E-mail	Horia.Banciu@ubbcluj.ro horibanciu3@yahoo.com		
Nationality	Romanian		
Date of birth	8 August 1974		
Gender	Male		
Desired employment / Occupational field	Teaching and research		
Work experience			
Dates	2012 – Present		
Occupation or position held	Associate Professor		
Main activities and responsibilities	Teaching and research		
Name and address of employer	Babes-Bolyai University, 1 Kogalniceanu Street, Cluj-Napoca, Romania		
Type of business or sector	Academic teaching and research		
Dates	2004 – 2012		
Occupation or position held	Lecturer		
Main activities and responsibilities	Teaching and research		
Name and address of employer	Babes-Bolyai University, 1 Kogalniceanu Street, Cluj-Napoca, Romania		
Type of business or sector	Academic teaching and research		
Dates	1997 – 2004		
Occupation or position held	Tutor/Teaching assistant		
Main activities and responsibilities	Teaching and research		
Name and address of employer	Babes-Bolyai University, 1 Kogalniceanu Street, Cluj-Napoca, Romania		
Type of business or sector	Academic teaching and research		

Education and training					
Dates	2002-2004				
Title of qualification awarded	PhD.				
Principal subjects/occupational skills covered	Microbial physiology and biotechnology				
Name and type of organisation providing education and training	TU Delft, The Netherlands				
Level in national or international classification	Top 200 in Shanghai Ranking (2010)				
Dates	1999				
Title of qualification awarded	Research assistant				
Principal subjects/occupational skills covered	Molecular biology of extremophilic bacteria				
Name and type of organisation providing education and training	Mount Sinai School of Medicine New York City, U.S.A.				
Level in national or international classification	Top 200 in Shanghai Ranking (2010)				
Dates	1998				
Title of qualification awarded	MSc.				
Principal subjects/occupational skills covered	Cell and molecular biology				
Name and type of organisation providing education and training	Faculty of Biology and Geology, Babes-Bolyai University of Cluj-Napoca, Romania				
Level in national or international classification	No classification in Shanghai Ranking				
Dates	1997				
Title of qualification awarded	BSc.				
Principal subjects/occupational skills covered	Biology				
Name and type of organisation providing education and training	Faculty of Biology and Geology, Babes-Bolyai University of Cluj-Napoca, Romania				
Level in national or international classification	No classification in Shanghai Ranking				
Personal skills and competences					
Mother tongue(s)	Specify mother tongue Romanian				
Other language(s)					
Self-assessment	Understanding		Speaking		Writing
<i>European level (*)</i>	Listening	Reading	Spoken interaction	Spoken production	
English	GOOD	GOOD	GOOD	GOOD	GOOD
	(*) Common European Framework of Reference for Languages				
Social skills and competences	Team spirit and good communication skills				
Organisational skills and competences	Research grant member and manager, between 2006-2015				
Technical skills and competences	Related to laboratory work experience				

Computer skills and competences	Basic knowledge in Windows and Office
Other skills and competences	Professional skill: cell and molecular biology techniques (cloning, transformation, PCR), broad knowledge in biochemistry, biophysics, genetics, microbiology, biotechnology. I am used to techniques of membrane protein purification by gel chromatography, gradient centrifugation, gel electrophoresis, Western blotting, HPLC, characterization of proteins by spectrophotometry, spectrofluorometry, membrane vesicles preparation; practical knowledge of bacteriology and applied microbiology, bacterial cell cultivation and identification
Annexes	Annex 1: Financed research grants Annex 2: Publications Annex 3: Conferences

