

2016

International Conferences

7th International Workshop on Ice Caves (IWIC VII), Postojna, Slovenia, 16-22 mai 2016

- Itcus C, Pascu MD, Hillebrand-Voiculescu A, Persoiu A, Brad T, Purcarea C
Cultured bacterial diversity in Scarisoara ice cave. poster
- Itcus C, Pascu MD, Hillebrand-Voiculescu A, Brad T, Persoiu A, Onac BP, Purcarea C.
Distribution of bacteria and archaea in the ice block of Scarisoara cave (Romania). Poster
Stable isotopes in cave ice: tracking changes in moisture source in Eastern Europe

National Conferences

A 56-a Sesiune Anuală de Comunicări Științifice a Institutului de Biologie București, 9 decembrie 2016, Academia Română, București

- Itcus C, Pascu MD, Hillebrand-Voiculescu A, Persoiu A, Brad T, Ardelean I, Purcarea C
Comunități microbiene din peștera Ghețarul Scărișoara, prezentare orală

CAVICE Management Workshops

- **Prima reuniune de lucru CAVICE** - El Chalten, Argentina, 25 Febrarie, 2016

Participanți: Argentina (Prof. Maria Farias), Chile (Dr. Paris Lavin), Romania (IBB: Dr. Cristina Purcarea, Dr. Aurel Persoiu, Drd. Corina Itcus; ISER: Dr. Alexandra Hillebrand-Voiculescu

Tematica: Discutarea strategiei științifice a echipelor participante la proiectul CAVICE și organizarea expediției de colectare a probelor de gheață din peștera Ghețarul Viedma, Argentina

- **Reuniune de lucru CAVICE** - Postojna, Slovenia - 20 Mai, 2016

Participanți: membrii echipelor norvegiene (Prof. Lise Ovreas and Prof. Stein-Erik Laurizen) și din romane (IBB: Dr. Cristina Purcarea, Dr. Aurel Perșiu, Drd. Corina Ițcuș)

Tematica: Organizarea expediției de colectare a probelor de gheață din Svarthamar Ice Cave, Norvegia

2017

CAVICE Management Workshops

- **Raportarea europeană** a Proiectului EraNet-LAC First Call. Lisabona, Portugalia. 9-10 octombrie 2017 Cave ice microbiom: metabolic diversity and activity in response to climate dynamics and anthropogenic pollution (CAVICE). *C. Purcarea* Presentare plenară.
- **Workshop “CAVICE - Microbiomes from glacial habitats”**, Institutul de Biologie, București, 11-13 Octombrie, 2017
 - (1) Microbiomes from glaciers and ice caves. *Purcarea C.* Presentare orală
 - (2) Scărișoara ice cave microbiome. *Paun V.I.* Presentare orală
 - (3) Bacterial and fungal diversity in Scărișoara ice block. *Iteus C.* Presentare orală
 - (4) Radiocarbon dating and stable isotope analyses of Scărișoara ice core. *Persoiu A.* Presentare orală

Research exchanges between CAVICE partners

- **15.01.2017 - 4.02.2017** – vizită pe o perioadă de 3 săptămâni a studentei masterand Ioana V. Păun (RO-IBB) la **Universitatea din Bergen** (NO-UoB) pentru extractia ADN si amplificarea PCR a genei 16S rRNA din probele de gheata extrase din pestera Svarthamar
- **20.06.2017 – 23.08.2017** – vizită de lucru a Dr. Paris Lavin (partner – Universitatea din Antofagasta, Chile) la **Institutul de Biologie Bucuresti** (RO-IBB) pe o perioadă de 2 luni pentru efectuarea unor studii în colaborare de testare a activitatii de biosinteza de nanoparticule de Au a tulpinilor izolate din ghetarul Grey (Chie)

Publications

BOOK: Ice caves, 1st Edition, 2017. Ed. *Aurel Persoiu, Stein-Erik Lauritzen*, Elsevier, ISBN 9780128117392, 752 p

BOOK CHAPTERS:

1. *Persoiu A.* 2017. Ice caves climate. In *Persoiu, Lauritzen*, (eds) Ice caves. Elsevier
2. *Persoiu A.* 2017 Ice dynamics. In *Persoiu, Lauritzen*, (eds) Ice caves. Elsevier
3. *Persoiu A.* 2017 Paleoclimatic significance of perennial ice accumulations in caves. In *Persoiu, Lauritzen*, (eds) Ice caves. Elsevier
4. *Purcarea C.* 2017 Microbial life in ice caves. In *Persoiu, Lauritzen*, (eds) Ice caves. Elsevier
5. *Brad T, Badaluta, C., Persoiu A.* 2017 Ice Caves in Romania. In *Persoiu, Lauritzen*, (eds) Ice caves. Elsevier

