

Standarde minimale: Chimie. Poziție: Lector

Candidat: Dr. Brîndușa Alina Petre

Articole științifice publicate *in extenso* în reviste internaționale cotate *Web of Science* cu factor de impact:

1. **Petre, B.A.** (2014), Affinity – mass spectrometry approaches for elucidating structures and interactions of protein – ligand complexes in “Advancements of Mass Spectrometry in Biomedical Research”, Eds. Alisa G. Woods & Costel C. Darie, Advances in Experimental Medicine and Biology Series (ISSN: 0065-2598), Springer –1.1. 806:129-151. DOI: 10.1007/978-3-319-06068-2_7
2. Schreier V. N., Pethő L, Orbán E., Marquardt A., **Petre B.A.**, Mező G. and Manea M. (2014), Protein expression profile of HT-29 human colon cancer cells after treatment with a cytotoxic daunorubicin-GnRH-III derivative bioconjugate, PLOS ONE – 9(4):e94041. DOI: 10.1371/journal.pone.0094041
3. **Petre B.A.**, Ulrich M., Stumbaum M., Bernevic ., Moise A., Döring G., Przybylski M. (2012), When is Mass Spectrometry Combined with Affinity Approaches Essential? A Case Study of Tyrosine Nitration in Proteins, *J. Am. Soc. Mass Spectrom.*, 23(11): 1831-1840.
4. Vlad C., Lindner K., Karreman C., Schildknecht S., Leist M., Tomczyk N., Rontree J., Langridge J., Danzer K., Ciossek T., **Petre A.**, Gross M., Hengerer B., Przybylski M. (2011), Autoproteolytic Fragments are Intermediates in the Oligomerization- Aggregation of Parkinson’s Disease Protein Alpha-Synuclein as Revealed by Ion Mobility Mass Spectrometry, *ChemBioChem* 12(18):2740-4.
5. Dragusanu M., **Petre B.A.**, Przybylski M. (2011), Epitope motif of an anti-nitrotyrosine antibody specific for nitrotyrosine- modified peptides revealed by affinity-mass spectrometry, *J. Pept. Sci.* 17(3): 184-191.
6. Bernevic B., **Petre B.A.**, Galetskiy D., Werner C., Wicke M., Schellander K., Przybylski M. (2011), Degradation and oxidation postmortem of myofibrillar proteins in porcine skeleton muscle revealed by high resolution mass spectrometric proteome analysis, *Int. J. Mass Spectrom.* 305 (2-3):217-227.
7. M. Drăgușan, **B.A Petre**, S. Slămnoiu, T. Tu, M. Gross, M. Przybylski (2010) Online bioaffinity–electrospray mass spectrometry for structure identification and

- quantification of protein-ligand interactions, *J. Am. Soc. Mass Spectrom.* 21(10): 1643-8.
8. Tu T., Drăgușanu M., **Petre B.A.**, Rempel D., Przybylski M., Gross M. (2010) Protein-peptide affinity determination using an H/D exchange dilution strategy: Application to antigen-antibody interactions, *J. Am. Soc. Mass Spectrom.* 21(10):1660-7.
 9. Drochioiu G., Manea M., Dragusanu M., Murariu M., Dragan E.S., **Petre B.A.**, Mezo G., Przybylski M., (2009), Interactions of Aβ1-40 peptide with metal ions: an electrospray ion trap mass spectrometric approach, *Biophysical Chemistry* 144(1-2) 9-20.
 10. Ulrich, M., **Petre A.**, N. Youhnovski, D. Worlitzsch, M. Schirle, M. Schumm J. Lee, J. Checkel, M. Dinauer, P. Schmid, F. Ratjen, M. Przybylski, G. Döring (2008), Post-translational tyrosine nitration of eosinophil granule toxins mediated by eosinophil peroxidase, *J. Biol. Chem.* 283 (42): 28629-28640.
 11. **Petre B.A.**, Drăgușanu M., Przybylski M. (2008), Molecular recognition specificity of anti-3-nitrotyrosine antibodies revealed by affinity- mass spectrometry and immunoanalytical methods in: “Applications of Mass Spectrometry in Life Sciences”, *NATO Science for Peace and Security Series A: Chemistry and Biology*, pp.55-67.
 12. Drochioiu, G., Murariu, M., **Petre B.A.**, Manea, M., Przybylski, M (2007). Sinteza si caracterizarea unei nonapeptide cu proprietati specifice de legare a cuprului, *Rev.Chim* Bucharest, Romania 58 (3) 311-315.
 13. **Petre B.A.**, Youhnovski N., Lukkari J., Weber R., Przybylski M. (2005), Structural Characterisation of tyrosine-nitrated peptides by ultraviolet and infrared matrix-assisted laser desorption/ionization Fourier transforms ion cyclotron resonance mass spectrometry, *Eur. J. Mass Spectrom.* 11, 513-518.
 14. Schmidt P., Youhnovski N., Daiber A., **Balan (Petre) A.**, Arsic M., Przybylski M. Ullrich V. (2003), Specific nitration at tyrosine-430 revealed by high resolution mass spectrometry as basis for redox regulation of bovine prostacyclin synthase, *J. Biol. Chem.*, 278: 12813-12819.

Membru în echipa unui proiect de cercetare câștigat prin competiție națională sau internațională:

1. *Project Manager*: ”Noi abordări mass-spectrometrice pentru elucidarea modificărilor oxidative în proteine,, PN-II-RU-TE-2011-3-0038. Universitatea „Al. I. Cuza” Iași (11/2011- 10/2014)
2. *Team member*: “Metal- and pH-induced conformational changes of peptides associated with neurodegenerative pathologies”, UEFSCDI-CNCS (PN-II-ID-PCE-2011-3-0628), RO. Collaboration with P.Poni Institute, Iasi (10/2011 – 10/2014)
3. *Team member*: “Studiul interacțiunii proteinelor cu ioni metalici la diverse valori ale pH-ului utilizand spectrometria de masa MALDI-TOF si ESI/MALDI-FT-ICR si a implicatiilor sale in bolile degenerative”, CNCSIS-1451, RO (2007-2009)

Puncte de la ultima promovare:

886 puncte (*Vezi Anexa 1*)