Financed research grants

No	Title	Period	Budget	Responsibilities
As Principal Investigator				
1.	Diversity of Archaea Inhabiting Saline Lakes from Transylvanian Basin (Central Romania) Code PN II-PCE-3-0546, Contract No. 186/2011.	2011-2015	1,500,000 RON/ 300,000 Euro	Project manager
2.	Modeling of heavy metal impact on aquifers by complex investigations using hyporheic fauna and GRID monitoring system. Project CDI II, Code 1247, Contract No. 31-032/14.09.2007	2007-2010	157,601 RON/ 45,000 Euros-	Partner Manager (Representing Babes-Bolyai University of Cluj-Napoca.)
3.	Energy conservation in double extremophilic bacteria: basic and applicative research. CEEEX Grant, Code 85, type ET, Contract No. 5913/18.09.2006	2006-2008	140,250 RON/ 40,000 Euros	Project manager
4.	Purification of avidin from chicken egg yolk for using in immunochemical assays. C.N.C.S.I.S. Grant, Code 88, type AT, Contract No. 2771/23.05.2006.	2006-2007	31,500 RON/ 10,000 Euros	Project manager
As Member				
1.	Methane fluxes at the lithosphere-atmosphere interface in hydrocarbon-prone areas. Implications for the greenhouse gases atmospheric budget. (FLUX). Project CDI II, Contract no. 31-094/14.09.2007.	2007-2010	1,416,000 RON/ 380,000 Euros	Supervised acquisitions of molecular biology consumables. Designed experiments and wrote progress reports for given activities.
2.	Molecular biology methods for the amelioration of crop cultures of economic interest. Project CDI II, Contract no. 51-085 /18.09.2007	2007-2010	410,000 RON/ 115,000 Euros	Performed experiments and wrote progress reports for given activities.
3.	Natural computing of excellence. Project CDI II, Code 543, Contract No. 130/1.10.2007	2007-2010	526,500 RON/ 150,000 Euros	Designed experiments and wrote progress reports for given activities.

Publications**Book chapters**

1. Sorokin, D.Y., **Banciu, H.**, Robertson, L.A., Kuenen, J.G. (2006) Haloalkaliphilic Sulfur-Oxidizing Bacteria, in *The Prokaryotes: A Handbook on the Biology of Bacteria – 3rd Edition* (Dworkin, M., Falkow, S., Rosenberg, E., Schleifer, K.-H., Stackebrandt, E., Eds.) Springer-Verlag, New York, pp. 969-984. ISBN 978-0387254999
2. Sorokin, D.Y., **Banciu, H.**, Robertson, L.A., Kuenen, J.G., Muntyan, M.S., Muyzer, G. (2013) Halophilic and Haloalkaliphilic Sulfur-Oxidizing Bacteria, in *The Prokaryotes (4th Edition): Prokaryotic Physiology and Biochemistry* (Rosenberg, E., DeLong, E.F., Lory, S., Stackebrandt, E., Thompson, F., Eds.), Springer-Verlag, Berlin, pp. 529-554. ISBN 978-3-642-30140-7.
3. **Banciu, H.L.**, Sorokin, D., Adaptation in Haloalkaliphiles and Natronophilic Bacteria, In: J. Seckbach, A. Oren and H. Stan-Lotter, Eds, „Polyextremophiles: Life Under Multiple Forms of Stress”, *Cellular Origin, Life in Extreme Habitats and Astrobiology* 27, 121–178, ISBN 978-94-007-6487-3, Springer Science+Business Media, Dordrecht, 2013.

Books

1. **Banciu, H.L.** Physiology of alkaliphilic sulfur-oxidizing bacteria from soda lakes”, Optima Grafische Communicatie BV, Rotterdam, The Netherlands, 2004, pp. 154. ISBN 90-77595-87-2.
2. Tarba, C., **Banciu H.L.** Biofizică. Ed. Risoprint, Cluj-Napoca, 2010, pp. 216. ISBN 978-973-53-0215-3, (In Romanian).

Articles published/accepted:

