

INFORMAȚII PERSONALE

Laura Darie-Ion


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EXPERIENȚA
PROFESIONALĂ

10/2025 – prezent **Asistent universitar**

Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași

10/2024 – 09/2025 **Asistent universitar asociat**

Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași

Cercetător postdoctoral

11/2020 – 10/2022 PN-III-P2-2.1-PED2019-2484, <https://teclu.chem.uaic.ro/bio-pascal/>

Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași

09/2020 – 08/2022 **Director de proiect**

PN-III-P1-1.1-PD-2019-0442, <http://teclu.chem.uaic.ro/zeincodrug/>

Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași

09/2016 – 6/2020 **Asistent universitar asociat**

Universitatea de Științele Vieții “Ion Ionescu de la Brad” din Iași

11/2017 – 08/2018 **Asistent cercetare**

PN-III-P4-ID-PCE-2016-0376, <http://meticonph.icmpp.ro/index.php>

Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași

08/2017 – 11/2018 **Cercetător științific**

PN-III-P2-2.1-PED-2016-0869, <https://procorn.icmpp.ro/index.php>

Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași

11/2015 – 09/2017 **Asistent cercetare**

PN-II-RU-TE-2014-4-0920,
<http://teclu.chem.uaic.ro/brindusapetre/project-te/project-pn-ii-ru-te-2014-4-0920/>

Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași

11/2015 – 09/2017 **Asistent cercetare**

PN-II-RU-TE- 2014-4-0437, <https://icmpp.ro/dms/index.html>

Institutul de Chimie Macromoleculara “Petru Poni”, Iași

- 02/2015 – 06/2016 **Asistent cercetare**
PN-II-PT-PCCA-2013-4-1149, <https://icmpp.ro/meta/metafore/index.php>
Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași
- 03/2015 - 05/2015 **Stagiu de cercetare**
Steinbeis Center of Biopolymer Analysis and Biomedical Mass Spectrometry,
Rüsselsheim, Germania
- 08/2012 – 10/2014 **Asistent cercetare**
PN-II-RU-TE-2011-3-0038, <http://teclu.chem.uaic.ro/brindusapetre/project-te/project-pn-ii-ru-te-2011-3-0038/>
Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași
- 01/2012 – 05/2012 **Stagiu de cercetare**
Laboratory of Analytical Chemistry and Biopolymer Structure Analysis,
Departmentul de Chimie, Universitatea Konstanz, Germania.

EDUCAȚIE ȘI FORMARE

- 04/2019 – 03/2021 **Studii postdoctorale**
Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași
Titlul tezei: „*Peptide Beta-Amiloidice și Peptide Anti-Amiloidice Implicate în Boala Alzheimer: Interacțiuni Multiple în Prezența Ionilor Metalici*”
Atestat de studii postdoctorale nr. 9/17.09.2021
- 09/ 2012 – 11/2015 **Studii doctorale**
Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași
Titlul tezei: „*Compuși cu legături peptidice și aplicațiile lor biomedicale*”
Nr. 3209 / 23.02.2016 (Diploma de Doctor Seria J Nr. 0014548)
- 10/ 2010 – 07/ 2012 **Studii de master**
Secția “*Chimia Produselor Cosmetice și Farmaceutice*”
Facultatea de Chimie, Universitatea Al. I. Cuza” din Iași
Titlul tezei: “*Sinteza chimică a unor noi substraturi pentru MPS I*”
Diplomă de Master, Seria A, nr. 0211870
- Modul psihopedagogic Nivel II**
Certificat de absolvire a programului de formare psihopedagogică, Nivelul II, Seria C, Nr. 0083809
Facultatea de Psihologie și Științe ale Educației, Universitatea “Al. I. Cuza” din Iași
- 10/ 2007 – 07/ 2010 **Studii de licență**
Secția *Biochimie Tehnologică*
Facultatea de Chimie, Universitatea “Al. I. Cuza” din Iași
Titlul tezei: “*Reactivitatea grupării carbonil în chimia organică*”.
Diplomă de Licență, Seria C Nr. 0141930

Modul psihopedagogic Nivel I

Certificat de absolvire a programului de formare psihopedagogică, Nivelul I, Seria C, Nr. 0037446

Facultatea de Psihologie și Științe ale Educației, Universitatea "Al. I. Cuza" din Iași

COMPETENȚE PERSONALE

Limba(i) maternă(e) Româna

Alte limbi străine cunoscute

Limba engleză

Limba franceză

ÎNȚELEGERE		VORBIRE		SCRIERE
Ascultare	Citire	Participare la conversație	Discurs oral	
B2	B2	B2	B2	B2
A2	A2	A1	A1	A1

Competențe organizaționale / manageriale

- Co-organizator - International Summer School "PROTEOMICS – from Introduction to Clinical Applications", Universitatea "Al. I. Cuza" din Iași (2017, 2018, 2019)
- Participarea ca voluntar în organizarea Concursului de Chimie "Magda Petrovanu" edițiile 3, 4 și 11.

Competențe dobândite la locul de muncă

- Sinteză de peptide în fază solidă
- Spectrometrie de masă (ESI și MALDI-ToF)
- Cromatografie de lichide de înaltă performanță (HPLC)
- Electroforeză 1D and 2D
- Test de imunoabsorbție legat cu enzimă (ELISA)
- Metode de digestie a proteinelor

BURSE OBȚINUTE

1. **04/2019 – 10/2020 - Bursă postdoctorală**, POCU/380/6/13/123623 - "Doctoranzi și cercetători postdoctorat pregătiți pentru piața muncii", Facultatea de Chimie, Universitatea Al. I. Cuza din Iași.
2. **06/2014 – 09/2015 - Bursă POSDRU**, POSDRU/159/1.5/S/137750 - „Programe doctorale și postdoctorale - suport pentru creșterea competitivității cercetării în domeniul științelor exacte”, Facultatea de Chimie, Universitatea Al. I. Cuza din Iași.
3. **03/2013 – 05/2013 - Bursă Erasmus**, Laboratory of Analytical Chemistry and Biopolymer Structure Analysis, Universitatea Konstanz, Germania - Prof. Dr. h.c. dr. Michael Przybylski.
4. **10/2011 – 12/2011 - Bursă DAAD**, Laboratory of Analytical Chemistry and Biopolymer Structure Analysis, Universitatea Konstanz, Germania - Prof. Dr. h.c. dr. Michael Przybylski.