ARTICLES

1. *Kern Z, Kele S, Persoiu A, F6rizs I, Bernasconi S.* Clumped isotope analysis of fine-grained cryogenic cave carbonates (Scarisoara Ice Cave, Romania). *Acta Carsologica. accepted.*

INTERNATIONAL CONFERENCES

Oral presentation

- **25th International Karstological Conference "Classical Karst"**, Postojna, Slovenia, 19-23 June 2017. Isotopes, pollen and microbes: the environment of the past 10,000 yrs in the Carpathians – a cave ice perspective. *Persoiu A.*
- **XXIIth SCAR Biology Symposium**, Leuven, Belgium, July 10-14, 2017. Environment dependent distribution of glacier and subglacial microbial communities from King George Island (NW Antarctica). *Itcus C, Hong, SG, Marin C, Coman C, Tusa I, Sidoroff ME, Purcarea C.*

Poster

- **European Geosciences Union General Assembly 2017**, Vienna, Austria, 23-28 April 2017. Oxygen and carbon stable isotopes in cryogenic cave calcite (CCC) – possible proxy for past climate changes. *Bădăluță C, Ersek V, Piotrowska N, Perșoiu A.*
- **XIVth Workshop of the European Society for Isotope Research**, Băile Govora, Romania, 25-29 June 2017. Climatic signals recorded in Romanian Carpathians ice caves. *Bădăluță A, Perșoiu A, Piotrowska N,*
- **7th International Conference on Polar & Alpine Microbiology**, Nuuk, Greenland, 8-12 September 2017.
 - (1) Reconstruction of Scarisoara ice cave microbiome based on 16S rRNA gene sequencing and shotgun metagenomics. *Itcus C, Pascu MD, Paun VI, Lavin P, Persoiu A, Hillebrand-Voiculescu A, Brad T, Purcarea C.*
 - (2) Microbial diversity of glacier ice and subglacial streams from King George Island. *Itcus C, Marin C, Hong, SG, Lavin P, Coman C, Tusa I, Sidoroff ME, Purcarea C.*

INTERVIEWS

- Interviu televizat și online PRO-TV (26.02.2017) asupra participării echipelor la proiectul CAVICE.

2018

CAVICE Management Workshop

- Reuniune finala de lucru a coordonatorilor partenerilor CAVICE - IBB (Romania), UoB (Norvegia), UA (Chile), CONICET (Argentina) pentru analiza rezultatelor si aplicatii viitoare pentru proiecte in colaborare – 13.11.2018-16.11.2018, Santiago, Chile

Research exchanges between CAVICE partners

- **20.06.2018 – 23.08.2018** – vizită de lucru a Dr. Paris Lavin (partner – Universitatea din Antofagasta, Chile) la **Institutul de Biologie Bucuresti (RO-IBB)** pe o perioadă de 2 luni pentru efectuarea unor studii în colaborare de microscopie SEM si a activitatii antimicrobiene si rezistenta la antibiotic ale tulpinilor isolate din ghetarul Grey (Chie) cu activitate de biosinteza de nanoparticule de aur.

Publications

BOOK CHAPTER:

Perşoiu A, Onac BP, 2018, Ice caves in Romania. In Ponta, G., Onac, B.P. (eds.) Caves and karst systems of Romania. Springer. https://doi.org/10.1007/978-3-319-90747-5_52

ARTICLES

1. *Iţcuş C, Pascu MD, Lavin P, Perşoiu A, Iancu L, Purcărea C* (2018) Bacterial and archaeal community structures in perennial cave ice. Scientific Reports, DOI: 10.1038/s41598-018-34106-2. IF 4.122
2. *Brad T, Iţcuş C, Pascu MD, Perşoiu A, Hillebrand-Voiculescu A, Iancu L, Purcărea C* (2018) Fungi in perennial ice from Scărişoara Ice Cave (Romania). Scientific Reports, 8(1): 10096. DOI: 10.1038/s41598-018-28401-1. IF 4.122
3. *Iancu L, Junkins EN, Necula-Petrăreanu G, Purcărea C* (2018) Characterizing forensically important insect and microbial community colonization patterns in buried remains. Scientific Reports, doi: 10.1038/s41598-018-33794-0. IF 4.122
4. *Iancu L, Dean DE, Purcărea C* (2018) Temperature Influence on Prevailing Necrophagous Diptera and Bacterial Taxa With Forensic Implications for Postmortem Interval Estimation: A Review. Journal of Medical Entomology, doi: 10.1093/jme/tjy136. IF 1.968

