

# REZULTATE

## 2020 - 2022

### Produse (3)

1. Plasmid pPSL2 continand gena lip2 din bacteria psihrofila *Psychrobacter* sp. SC65A.3 in vectorul de expresie pHAT2
2. Enzima PSL2 recombinanta purificata
3. Biocatalizator lipazic obtinut prin incapsularea lipazei PSL2

### Metode (2)

1. Metoda de derivatizare enzimatica a silybinului pe baza lipazei extremofile din tulpina bacteriana psihrofila *Psychrobacter* SC65A.3
2. Metodă de obținere a lipazei bacteriene PSL2 psihrofile

### Articole (5)

1. Paun VI, Lavin P, Chifiriuc MC, Purcarea C (2021) First report on antibiotic resistance and antimicrobial activity of bacterial isolates from 13,000-year old cave ice core. *Scientific Reports* 11, 514. <https://doi.org/10.1038/s41598-020-79754-5> (Q1)
2. Gheorghita GI, Paun VI, Neagu S, Maria GM, Enache M, Purcarea C, Parvulescu VI, Tudorache M (2021) Cold-active lipase-based biocatalysts for silymarin valorization through biocatalytic acylation of silybin. *Catalysts*, 11(11):1390. <https://doi.org/10.3390/catal11111390> (Q2)
3. Paun VI, Banciu RM, Lavin P, Vasilescu A, Fanjul-Bolado P, Purcarea C (2022) Antarctic aldehyde dehydrogenase from *Flavobacterium* PL002 as a potent catalyst for acetaldehyde determination in wine. *Scientific Reports*, DOI: 10.1038/s41598-022-22289-8 (Q2)
4. Paun VI, Ion S, Gheorghita GI, Ftodiev A, Sandulescu-Tudorache M, Purcarea C. Cold-active lipase from the ice cave *Psychrobacter* SC65A.3 strain, a new catalyst for silymarin valorization. *Molecules*, in evaluare (Q2)
5. Ion S, Ftodiev A, Gheorghita G, Paun VI, Purcarea C, Tudorache M. New biocatalytic method for silybin derivatization using a cold-active lipase from *Psychrobacter* SC65A3. in curs de redactare (Q1/Q2)

### Aplicatie patent (1)

Metodă de obținere a lipazei bacteriene PSL-2 din tulpina bacteriană *Psychrobacter* SC65A3 izolată din gheața de peșteră din Ghețarul Scărișoara. Autori: Purcarea Cristina, Păun Victoria Ioana, Ojovan Bianca-Oana, Sandulescu-Tudorache Mădălina, Ion Sabina. [Numar inregistrare OSIM: A/00652/19.10.2022](#)

## Conferinte (11)

**2021**

**Contemporary Solutions for Advances Catalytic Materials with a High Impact on Society (CoSolMat2021)**, 11-15 octombrie 2021, Bucuresti (online)

Giulia Gheorghita, Cristina Purcarea, Madalina V. Sandulescu-Tudorache. Biocatalysis based on cold-active lipase for silymarin valorization from vegetal waste of cold-pressed milk thistle oil technology. *Prezentare orală*

**15<sup>th</sup> International Symposium on Biocatalysis and Biotransformations (BIOTRANS 2021)**, 19-22 iulie 2021, Graz, Austria (online)

Giulia Gheorghita, Cristina Purcarea, Madalina V. Sandulescu-Tudorache. Biocatalysis based on cold-active lipase for silymarin derivatization. *Poster*

**International Symposium on Biomaterials for Fuels and Chemicals (SBFC)**, 26-28 aprilie, 2021 (online)

Giulia Gheorghita, Cristina Purcarea, Madalina V. Sandulescu-Tudorache. Biocatalysis based on cold-active lipase for silymarin valorization from vegetal waste of cold-pressed milk thistle oil technology. *Prezentare orală*

**28<sup>th</sup> International Karstological School Classical Karst “Regional Karstology – Local and General Aspects within International Year of Karst and Caves”**, 14-18 iunie 2021, Slovenia (online)

Ojovan B, Gheorghita GR, Paun VI, Purcarea C. Cold active lipases from Scarisoara Ice Cave and their applicative potential. *Poster*

**Ziua Internațională a Microorganismelor (ZIM2021)** Bucuresti, 17 septembrie 2021

Paun VI, Cheorghita GR, Iancu L, Ojovan B, Sandulescu-Tudorache MV, Chifiriuc MC, Purcarea C. Genome sequence and applicative potential of the psychrotrophic *Psychrobacter* SC65A3 strain isolated from Scarisoara Ice Cave. *Prezentare orală*

**A 61-a Sesiune Anuala de Comunicari Stiintifice a Institutului de Biologie**, Bucuresti, 10 decembrie 2021

Paun VI, Cheorghita GR, Sandulescu-Tudorache MV, Purcarea C. Bacterii din gheata perena din peștera Scarisoara: sursa de biocatalizatori activi la temperaturi scăzute. *Prezentare orală*

**2022**

**13<sup>th</sup> International Symposium of the Romanian Catalysis Society. RomCat 2022**, Baile Govora, Romania, 22-24 iunie 2022

Giulia Gheorghita, Sabina Ion, Andreea Ftodiev, Victoria I. Paun, Cristina Purcarea, Madalina Tudorache. Biocatalytic system for silymarin derivatization based on cold-active lipase biocatalyst. *Poster*

**10<sup>th</sup> SCAR Open Science Conference.** Online 1-10 august 2022.

Victoria I. Paun, Antonio Mondini, Zohaib Anwar, Paris Lavin, Lea Ellegaard-Jensen, Carsten Suhr Jacobsen, Cristina Purcarea. Ice microbiome response to thermal stress. *Prezentare orală*

**9<sup>th</sup> IUPAC International Conference on Green Chemistry.** Atena, Grecia 5-9 septembrie 2022,

Giulia Gheorghita, Sabina Ion, Andreea Ftodiev, Victoria I. Paun, Cristina Purcarea, Madalina Tudorache. Silymarin derivatization using biocatalytic system based on cold-active lipase biocatalyst. *Prezentare orală*

**13<sup>th</sup> International Congress on Extremophiles,** Loutraki, Grecia, 18-22 septembrie 2022.

Sabina Ion, Victoria I. Paun, Giulia R. Gheorghita, Andreea Ftodiev, Simona Neagu, Madalina Tudorache, Cristina Purcarea. Psychrophilic bacterial lipase for improved biocatalytic acylation process in oil industry. *Poster*

**Conferinta de Microbiologie "G. Zarnea".** Bucuresti, 29 septembrie 2022.

Victoria I. Paun, Roberta Banciu, Alina Vasilescu, Sabina Ion, Madalina Sandulesc, Cristina Purcarea. Enzime din bacterii psihrofile cu potential aplicativ. *Prezentare orală*