CURSURI & WORKSHOP-URI

- | | |
|------|---|
| 2022 | Participare workshop <i>"The application of LC-MS/MS in Biopharma, Pharma, Life Science"</i> , Antisel and SCIEX |
| 2022 | Participare seminar <i>"Materiale de referință și teste de competență"</i> , Merck România |
| 2021 | Participare webinar <i>"Latest Developments in Peptide Synthesis - Screening, lead discovery, - through to cGMP"</i> , CEM Corporation; |
| 2018 | Participare Workshop <i>"Tehnici alternative de analiza a particulelor și a proteinelor de la Malvern Panalytical"</i> , Malvern Panalytical; |
| 2018 | Participare Workshop <i>"Cromatografia de schimb ionic – extravaganta sau necesitate in laboratorul dumneavoastra?"</i> , Thermo Fisher Scientific; |
| 2018 | Participare seminar <i>"Merck Chromatography Seminar"</i> , Merck Life Science; |
| 2014 | Participare seminar <i>"Life science research with Merck Millipore"</i> , Merck Millipore; |
| 2013 | Participare curs <i>"Application of mass spectrometry in research"</i> , Institutul de Chimie Macromoleculară "Petru Poni" Iași, AB Sciex |
| 2013 | Participare școală de vară <i>"7th Summer Course for Mass Spectrometry in Biotechnology and Medicine"</i> , Dubrovnik, Croația |
| 2012 | Participare curs <i>"Drug Discovery & Development in the Pharmaceutical Industry"</i> , Universitatea Konstanz, Germania; |
| 2012 | Participare curs <i>"The Power of Cutting Edge Mouse Genetics"</i> , Universitatea Konstanz, Germania; |
| 2012 | Participare workshop <i>"Statistică"</i> , Conf. Univ. Dr. Dănuț Cozma, Universitatea "Al. I. Cuza" din Iași; |
| 2011 | Participare curs <i>"Chemical biology of polypeptides"</i> Universitatea Konstanz, Germania, Prof. Dr Dr h.c. Michael Przybylski. |

PROIECTE DE CERCETARE

Manager de proiect

- **3 proiecte naționale:** PN-III-P1-1.1-PD-2019-0442, PN-III-P1-1.1-MC-2017-0822, PN-III-P1-1.1-MC-2017-0560

Membru în echipa de cercetare

- **7 proiecte naționale:** PN-III-P2-2.1-PED2019-2484, PN-III-P4-ID-PCE-2016-0376, PN-III-P2-2.1-PED-2016-0869, PN-II-RU-TE-2014-4-0920, PN-II-RU-TE- 2014-4-0437, PN-II-PT-PCCA-2013-4-1149, PN-II-RU-TE-2011-3-0038

Proiecte de cercetare dezvoltare (director de proiect)

Acronim	Sursa de finanțare	Titlul proiectului	Volumul finanțării
PN-III-P1-1.1-PD-2019-0442 (ZeinCoDrug)	UEFISCDI / Ministerul Cercetării, Inovării și Digitalizării)	Conjugați de α -zeină utilizați ca sisteme pentru eliberarea controlată a medicamentelor	250.000 RON

➤ **Lucrări publicate**

1. **Darie-Ion, L.**, Jayathirtha, M., Hitruc, G.E., Zaharia, M.M., Gradinaru, R.V., Darie, C.C., Pui, A., Petre, B.A., A proteomic approach to identify zein proteins upon eco-friendly ultrasound-based extraction, *Biomolecules* **2021**, 11(12), 1838; <https://doi.org/10.3390/biom11121838>
2. **Darie-Ion, L.**, Neamtu, A., Iliescu, R., Petre, B.A., Immuno-affinity study of oxidative tyrosine containing peptides, *Int J Pept Res Ther* **2022**, 28(41); <https://doi.org/10.1007/s10989-021-10329-2>
3. Jureschi, M., Lupaescu, A.V., **Darie-Ion, L.**, Indeykina, M., Hitruc, E.G., Petre, B.A., Cu and Zn Interactions with Peptides Revealed by High Resolution Mass Spectrometry, *Pharmaceuticals* **2022**, 15(9), 1096; <https://doi.org/10.3390/ph15091096>
4. **Darie-Ion, L.**, Drochioiu, G., Jitaru, S.C., Mocanu, C.S., Petre, B.A. "Drug-Peptide Conjugates: Solid Phase Synthesis and Mass Spectrometric Characterization". vol 21:59-66, **2021**, ISBN:978-619-7603-30-9, ISSN:1314-2704, DOI: 10.5593/sgem2021/6.1/s25.14
5. **Darie-Ion, L.**, Drochioiu, G., Pui, A., Mihalcea, E., Gradinaru, V.R. "Zein Conjugates of Biomedical Interest: Synthesis and Characterization by MALDI-ToF Mass Spectrometry and Fourier Transform Infrared Spectroscopy". vol 21:155-162, **2021**, ISBN:978-619-7603-30-9, ISSN:1314-2704, DOI: 10.5593/sgem2021/6.1/s25.38