1. Sorokin, D.Y., **Banciu, H.**, van Loosdrecht, M.C.M., Kuenen, J.G. (2003) Growth physiology and competitive interaction of obligately chemolithoautotrophic, haloalkaliphilic, sulfur-oxidizing bacteria from soda lakes, *Extremophiles*, 7 (3): 195-203.
2. Hicks, D.B., Wang, Z., Wei, Y., Kent, R., Guffanti, A.A., **Banciu, H.**, Bechhofer, D.H. and Krulwich, T.A. (2003) A newly discovered tenth atp gene and the conserved atpI gene of a *Bacillus* atp operon have a role in Mg²⁺ uptake. *Proc. Natl Acad Sci USA* 100 (18): 10213-10218.
3. **Banciu, H.**, Sorokin, D.Y., Kleerebezem, R., Muyzer, G., Galinski, E.A., Kuenen, J.G. (2004) Growth kinetics of haloalkaliphilic sulfur-oxidizing bacterium *Thioalkalivibrio versutus* strain ALJ 15 in continuous culture, *Extremophiles* 8 (3): 185-192.
4. **Banciu, H.**, Sorokin, D.Y., Muyzer, G., Kleerebezem, R., Galinski, E.A., Kuenen, J.G. (2004) *Thioalkalivibrio halophilus* sp. nov, a novel obligately chemolithoautotrophic facultatively alkaliphilic and extremely salt-tolerant sulfur-oxidizing bacterium from a hypersaline alkaline lake. *Extremophiles* 8 (4): 325-334.
5. Takaichi, S., Maoka, T., Akimoto, N., Sorokin, D.Y., **Banciu, H.**, Kuenen, J.G. (2004) Two novel yellow pigments natronochrome and chloronatronochrome from the natrono(alkali)philic sulfur-oxidizing bacterium *Thioalkalivibrio versutus* ALJ 15. *Tetrahedron Lett* 45 (45): 8303-8305.
6. **Banciu, H.**, Sorokin, D.Y., Rijpstra, W.I., Sinnighe Damste, J.S., Galinski, E.A., Takaichi, S., Muyzer, G., Kuenen, J.G. (2005) Fatty acid, compatible solute and pigment composition of obligately chemolithoautotrophic alkaliphilic sulfur-oxidizing bacteria from soda lakes. *FEMS Microbiol Lett.* 243 (1):181-187.
7. **Banciu, H.L.**, Sorokin, D.Y., Tourova, T.P., Galinski, E.A., Muntyan, M.S., Kuenen, J.G., Muyzer, G. (2008) Influence of salts and pH on growth and activity of a novel facultatively alkaliphilic, extremely salt-tolerant, obligately chemolithoautotrophic sulfur-oxidizing Gammaproteobacterium *Thioalkalibacter halophilus* gen. nov., sp. nov. from South-Western Siberian soda lakes. *Extremophiles.* 12 (3), 391-404
8. Geelhoed J.S., Sorokin D.Y., Epping E., Tourova T.P., **Banciu H.L.**, Muyzer G., Stams A.J., van Loosdrecht M.C. (2009) Microbial sulfide oxidation in the oxic-anoxic transition zone of

- freshwater sediment: involvement of lithoautotrophic *Magnetospirillum* strain J10. FEMS Microbiol Ecol. 70 (1), 54-65.
9. Miclea A., Van der Star, W.R.L., Kleerebezem R., **Banciu H.** (2009) Anammox process and its applications in wastewater treatment. Studia Univ Babes-Bolyai, Biologia, 54 (2), 97-110
 10. **Banciu H.** (2009) Dancing in the soda with the haloalkaliphilic sulfur-oxidizing bacteria. RBCAR Newslett., 1 (2), 5-7.
 11. Rusu M., **Banciu H.L.**, Banciu M., Brad T., Moldovan. O.T. (2010) Oxidative stress enzymes as biomarkers of heavy metal pollution in interstitial invertebrates. Studia Univ Babes-Bolyai, Biologia, 55 (2), 61-66.
 12. Moldovan O.T; Levei E.; Marin C.; Banciu M.; **Banciu H.L.**; Pavelescu C.; Brad T.; Cimpean M.; Meleg I.; Iepure S.; Povara I. (2011) Spatial distribution patterns of the hyporheic invertebrate communities in a polluted river in Romania. Hydrobiologia, 669 (1), 63-82.
 13. Ionescu M.I., Costache A.Z., Oniga O., **Banciu H.L.**, Lupan I. (2013) Inhibition of *Streptococcus pneumoniae* adenylate kinase by some 5-arylidene-thiazolidin-4-on-2-thione derivatives. Rev. Romana Med. Lab., 21 (1), 93-99.
 14. **Banciu, H. L.** (2013) Diversity of endolithic prokaryotes living in stone monuments, Studia UBB Biologia, 58 (1), 99-109.
 15. Andrei, A.Ş., **Banciu, H.L.**, Oren, A. (2012) Living with salt: metabolic and phylogenetic diversity of archaea inhabiting saline ecosystems. FEMS Microbiol Lett. 330(1), 1-9.
 16. Baricz,A, Coman, C., Andrei, A.Ş., Muntean, V., Keresztes, Z.G., Păusan, M., Alexe, M., **Banciu, H.L.**, Spatial and temporal distribution of archaeal diversity in meromictic, hypersaline Ocnei Lake (Transylvanian Basin, Romania). Extremophiles 18(2):399-413.
 17. Cristea, A., Andrei, A.-Ş., Baricz, A., Muntean, V., **Banciu, H. L.** (2014) Rapid assessment of carbon substrate utilization in the epilimnion of meromictic Ursu lake (Sovata, Romania) by the BIOLOG ECO PLATETM approach. Studia UBB Biologia, 59 (1), 41-53
 18. 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, 1-12. DOI 10.1007/s00606-014-1190-x
 19. Baricz, A., Cristea, A., Muntean, V., Teodosiu, G., Andrei, A.-S., 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.
 20. 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.
 21. Andrei AŞ, Robeson MS, Baricz A, Coman C, Muntean V, Ionescu A, Etiope G, Alexe M, Sicora CI, Podar M, Banciu HL (2015). Contrasting taxonomic stratification of microbial communities in two hypersaline meromictic lakes. ISME J., DOI:10.1038/ismej.2015.60.