5. *Iancu L, Junkins EN, Purcărea C* (2018) Characterization and microbial analysis of first recorded observation of *Conicera similis* Haliday (Diptera: Phoridae) in forensic decomposition study in Romania. *Journal of Forensic and Legal Medicine*, 58:50-55. doi: 10.1016/j.jflm.2018.04.01. IF 1.103
6. *Kern, Z., Kele, S., Perşoiu, A., Fórizs, I., Bernasconi, S* (2018) Clumped isotope analysis of fine-grained cryogenic cave carbonates (Scarisoara Ice Cave, Romania). *Acta Carsologica*. *in press*. IF 0.959
7. *Bădăluță CA, Ioniță M, Dima D, Perşoiu A, Rădoane M, Bădăluță G*. Hydrometeorological extremes and social vulnerability in the eastern part of Europe over the last 500 years. *Nature communications*. *in review*. IF 12.353
8. *Perşoiu A, Ioniță M, Weiss H*. Blocking induced by the strengthened Siberian High led to drying in the Middle East during the 4.2 ka event – a hypothesis. *Climate of the Past*. *in review*. IF 3.174
9. *Păun VI, Icaza G, Lavin PS, Marin C, Tudorache A, Perşoiu A, Dorador C, Purcărea C*. Active bacteria from a Late Glacial through Holocene ice core from Scarisoara Ice Cave, Romania. *Front. Microbiol. - Extreme Microbiology*. *in review*. IF 4.019
10. *Mondini A., Donhauser J., Iţcuş C., Marin C., Perşoiu A., Frey B., Purcărea C*. High-throughput sequencing of fungal communities across the perennial ice block of Scarisoara Ice Cave. *Annals of Glaciology*. *in review*. IF 2.761
11. *Bădăluță CA, Perşoiu A, Ionita M, Piotrowska M*. Summer signal variability over the last millennium using an ice cave in East – Central Europe. *Climate of the Past*. *in prep*. IF 3.174
12. *Sekul PA, Lavin P, Munoz P, Severino E, Hengst M, Purcarea C, Dorador C*. Exploring a cold landscape: Microbial diversity associated to Patagonian Grey Glacier, Chile. *Frontiers in Microbiology*. *in prep*. IF 4.019
13. *Lavin P, Sekul PA, Munoz P, Severino E, Paun VI, Chifiriuc C, Purcarea C, Dorador C*. Inhibition of multi-drug resistant bacteria and gold nanoparticle synthesis for biotechnological applications by bacterial strains isolated from Grey Glacier (Patagonia - Chile). *Extremophiles*. *in prep*. IF 2.00

INTERNATIONAL CONFERENCES

- **International Symposium on Cryosphere and Biosphere 2018**, Kyoto, Japonia, 14-19 martie 2018
 - Purcarea C, Iţcuş C, Paun VI, Marin C, Perşoiu A, Hillebrand-Voiculescu A, Brad T, Badaluta C, Lavin P. - „Cave ice microbiome”. **Prezentare orală**
- **European Geosciences Union General Assembly 2018**, Vienna, Austria, 8-13 aprilie, 2018
 - Bădăluță, C.A., Ioniță, M., Perşoiu, A., Bădăluță, G. – “*Historical climatology in Eastern Europe during the Little Ice Age*”. **Prezentare orală**

- **International Workshop on Ice Caves IWIC-8**, Potes, Spania, 09-18 iunie 2018
 - Purcărea C, Ițcus C, Păun VI, Marin C, Perșoiu A, Brad T, Bădăluță C, Icaza G, Dorador C, Lavin P, Donhauser J, Frey B. – “*Searching for microbial biomarkers for past climate changes in Scărisoara Ice Cave*”. **Prezentare orală**
 - Perșoiu, A. - „*Climate proxies in ice caves – a review*”. Prezentare orală
 - Bădăluță, A., Perșoiu, A., Ioniță, M., Piotrowska, N. - „*Summer climate changes during the last 1000 years as seen in cave ice*”. **Prezentare orală**
 - Kern, Z., Perșoiu, A. - „*Ice core drilling in cave environment. Challenges and achievements over the past 70 years*”. **Prezentare orală**