PN-III-P1-1.1-MC-2017-0822	UEFISCDI / Ministerul Cercetării, Inovării și Digitalizării)	Participare training „On-line coupling of a Surface Plasmon Resonance and Mass spectrometry for the elucidation of epitopes structure and their affinity bindings” în cadrul Int. Workshop “Affinity – Mass spectrometry – Clinical Methods Development and Applications” – 2-3 Noiembrie 2017 Rüsselsheim am Main, Germany	3.725 Ron
PN-III-P1-1.1-MC-2017-0560	UEFISCDI / Ministerul Cercetării, Inovării și Digitalizării)	Mobilitatea internațională la conferința 9 th International Conference and Expo on Proteomics and Molecular Medicine, 13-15 noiembrie 2017, Paris Franța	12.705 Ron

- **Lucrare prezentată:** “Proteomic-based Approaches for the Characterization of Peptides Associated with Alzheimer’s Disease”

INFORMAȚII SUPLIMENTARE

Brainmap ID	U-1700-037N-5090
ORCID ID	https://orcid.org/0000-0002-9216-4875
ResearchGate ID	https://www.researchgate.net/profile/Laura-Darie-Ion
Indice Hirsch	8 (Web of Science)
Publicații	17 articole în reviste indexate ISI 2 capitole de carte 5 articole publicate <i>in extenso</i> în volumele conferințelor
Conferințe naționale și internaționale	12 naționale 49 internaționale

Articole științifice indexate ISI

1. Lupu, A., Gradinaru, LM., Balan-Porcarasu, M., **Darie-Ion, L.**, Petre, BA., Gradinaru, VR., The hidden power of a novel collagen octapeptide: Unveiling its antioxidant and cofactors releasing capacity from polyurethane based systems. *Reactive and Functional Polymers*, **2025**, 207, 106131, <https://doi.org/10.1016/j.reactfunctpolym.2024.106131>
2. **Darie-Ion, L.**, Petre, BA., "An update on multiplexed mass spectrometry- based lysosomal storage disease diagnosis." *Mass Spectrometry Reviews*, **2023**, 1-15, <https://doi.org/10.1002/mas.21864>
3. Jitaru, SC., Neamtu, A., Drochioiu, G., **Darie-Ion, L.**, Stoica, I., Petre, BA., Gradinaru, VR. A Diphenylalanine Based Pentapeptide with Fibrillating Self-Assembling Properties. *Pharmaceutics* **2023**, 15, 371. <https://doi.org/10.3390/pharmaceutics15020371>
4. Iavorschi, M., Lupaescu, AV., **Darie-Ion, L.**, Indeykina, M., Hitruc, EG., Petre, BA., Cu and Zn Interactions with Peptides Revealed by High Resolution Mass Spectrometry, *Pharmaceutics*, **2022**, 15(9), 1096; <https://doi.org/10.3390/ph15091096>
5. **Darie-Ion, L.**, Whitham, D., Jayathirtha, M., Rai, Y., Neagu, A.N., Darie, C.C., Petre, BA. Applications of MALDI-MS/MS-Based Proteomics in Biomedical Research. *Molecules* **2022**, 27, 6196. <https://doi.org/10.3390/molecules27196196>
6. Mocanu, CS., **Darie-Ion, L.**, Petre, BA., Gradinaru, VR., Drochioiu, G. A computational study of metal ions interaction with amyloid- β 1–42 peptide structure in hyperpyrexia: Implications for Alzheimer disease. *Journal of King Saud University-Science*, **2022**, 34(6), 102184. <https://doi.org/10.1016/j.jksus.2022.102184>
7. **Darie Ion, L.**, Neamtu, A., Iliescu, R., Petre, BA., Immuno-affinity study of oxidative tyrosine containing peptides, *Int J Pept Res Ther*, **2022**, 28, 41. <https://doi.org/10.1007/s10989-021-10329-2>
8. **Darie-Ion, L.**, Jayathirtha, M., Hitruc, EG., Zaharia, MM., Gradinaru, VR., Darie, CC., Pui, A., Petre, BA., A proteomic approach to identify zein proteins upon eco-friendly ultrasound-based extraction, *Biomolecules* **2021**, 11(12), 1838; <https://doi.org/10.3390/biom11121838>
9. Mocanu, CS., Petre, BA., **Darie-Ion, L.**, Drochioiu, G., Niculaua, M., Stoica, I., Homociana M., Nita, LE., Gradinaru, VR. Structural Characterization of a New Collagen Biomimetic Octapeptide with Nanoscale Self-assembly Potential: Experimental and Theoretical Approaches. *ChemPlusChem*, 87(2): e202100462, **2021**. <https://doi.org/10.1002/cplu.202100462>
10. Maeser, S., Petre, BA., **Ion, L.**, Rawer, S., Kohlschütter, A., Santorelli, FM., Simonati, A., Schulz, A.,