Conferences (2009-2015)

1. **Banciu, H.** Molecular Adaptations of Prokaryotes at Extreme Environments Revealed by Proteomic Techniques. Proteomics Roadshow – 2009 seminar organized by Bio-Rad & Institute of Biology and Cell Pathology „N. Simionescu”, 24 April 2009, Bucharest, Romania.
2. Miclea, A., **Banciu, H.**, Spulber, L., Baci, C. Molecular diversity of Prokaryotes in areas with strong methane emissions in the Transylvanian Basin (Romania). Volume of Abstracts, pp. 66-69. 10th International Congress of Gas Geochemistry (ICGG 10), 13-18 September, Cluj-Napoca, Romania.
3. Ionescu, M., Costache, A., Oniga, S., **Banciu, H.**, Lupan, I. Inhibition of Streptococcus pneumoniae and Escherichia coli adenylate kinase by 2-amino-4-methyl-5-carbohydrazol thiazol derivatives. Romanian J. Biochem., 46 (Suppl.), pp. 89. International Annual Conference of RSBMB, 30 September - 3 October, 2009, Cluj-Napoca, Romania.
4. Rusu, M., Banciu, M., Brad, T., **Banciu, H.L.**, Moldovan, O.T. Oxidative stress enzymes as biomarkers of heavy metal pollution in interstitial invertebrates. International Annual Conference of RSBMB, 21-23 September, 2010, Bucharest, Romania.
5. Baricz, A., Andrei, A.-S., Muntean, V., Coman, C., Keresztes, Z.G., Alexe, M., **Banciu, H.L.** Spatial distribution of microbial communities along salinity gradient in six saline and hypersaline lakes from Transylvania (Central Romania)”, Abstracts Book, p. 143. 9th International Congress EXTREMOPHILES 2012, 10-13 September, Seville, Spain.
6. Andrei, A.-Ş., Baricz, A., Muntean, V., Coman, C., Keresztes, Z.G., Alexe, M., **Banciu, H.** Diversity of archaeal community in the chemocline of a hypersaline lake in the Transylvanian Basin (Romania). Book of Abstracts, p.40 - 41. Annual Symposium of Institute of Biology (Romanian Academy): A New Approach of the Academic Research in Biology”, 12-13 December 2012, Bucharest, Romania.
7. Păușan, M.-R., Andrei, Ş.-A., Baricz, A., Coman, C., Muntean, V., Keresztes, Z. G., Alexe, M., **Banciu, H.** Seasonal diversity and vertical distribution of archaea inhabiting Brâncoveanu Lake (Sibiu County, Romania). 5th International Conference of RSCB, 5-9 June, 2013, Timișoara, Romania.
8. Baricz, A., Păușan, M.-R., Andrei, Ş.-A., Coman, C., Muntean, V., Keresztes, Z.G., Alexe, M., **Banciu, H.** Diversity of archaea in meromictic saline lake Ocnei (Turda, Romania). 5th International Conference of RSCB, 5-9 June, 2013, Timișoara, Romania.
9. Baricz, A., Cristea, A., Luca, A.-C., Istrate, D.A., Andrei, A.-Ş., Muntean, V., **Banciu, H.L.** Cultivable diversity of haloarchaea in four Transylvanian salt lakes. Bul. Rom. Soc. Cell. Biol., 42, 2014, p.27.
10. Coman, C., Chiriac, C., Ionescu, C., Robeson, M., Andrei, Ş., Dragoș, N., Sicora, C., **Banciu, H.**, Podar, M. Characterization of microbial diversity in modern hot spring laminated carbonate deposits from the Western Plain of Romania by barcoded pyrosequencing. Bul. Rom. Soc. Cell. Biol., 42, 2014, p. 32. 32nd Annual Conference with International Participation of RSCB, 4-7 June 2014, Târgu Mureș, Romania.
11. Cristea, A., Baricz, A., Andrei, A.-Ş., Muntean, V., **Banciu, H.L.** Biotechnological potential of haloarchaeal strains isolated from Transylvanian salt lakes”. Bul. Rom. Soc. Cell. Biol., 42, 2014, p. 25. 32nd Annual Conference with International Participation of RSCB, 4-7 June 2014, Târgu Mureș, Romania.
12. Păușan, M., Andrei, A.-Ş. , Baricz, A., **Banciu, H.L.** Epilithic bacterial communities dwelling on a public stone monument of Cluj-Napoca. Bul. Rom. Soc. Cell. Biol., 42, 2014, p. 26. 32nd Annual Conference with International Participation of RSCB, 4-7 June 2014, Târgu Mureș, Romania.
13. Andrei, A.-Ş., Robeson II, M.S., Podar, M., Baricz, A., Coman, C., Sicora, C.I., Muntean, V., **Banciu, H.L.** Taxonomic profiling of prokaryotic communities from an extreme hypersaline meromictic lake using a next-generation sequencing approach. Romanian J. Biochem., 51 (Suppl.), 2014, p. 16-17. International Conference of RSBMB, 5-6 June 2014, Băile Felix (Oradea), Romania.

