



**Tematica si bibliografia pentru concursul de admitere  
la studii universitare de doctorat,  
sesiunea iulie 2023**

- 1.** Implicatii biologice si farmaceutice ale elementelor esentiale.
- 2.** Profilul bioanorganic al ionilor lantanidelor si al unor combinatii generate de acestia.
- 3.** Compusi ai lantanidelor utilizati ca remedii homeopate.
- 4.** Combinatii ale elementelor tranzitionale utilizate in terapie ca surse de biocationi esentiali.
- 5.** Structuri macrociclice tetrapirolice cu profil de marker si agent antitumoral.
- 6.** Nanoparticule anorganice utilizate ca vectori in transportul substantelor active antitumorale.
- 7.** Compusi tetrapirolici de sinteza utilizati in terapia antimicrobiana.
- 8.** Legaturi chimice in combinatiile anorganice.
- 9.** Tehnici de evaluare structurala si spectrala pentru compusii de sinteza cu potential biomedical.
- 10.** Metode de evaluare primara a potentialului citotoxic al compusilor de sinteza cu aplicabilitate biomedicala.

### **Bibliografie**

- 1.** R. Boscencu, V. Nacea, *Chimie Anorganica Descriptiva*, Ed. Univ. „Carol Davila”, Bucuresti, 2013.
- 2.** M. Kohlmeier , *Nutrient Metabolism*, Chapter 11, Academic Press, 2015.
- 3.** S. A. Cotton, J. M. Harrowfield, *Lanthanides in Living Systems*, in the Encyclopedia of Inorganic and Bioinorganic Chemistry, John Wiley & Sons, Ltd., 2012.
- 4.** J. A. Cotruvo, *The Chemistry of Lanthanides in Biology: Recent Discoveries, Emerging Principles and Technological Applications*, ACS Central Science, 5, 1496, 2019.
- 5.** G. Manda, M. E. Hinescu, I. V. Neagoe, L.F.V. Ferreira, R. Boscencu, P. Vasos, S. H. Basaga, A. Cuadrado, *Emerging Therapeutic Targets in Oncologic Photodynamic Therapy*, Current Pharmaceutical Design, 24, 5268, 2018.



6. R. P. Socoteanu, R. Boscencu, A. Hirtopeanu, G. Manda, A. S. Oliveira, M. Ilie, L. F. Vieira Ferreira, *Trends in Interdisciplinary Studies Revealing Porphyrinic Compounds Multivalency Towards Biomedical Application*, in *Biomedical Engineering - From Theory to Applications*, Reza Fazel (Ed.), InTech Open, Chapter 15, 355, 2011.
7. D. Gao, X. Guo, X. Zhang, et. al., *Multifunctional phototheranostic nanomedicine for cancer imaging and treatment*, Materials Today Bio, 5, 100035, 2020.
8. H. Montaseri, C.A. Kruger, H. Abrahamse, *Recent Advances in Porphyrin-Based Inorganic Nanoparticles for Cancer Treatment*, Int. J. Mol. Sci., 21, 3358, 2020.
9. T. Amos, M. Bamidele, et al. *Application of Porphyrins in Antibacterial Photodynamic Therapy*, Molecules, 24, 13 2456, 2019.
10. V. Nacea, R. Boscencu, *Chimie Anorganica. Baze teoretice*, Ed. Univ. „Carol Davila”, Bucuresti, 2010.
11. M. Iovu, T.O. Nicolescu, *Chimie Organica. Metode experimentale*, Ed. Univ. „Carol Davila”, Bucuresti, 2009.
12. J. R. Lakowicz, *Principles of Fluorescence Spectroscopy*, Third Edition, Springer Science, 2006.
13. F. K. M. Chan, K. Moriwaki, M. J. De Rosa, *Detection of Necrosis by Release of Lactate Dehydrogenase (LDH) Activity*. Methods Mol. Biol., 979, 65, 2013.
14. T. L. Riss, R. A. Moravec, et al., *Cell Viability Assays*. In *Assay Guidance Manual*, Eli Lilly & Company and the National Center for Advancing Translational Sciences: Bethesda, MD, USA, 2016.
15. T. L. Riss, R. A. Moravec, et al. *Cytotoxicity Assays: In Vitro Methods to Measure Dead Cells*. In *Assay Guidance Manual*, Eli Lilly & Company and the National Center for Advancing Translational Sciences: Bethesda, MD, USA, 2019.

**Conducator de doctorat,**  
Prof. Dr. Rica Boscencu