- Przybylski, M., Enzymatic diagnosis of neuronal lipofuscinoses in dried blood spots using substrates for concomitant tandem mass spectrometry and fluorimetry. *J. Mass Spectrom.*, **2021** 29:e4675. <https://doi.org/10.1002/jms.4675>
11. Postu, PA*, **Ion, L***, Drochioiu, G., Petre, BA., Glocker, MO. "Mass spectrometric characterization of the zein protein composition in maize flour extracts upon protein separation by SDS-PAGE and 2D gel electrophoresis", *Electrophoresis*, **2019**, 40(20):2747-2758, <https://doi.org/10.1002/elps.201900108>, (***contributie egala**)
 12. Lupaescu, A., Jureschi, M., Ciobanu, C., **Ion, L.**, Zbancioc, G., Petre, BA., Drochioiu, G. "FTIR and MS evidence for heavy metal binding to anti-amyloid NAP-like peptides" *Int. J. Pept. Res. Ther.*, **2019**, 25: 303-305, <https://doi.org/10.1007/s10989-018-9672-2>
 13. Murariu, M., **Ion, L.**, Ciobanu, C., Petre, BA., and Drochioiu, G. "MS, CD, and FT-IR characterization of five newly synthesized histidine-containing Ala- and Gly-based peptides" *Rev. Roum. Chim.*, **2017**, 62(3), 277-289.
 14. **Ion, L.**, Ciobanu, C., Murariu, M., Gradinaru, RV., Drochioiu, G. "SDS-induced peptide conformational changes: From triglycyl-glycine to amyloid- β oligomers associated with Alzheimer's disease". *Int. J. Pept. Res. Ther.* 22: 45-55, **2016**. DOI: 10.1007/s10989-015-9483-7
 15. Drochioiu, G., Ciobanu, C., Bancila, S., **Ion, L.**, Petre, BA., Andries, C., Gradinaru, RV., Murariu, M. "Ultrasound-based protein determination in maize seeds". *Ultrason Sonochem*, **2016**, 29: 93–103, <https://doi.org/10.1016/j.ultsonch.2015.09.007>
 16. Drochioiu, G., **Ion, L.**, Ciobanu, C., Habasescu, L., Mangalagiu, I. Letter: Mass spectrometric approach of high pH- and copper-induced glutathione oxidation, *Eur. J. Mass Spectrom.* **2013**; 19: 71–75, <https://doi.org/10.1255/ejms.1210>
 17. Surleva, A., Zaharia, M., **Ion, L.**, Gradinaru, RV., Drochioiu, G., and Mangalagiu, I., "Ninhydrin-based spectrophotometric assays of trace cyanide", *Acta Chemica Iasi*, **2013**; 21: 57–70, DOI:10.2478/achi-2013-0006

Capitole de carte

1. **Ion, L.**, Petre, B.A. "Immuno – affinity Mass Spectrometry: A Novel Approaches with Biomedical Relevance". *Adv. Exp. Med. Biol.*, Springer, **2019**, 1140:377-388, DOI: 10.1007/978-3-030-15950-4_21
2. Jureschi, M., Lupaescu, A.V., **Ion, L.**, Petre, B.A., Drochioiu, G. Stoichiometry of heavy metal binding to peptides involved in Alzheimer's disease: mass spectrometric evidence. *Adv. Exp. Med. Biol.*, Springer, **2019**, 1140:401-415, DOI: 10.1007/978-3-030-15950-4_23

Lucrări științifice publicate in extenso în volumele conferințelor internaționale

1. **Darie-Ion, L.**, Drochioiu, G., Jitaru, S.C., Mocanu, C.S., Petre, B.A. "Drug-Peptide Conjugates: Solid Phase Synthesis and Mass Spectrometric Characterization". vol 21:59-66, **2021**, ISBN:978-619-7603-30-9, ISSN:1314-2704, DOI: 10.5593/sgem2021/6.1/s25.14
2. **Darie-Ion, L.**, Drochioiu, G., Pui, A., Mihalcea, E., Gradinaru, V.R. "Zein Conjugates of Biomedical Interest: Synthesis and Characterization by MALDI-ToF Mass Spectrometry and Fourier Transform Infrared Spectroscopy". vol 21:155-162, **2021**, ISBN:978-619-7603-30-9, ISSN:1314-2704, DOI: 10.5593/sgem2021/6.1/s25.38

3. **Ion, L.**, Jureschi, M., Lupaescu, A., Petre, B. A., Drochioiu, G., Metal ions binding to amyloid-beta and neuroprotective NAP-like peptides: MS, FT-IR and AFM investigations. vol 20: 259-266, ISBN: 978-619-7603-12-5, ISSN: 1314-2704, **2020**, 10.5593/sgem2020/6.1/s25.034
4. **Ion, L.**, Drochioiu, G., Lupaescu, A., Jureschi, M., Petre, B. A. Amyloid β and anti amyloid peptides involved in Alzheimer's disease: Interactions with metal ions. 19(6.1) 515-522, 2019. ISBN 978-619-7408-88-1; ISSN 1314-2704, **2019**, DOI: 10.5593/sgem2019/6.1
5. Drochioiu, G., Cloșcă, C. M., **Ion, L.**, Pelin, I., Gradinaru, R. V. Bacteriorhodopsin from Halobacterium salinarum is a key compound in bioenergetics. 19(6.1) 575-582, 2019. ISBN 978-619-7408-88-1; ISSN 1314-2704, **2019**, DOI: 10.5593/sgem2019/6

Proceedings / ISI

1. Jayaweera, T., **Darie-Ion, L.**, Petre, B.A., Darie, C. Multiplex Mass Spectrometry for Enzymatic Activities Screening of Lysosomal Storage Diseases, *The FASEB Journal* 36, **2022**, <https://doi.org/10.1096/fasebj.2022.36.S1.L7862> IF 4.4
2. Dimitriu, D.C., **Ion, L.**, Gorduza, E.V., Augustin, G., Petre, B.A. - Enzyme Activity Determination by Fluorimetric Methods in some Lysosomal Storage Diseases, *Rev Romana Med Lab*, Vol. 26:2, (Suppl), 2018. IF 0.5
3. **Ion, L.**, Lupaescu, A., Jureschi, M., Drochioiu, G. - Proteomic-based Approaches for the Characterization of Peptides Associated with Alzheimer's disease. *J Proteomics Bioinform*, vol 10:11 (Suppl), (2017) doi: 10.4172/0974-276X-C1-106.
4. **Ion, L.**, Andrieș, C., Maeser, S., Drochioiu, G., Przybylski, M., Petre, B.A., , „Clinical diagnostics of lysosomal storage diseases on dry blood spots: MRM-MS and fluorimetric determinations”, *Acta Chemica Iasi*, 23(2): 91-147(2015), DOI: 10.1515/achi-2015-0008. IF 0.4
5. **Ion, L.**, Andries, C., Hritcu, L., Gau, B., Gross, M., Petre, B.A., “Mass spectrometric based approaches for studying aggregation of β -amyloid peptide”, *Acta Chemica Iasi*, 22: 177-235 (2014), doi: 10.2478/achi2014-0015 IF 0.4
6. **Ion, L.**, Andries, C., Slamnoiu, S., Drochioiu, G., Przybylski, M., Petre, B.A., “Pathophysiological oxidative protein modifications: nitration versus hydroxylation of tyrosine”, *Acta Chemica Iasi*, 22: 177-235 (2014), doi: 10.2478/achi-2014-0015 IF 0.4
7. Drochioiu, G., Murariu, M., **Ion, L.**, Habasescu, L., “Iron and aluminum interaction with amyloid-beta peptides associated with Alzheimer's disease” *AIP Conf. Proc.* 1618, 99 (2014), doi: 10.1063/1.4897686 IF 0.4