- **POLAR 2018 “Where the Poles come together” SCAR/IASC Open Science Conference**, Davos, Elvetia, 19-23 iunie 2018
 - Purcarea C, Itcus C, Marin C, Hong SG, Paun VI, Persoiu A, Brad T, Lavin P, Hillebrand-Voiculescu A, Pascu D, Coman C, Tusa I, Sidoroff ME. – “*Ice microbiome: from Antarctic glaciers to Alpine ice caves*”. **Prezentare orală**
 - Itcus C, Marin C, Hong SG, Lavin P, Coman C, Tusa I, Sidoroff ME, Purcarea C. - “*Bacterial community structure in glacier ice and subglacial streams from King George Island, Antarctica*”. **Poster**
 - Paun VI, Itcus C, Marin C, Persoiu A, Lavin P, Hillebrand-Voiculescu A, Mondini A, Badaluta C, Dorador C, Purcarea C. – “*Chronosequence of active bacterial community from an alpine ice cave*”. **Poster**

- **Fluvial Archives Group Biannual Meeting**, Liège, Belgium, 2-7 septembrie, 2018
 - Perșoiu, A., Perșoiu, I., - “*Flood events in Transylvania during the Medieval Warm Period and the Little Ice Age*”. **Poster**

- **3rd SISAL workshop**, Agadir, Morocco, 8-12 octombrie, 2018
 - Scroxtton, N., Kern, Z., Sekhon, N., Sifeddine, A., Bernal, J.P., Perșoiu, A., - “*Medieval Climate Anomaly and the Little Ice Age as reflected by speleothems*”. **Prezentare orală**

- **XXIV Latinoamerican Congress of Microbiology**, Santiago de Chile, Chile, 13-16 noiembrie 2018
 - Paun VI, Itcus C, Marin C, Persoiu A, Lavin P, Brad T, Icaza G, Dorador C, Mondini A, Donhauser J, Frey B, Purcarea C. - “*Microbiome from Late Glacial perennial ice of Scărisoara ice cave*”. **Prezentare orală**
 - Lavin P, Aran SP, Icaza G, Munoz P, Severino E, Garcia J, Molina V, Itcus C, Paun I, Chifiriuc C, Purcarea C, Dorador C. - “*Microbial diversity of Grey Glaciär system (Patagonia, Chile): high biotechnological potential regarding antimicrobial and nanoparticles synthesis*”. **Poster**

- **The 10th International Zoological Congress of "Grigore Antipa" Museum**, Academia Română, București, 21-24 Noiembrie 2018
 - Lavinia Iancu, Emily Junkins, Cristina Purcărea – *"New record of Conicera similis haliday (Diptera: Phoridae) in Romania and microbiome characterization"*. **Poster**

NATIONAL CONFERENCES

- **Biospeleology and Theoretical And Applied Karstology Symposium**, Băile Herculane, România, 27-30 Septembrie 2018
 - Păun VI, Icaza G, Lavin P, Perșoiu A, Iancu L, Marin C, Bădăluță C, Mondini A, Hillebrand-Voiculescu A, Haidău C, Dorador C, Purcărea C. – *"Bacterial diversity in 13,000 years old ice from Scărișoara Ice Cave"*. **Prezentare orală**
 - Marin C, Păun VI, Tudorache A, Icaza G, Lavin P, Perșoiu A, Iancu L, Dorador C, Purcărea C. – *"Geochemistry of the Scărișoara ice block chronosequence"*. **Prezentare orală**
- **A 58-a Sesiune Anuală de Comunicări Științifice a Institutului de Biologie București**, 12 decembrie 2018, Institutul de Biologie, București
 - Paun VI., Icaza G., Lavin P., Marin C., Iteus C., Mondini A., Hillebrand-Voiculescu A., Haidau C., Badaluta C., Persoiu A., Iancu L., Dorador C., Purcarearea C. – *"Ice microbiome and active bacterial communities from Scarisoara Cave"* . **Poster**
 - Lavinia Iancu, Emily Junkins, Georgiana Necula-Petrăreanu, Ioana Păun, Antonio Mondini, Cristina Purcărea. – *"Qualitative and quantitative analysis of buried rat and associated-insects microbiome"* . **Poster**

PROJECT OUTREACH

<https://youtu.be/1ZlihofclTg>

GRANT APPLICATION IN COLLABORATION WITH CAVICE PARTNERS

Aplicatie Proiect Colaborativ de Cercetare EEA *"Ice cave microbiome: searching for novel antimicrobial and anticancer bioactive compounds for overcoming drug resistance (ICEMAN)"*. EEA-RO-NO-2018-0172 - coordonator Dr. Cristina Purcarearea (IBB), partener Prof. Lise Ovreas (UoB), Prof. Carmen Chifiriuc (Universitatea Bucuresti), Dr. Alina Vasilescu (Centrul International de Biodinamica Bucuresti)