14. Cristea, A., Baricz, A., Andrei, A.-Ș., Muntean, V., **Banciu, H.L.** Isolation and phenotypic characterization of Haloferax sp. strains isolated from Transylvanian salt lakes. International Symposium "Young Researchers in BioSciences". 23-27 July, 2014, Cluj-Napoca, Romania.
15. Leș, A., Banciu, H.L. Mircescu, N., Leopold, N. Discrimination between different species of halophilic archaea using Raman spectroscopy and principal component analysis. 5th Conference on Advanced Spectroscopies on Biomedical and Nanostructured Systems (BioNanoSpec), 7-10 September, 2014, Cluj-Napoca, Romania.
16. Păușan M., Andrei A.-Ș., **Banciu H.** Diversity of epilithic bacterial communities inhabiting cultural heritage. Saint Donatus statute – A case study. Bio.T.A Symposium, 28 March, 2015, Babes-Bolyai University, Cluj-Napoca, Romania.
17. Leș, A., Dina, N.E., Baricz, A., **Banciu, H.L.**, Leopold, N. Discrimination of haloarchaeal genera using Raman spectroscopy and PCA. Abstract sent at 8th International Conference on Advanced Vibrational Spectroscopy (ICAVS 8), 12-17 July, 2015, Vienna, Austria.
18. Andrei, A.-Ș., Baricz, A., Chiriac, C., Szekeres, E., Coman, C., **Banciu, H.L.** Composition and diversity of microbial communities in hypersaline sapropels. Abstract sent at Second EMBO Conference on Aquatic Microbial Ecology (SAME-14), 23-28 August, 2015, Uppsala, Sweden.

Date: 06.04.2015

Signature