Manifestări științifice internaționale

1. **Darie-Ion, L.**, Gradinaru, V.R., Petre, B.A., Extraction and characterization of zein protein: a new approach – **poster** - 22nd Romanian International Conference on Chemistry and Chemical Engineering, Sinaia, Romania, 7-9 Sempembrie 2022
2. **Darie-Ion, L.**, Hitruc, E.G., Pui, A., Petre, B.A., A Proteomic Approach to Identify Zein Proteins upon Eco-Friendly Ultrasound-Based Extraction – **poster** - Athens Conference on Advances in Chemistry, National and Kapodistrian University of Athens, Greece, 26 June – 1 July 2022
3. Jayaweera, T., **Darie-Ion, L.**, Jayathirtha, M., Darie, C., Petre, B.A., A Proteomic Approach to Identify Zein Proteins upon Eco-friendly Ultrasound-Based Extraction. – **poster** - 70th ASMS Conference on Mass Spectrometry and Allied Topics, Minneapolis, Minnesota, USA 5-9 June 2022
4. **Darie-Ion, L.**, Pui, A., Petre, B.A., Zein Conjugates with Potential Controlled Drug Delivery Properties - prezentare orala- 28th International Multidisciplinary Conference "Recent Research and Ideas" 12-14 May 2022 – online

5. **Darie-Ion, L.**, Gradinaru, V-R., Pui, A., Petre, B-A., Zein extraction and zein-based conjugates: synthesis and characterization - **prezentare orală** - 27th World Congress on Biotechnology April 29-30, 2022 - online
6. **Darie-Ion, L.**, Gradinaru, V-R., Petre, B-A., Zein Conjugates of Biomedical Interest: Synthesis and Characterization – **prezentare orală** - Global Pharma Summit 2022, 11-12 March 2022 – online
7. Jitaru, S.C., Mocanu, C.S., Gradinaru, R.V., Petre, B.A., **Ion, L.**, Stoica, I., Drochioiu, G., - Copper Binding Studies And PH-Triggered Assembly of a Double Phe-Flanked Peptide - **prezentare orală** - 12th International Conference on Engineering & Natural Sciences, Bingöl, Turcia, 24-25 December 2021 - online
8. **Darie-Ion, L.**, Jitaru, S.C., Petre, B.A., Pui, A., – Optimization of ultrasound assisted extraction of protein from corn - **prezentare orală** - 10th International Conference on Environment Science and Biotechnology, Osaka, Japonia, 16-18 Decembrie 2021 – online
9. **Darie-Ion, L.**, Hitruc, E.G., Zaharia, M.M., Gradinaru, V.R., Petre, B.A., – Effect of different fractions and granulations of zein on physicochemical properties of ultrasound-assisted zein extraction from corn – **prezentare orală** - 26th International Multidisciplinary Conference “Recent Research and Ideas”, Gent University, Belgia, 10-11 Decembrie 2021 – online
10. **Darie-Ion, L.**, Pui, A., Petre, B.A., – “Extraction and characterization of zein protein: a new approach” – **prezentare orală** - 15- The 10th International Conference on Biomedical Engineering and Biotechnology, Suzhou, China, 18 Noiembrie 2021 – online
11. **Darie-Ion, L.**, Iavorschi, M., Lupaescu, A.V., Zaharia, M., Petre, B.A., – “An optimized ultrasound-based protein determination in maize seeds” – **poster** - 11th International Conference on Biotechnology and Bioengineering, 27-29 Octombrie 2021 – online
12. **Darie-Ion, L.**, Iavorschi, M., Lupaescu, A.V., Pui, A., – “Zein extraction and zein-based conjugates synthesis” – **prezentare orală** - 25th International Conference on Multidisciplinary Studies, ICMS XXV University of Southern California, USA, 17-18 Septembrie 2021 – online
13. **Darie-Ion, L.**, Drochioiu, G., Jitaru, S.C., Mocanu, S.C., Petre, B.A., - Drug-Peptide Conjugates: Solid Phase Synthesis and Mass Spectrometric Characterization” – prezentare orală - XXIth International Multidisciplinary Scientific GeoConference Surveying, Geology and Mining, Ecology and Management, SGEM 2021, Albena, Bulgaria, 4-22 August 2021
14. **Darie-Ion, L.**, Drochioiu, G., Pui, A., Mihalcea, E., Gradinaru, V.R., – “Zein Conjugates of Biomedical Interest: Synthesis and Characterization by MALDI-ToF Mass Spectrometry and Fourier Transform Infrared Spectroscopy” – **poster** - XXIth International Multidisciplinary Scientific GeoConference Surveying, Geology and Mining, Ecology and Management, SGEM 2021, Albena, Bulgaria, 4-22 August 2021
15. **Darie-Ion, L.**, Lupaescu, A.V., Iavorschi, M., Pui, A., Petre, B.A., “Proteomic-based approach for the characterization of maize protein” – **prezentare orală**- 5th International Conference on Biochemistry and Molecular Biology, 07-08 Iulie 2021 – online
16. **Darie-Ion, L.**, Pui, A. Ultrasound-Assisted Extraction of Zein from Corn”- **poster** - First Canadian Peptide and Protein Community Virtual Symposium, CPPC2021, 27-28 May 2021 - online
17. **Ion, L.**, Jureschi, M., Lupaescu, A., Petre, B.A., Drochioiu, G. - Metal Ions Binding to Amyloid-Beta and Neuroprotective Nap-Like Peptides: MS, FT-IR and AFM Investigations – **poster** - XXth International Multidisciplinary Scientific GeoConference Surveying, Geology and Mining, Ecology and Management – SGEM, Albena, Bulgaria, 16 august – 25 august 2020.
18. **Ion, L.**, Jureschi, M., Mocanu, C., Lupaescu, A., Petre, B.A., Drochioiu, G. - Heavy metal ions binding to beta-amyloid and anti-amyloid peptides – **prezentare orală** - 23rd International Conference on Multidisciplinary Studies: "Resilience for Survival", University of Cambridge, Anglia, 30 – 31 Iulie 2020
19. **Ion, L.**, Dimitriu, C., Przybylski, M., Petre, B.A., Enzymatic Diagnosis of Lysosomal Storage Disorders using Substrates for Fluorimetry and MRM-Mass Spectrometry – **prezentare orală** - Annual International Conference of the Romanian Society of Biochemistry and Molecular Biology, 26-27 September 2019, Iași, Romania.

20. **Ion, L.**, Dimitriu, C., Przybylski, M., Petre, B.A., Clinical Diagnostics of Lysosomal Storage Disorders using MRM-MS and Fluorimetric Approaches – **prezentare orală** - 21st Romanian International Conference on Chemistry and Chemical Engineering, Constanta, Romania, 4-7 September, 2019.
21. **Ion, L.**, Lupaescu, A., Jureschi, M., Petre, B.A., Drochioiu, G. - Amyloid- β and anti-amyloid peptides involved in Alzheimer's disease: interactions with metal ions – **poster** - *XIX International Multidisciplinary Scientific GeoConference SGEM*, Albena, Bulgaria, 28 June - 7 July, 2019.
22. Drochioiu, G., Cloșcă, C. M., **Ion, L.**, Pelin, I., Gradinaru, R. V. Bacteriorhodopsin from Halobacterium salinarum is a key compound in bioenergetics – **prezentare orală**- *XIX International Multidisciplinary GeoConference SGEM2019*, Albena, Bulgaria, 28 June - 7 July, 2019
23. Petre, B.A., **Ion, L.**, Dimitriu, C., Maeser, S., Kleinekofort, W., Bulei, C., Przybylski, M. Clinical Diagnostics of Lysosomal Storage Diseases in DBS Using New Substrates by MRM-MS – **poster** - 67th *ASMS Conference on Mass Spectrometry*, Atlanta, Georgia, USA, June 2 - 6, 2019.
24. Postu, P.A., **Ion, L.**, Ruß, M., Petre, B.A., Glocker, M.O., - Mass Spectrometric Characterization of the Zein Protein Composition in Maize Flour by SDS-PAGE and 2D Gel Electrophoresis – **poster** - 52nd *Annual DGMS Conference*, Rostock, Germany, 10 – 13 March 2019.
25. Brdar, B., Maeser, S., Petre, B.A., **Ion, L.**, Kohlschütter, A., Bräulke, T., Santorelli, F., Schulz, A., Przybylski, M. - Clinical Diagnostics of Neuronal Ceroid Lipofuscinoses (NCL-1, NCL-2 and NCL-10) using New Substrates for Tandem Mass Spectrometry and Fluorimetry – **poster** - 52nd *Annual DGMS Conference*, Rostock, Germany, 10 – 13 March 2019.
26. **Ion, L.**, Cozma, C., Dimitriu, D.C., Przybylski, M., Petre, B.A. - Enzyme Activity Determination of Lysosomal Storage Disorders by Novel Analytical Approaches – **prezentare orală** – 2nd *Int. Summer School "PROTEOMICS – from Introduction to Clinical Applications"*, Iasi, Romania, 9-13 July 2018.
27. **Ion, L.**, Lupaescu, A., Jureschi, M., Drochioiu, G. - Proteomic-based Approaches for the Characterization of Peptides Associated with Alzheimer's Disease – **prezentare orală** – 9th *International Conference and Expo on Proteomics and Molecular Medicine*, Paris, France, 13-15 November 2017.
28. **Ion, L.**, Cozma, C., Maeser, S., Dimitriu, C., Przybylski, M., Petre, B.A. - Clinical Diagnostics of Lysosomal Storage Disorders by Fluorimetry and MRM-Mass spectrometry – **prezentare orală** – *Int. Workshop Affinity - Mass spectrometry – New Methods for Biochemical and Clinical Applications*, Rüsselsheim am Main, Germany, 2-3 November 2017.
29. M. Jureschi, **L. Ion**, B.-A. Petre, C.-I. Ciobanu, G. Drochioiu, Solid synthesis and analysis by mass spectrometry of fragments derived from amyloid- β peptide and their complexes with various metal - **poster** - *Sciences et Technologies SCITECH*, Sofia, Bulgaria, 28 Septembrie 2017.
30. A.-V. Lupăescu, M. Matei, **L. Ion**, B.-A. Petre, Ghe. Zbancioc, C.-I. Ciobanu, G. Drochioiu, Structural characterization of a synthesized peptide with potential neuroprotective activity against neuroinflammation in Alzheimer disease – **poster** - *Sciences et Technologies SCITECH*, Sofia, Bulgaria, 28 Septembrie 2017.
31. **Ion, L.**, Cozma, C., Dimitriu, D.C., Przybylski, M., Petre, B.A. - Enzyme Activity Determination of Lysosomal Storage Disorders by Novel Analytical Approaches – **prezentare orală** - 1st *Int. Summer School "PROTEOMICS – from Introduction to Clinical Applications"*, Iasi, Romania, 9-13 June 2017.
32. **Ion, L.**, Hritcu, L., Dimitriu, C., Maeser, S., Przybylski, M., Petre, B.A., - **prezentare orală** - 3rd *International Conference on Analytical Chemistry*, Iasi, Romania, 29-31 August 2016.
33. Petre, B.A., **Ion, L.**, Andries, C., Gau, B., Gross, M. Molecular characterization of neuronal protein aggregates by a new mass spectrometric approach - **prezentare orală** - 19th *Romanian International Conference on Chemistry and Chemical Engineering, Sibiu, Romania*, 2-5 Septembrie 2015.
34. **Ion, L.**, Petre, B.-A., Bräulke, T., Schulz, A., and Przybylski, M. Clinical Diagnostics of Neuronal Ceroid Lipofuscinoses on Dry Blood Spots: Development of New Cathepsin Substrates for MRM-MS Determination" – **poster** - 61ST *ASMS Conference on Mass Spectrometry and Allied Topics*, USA, 31-4 Iunie 2015.
35. **Ion, L.**, Andrieș, C., Przybylski M. and Petre, B.-A. Lysosomal Storage Diseases: Development of ESI-ion trap diagnostic assay for MPS II and MPS VI. Multiplexing possibilities – **poster** - 48. *Annual Meeting*

- of the German Society for Mass Spectrometry, Wuppertal, Germania, 1-4 Martie 2015.
36. Andrieș, C., Slamnoiu, S., **Ion, L.**, Przybylski M. and Petre, B.-A. Identification, recognition structures and affinities of nitrated tyrosine sites by affinity mass spectrometry - **prezentare orală** - 48. *Annual Meeting of the German Society for Mass Spectrometry, Wuppertal, Germania, 1-4 Martie 2015.*
 37. Andrieș, C., **Ion, L.**, Gross, M. and Petre, B.-A.- Mass spectrometric base approaches for studying oligomization of β -amyloid peptide at amino acid levels"- **poster** - 48. *Annual Meeting of the German Society for Mass Spectrometry, Wuppertal, Germania, 1-4 Martie 2015.*
 38. **Ion, L.**, Cozma, C., Andrieș, C., Przybylski, M. and Petre, B.-A. Specific lysosomal diagnostic for MPS II / MPS VI patients by fluorimetry and mass spectrometry - **poster** - *Affinity-Mass Spectrometry in Life Sciences; Diagnostics & Therapy Development of Lysosomal Diseases*, Rüsselsheim, Germania, 24-25 Noiembrie 2014
 39. **Ion, L.**, Andrieș, C., Slamnoiu, S., Przybylski, M., Drochioiu, G. and Petre, B.-A. Pathophysiological oxidative protein modifications: nitration versus hydroxylation of tyrosine – **poster** - 3^{eme} *Colloque Franco-Roumain de Chimie Medicinale, Iași, Romania, 30-31 Octombrie 2014.*
 40. Drochioiu, G., Murariu, M., **Ion, L.**, Habasescu, L. Iron and aluminum interaction with amyloid-beta peptides associated with Alzheimer's disease – **prezentare orală** - 10th *International Conference of Computational Methods in Sciences and Engineering*, Atena, Grecia, 4-7 Aprilie 2014.
 41. **Ion, L.**, Cozma, C., Andrieș, C., Przybylski, M. and Petre, B.-A. Specific lysosomal diagnostic for MPS II / MPS VI patients by fluorimetry and mass spectrometry - **poster** - 47. *Annual Meeting of the German Society for Mass Spectrometry 2014*, Goethe University, Frankfurt, 2-5 Martie 2014
 42. Andrieș, C., **Ion, L.**, Gau, B., Gross, M., Drochioiu, G. and Petre, B.-A. Molecular characterization of neuronal protein aggregates by massspectrometry-based footprinting methods – **poster** - 47. *Annual Meeting of the German Society for Mass Spectrometry 2014*, Goethe University, Frankfurt, 2-5 Martie 2014
 43. Cozma, C., **Ion, L.**, Iurascu, M.-I., Maeser, S. and Przybylski, M., Novel Approach on Clinical Diagnostic of Lysosomal Storage Disease in DBSs by Fluorimetry and MRM-MS using Coumarin Derivates based Substrates – **prezentare orală** - 47. *Annual Meeting of the German Society for Mass Spectrometry 2014*, Goethe University, Frankfurt, 2-5 Martie 2014.
 44. **Ion, L.**, Cozma, C., Przybylski, M., Drochioiu, G. and Petre, B.-A. Lysosomal Storage Disease: Characterization and Diagnostics – **prezentare orală** - 18th *Romanian International Conference on Chemistry and Chemical Engineering*, Sinaia, Romania, 4-7 Septembrie 2013.
 45. Petre, B.-A., **Ion, L.**, Andrieș, C., Gau, B., Drochioiu, G. and Gross, M. Hydrogen/ deuterium exchange – mass spectrometry for molecular characterization of neuronal protein aggregates – **prezentare orală** - 18th *Romanian International Conference on Chemistry and Chemical Engineering*, Sinaia, Romania, 4-7 Septembrie 2013.
 46. **Ion, L.**, Andrieș, C., Cozma, C., Przybylski, M. and Petre, B.-A., Lysosomal Storage Diseases: MRM-MS and fluorimetric diagnostics"- **prezentare orală** - 7th *Summer Course for Mass Spectrometry in Biotechnology and Medicine*, Dubrovnik, Croatia, 7-13 Iulie 2013.
 47. Cozma, C., Iurascu, M.-I., Paraschiv, G., **Ion, L.**, Petre, B.-A., Mühl, A., Maeser, S. and Przybylski, M. Clinical Diagnostics Approaches of Lysosomal Storage Diseases on DBSs by Fluorimetry and MRM-MS Using Identical α -hydroxy-coumarin based substrates – **poster** - 61ST *ASMS Conference on Mass Spectrometry and Allied Topics Minneapolis*, Minnesota, USA, 9-13 Iunie 2013.
 48. **Ion, L.**, Andrieș, C., Stumbaum, M., Przybylski, M. and Petre, B.-A. Mass spectrometric based methods for rigorous characterization of antibody-antigen interaction – **poster** - 11th *Conference on Colloid and Surface Chemistry*, Iasi, Romania, 9-11 Mai 2013.
 49. **Ion, L.**, Andrieș, C., Stumbaum, M., Przybylski, M., Petre, B.-A. Mass spectrometric based methods for rigorous characterization of antibody-antigen interaction – **poster** - 46. *Annual Meeting of the German Society for Mass Spectrometry, Humboldt University, Berlin*, 10 – 13 Martie 2013.

Manifestări științifice naționale

1. Pascu, M., **Darie-Ion, L.**, Petre, B.A., Characterization and identification of zein proteins upon ultrasound-assisted extraction – **prezentare orală** - “Sustainable Foods For A Safety Future: A Healthy And Quality Life Vision”, Facultatea de Știința și Ingineria Alimentelor, Universitatea „Dunărea De Jos” din Galați 26-27 Martie 2022
2. **Darie-Ion, L.**, Drochioiu, G., Darie, C.C., Petre, B.A., – “Mass Spectrometric Characterization of the Zein Protein Composition in Maize Flour „Eco- Friendly” Extracts” – **prezentare orală** - New trends in Biology: from molecules to complex systems, Iași, Romania, 28 – 29 Octombrie 2021 – online
3. Jureschi, M., **Ion, L.**, Petre, B.-A., Ciobanu, C.-I., Drochioiu, G. - Synthesis of some analogs of A β (9-16) peptide and their interaction with metal ions. – **prezentare orală** - *Sesiunea de Comunicări Științifice a Studenților, Masteranzilor și Doctoranzilor*, 20-21 iunie 2019.
4. Lupăescu, A.-V., Petre, B.-A., Ciobanu, C.-I., **Ion, L.**, Drochioiu, G., - Synthesis and characterization of anti-amyloid peptides – **prezentare orală** - *Sesiunea de Comunicări Științifice a Studenților, Masteranzilor și Doctoranzilor*, 20-21 iunie 2019.
5. Dimitriu, D.C., **Ion, L.**, Gorduza, E.V., Augustin, G., Petre, B.A. - Enzyme Activity Determination by Fluorimetric Methods in some Lysosomal Storage Diseases – **prezentare orală** - *Al 2-lea Congres Național al Asociației de Medicină de Laborator din România*, cu participare internațională, București, Romania, 09 - 12 Mai 2018
6. Dimitriu, D.C., **Ion, L.**, Andrieș, C., Petrescu, E.D., Petre, B.A. - New Approaches for Diagnosing Lysosomal Storage Diseases – **prezentare orală** - *al IX-lea Congres Național de Biologie Celulară și Moleculară*, Iasi, Romania, 7-11 iunie 2017.
7. **Ion, L.**, Andrieș, C., Maeser, S., Drochioiu, G., Przybylski, M., Petre, B.A. Clinical diagnostics of lysosomal storage diseases on dry blood spots: MRM-MS and fluorimetric determinations – **prezentare orală** - *Zilele Universității „Alexandru Ioan Cuza”*, Romania, 31-1 Octombrie 2015.
8. **Ion, L.**, Cozma, C., Andrieș, C., Drochioiu, G., Przybylski M. and Petre, B.-A. Lysosomal Storage Disease. Characterization and Diagnostics of MPS II and MPS VI – **prezentare orală** - *University days „Alexandru Ioan Cuza University of Iași”*, Romania, 31-1 Octombrie 2014.
9. **Ion, L.**, Stumbaum, M., Przybylski, M., Drochioiu, G. and Petre, B.-A. Binding Affinities Studies of Nitrated Model Peptides to Anti-3-Nitrotyrosine Antibody” – **poster** - *33rd National conference of Chemistry Căciulata, Romania, 1–3 Octombrie 2014.*
10. **Ion, L.**, Andrieș, C., Drochioiu, G., Petre, B.-A. Oxidative modifications in proteins: Synthesis and structural characterization of tyrosine modified peptides – **poster** – *Zilele Universității „Alexandru Ioan Cuza” of Iași*, 25-26 Octombrie 2012.
11. Petre, B.-A., Andrieș, C., **Ion, L.**, Drochioiu, G., Przybylski, M., Ulrich, M., Doering, G. When is mass spectrometry combined with affinity approaches essential? A case study of Tyrosine nitration in proteins – **prezentare orală** - *Zilele Universității „Alexandru Ioan Cuza” of Iași*, 25-26 Octombrie 2012.
12. **Ion, L.**, Cozma, C., Drochioiu, G., Przybylski, M., Petre, B.-A. Chemical synthesis of new MPS I substrates” – **poster** - *32nd National conference of Chemistry, Căciulata, 3-5 Octombrie 2012*

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