Dr. Mihaela Balan-Porcărașu

Research Assistant

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Mihaela Balan-Porcărașu

Has experience in using NMR spectroscopy for structure determination of organic compounds, polymers and supramolecular systems. She conducts studies that include detailed structural characterization of nitrogen containing heterocyclic compounds, Schiff bases, polysaccharides, polysiloxanes and polisylanes, cyclodextrin based polyrotaxanes, native and chemically modified cyclodextrins and inclusion phenomena between cyclodextrins and biologically active compounds. These studies involve optimizing the experimental parameter sets and adapting them to each particular case, using bidimensional ^{1}H-^{13}C correlations over one or several bonds, using NOE experiments for determination of conformation of organic compounds and for proving complexation between cyclodextrins and various organic or macromolecular compounds. She is also experienced in using NMR spectroscopy for analyzing plant extracts like juices obtained from various fruits, vegetables or plants.

Scientific record: She is co-author of 37 articles published in ISI journals (**H = 11** in SCOPUS and Web of Science, **H = 13** in Google Scholar) with a cumulated impact factor of **89**, 2 articles published in non-ISI journals, 10 communications, 15 posters. Since 2007 until now she was involved in 11 national projects as a member in the research teams.

SELECTED SCIENTIFIC ARTICLES

1. A. Farcas, Y.-C. Liu, M. Nilam, **M. Balan-Porcarasu**, E.-L. Ursu, W. M. Nau, A. Hennig „Synthesis and photophysical properties of inclusion complexes between conjugated polyazomethines with γ-cyclodextrin and its tris-O-methylated derivative", *Eur. Polym. J.*, **2019**, *113*, 236-243;
2. G.-O. Turcan-Trofin, M. Asandulesa, **M. Balan-Porcarasu**, C.-D. Varganici, V. Tiron, C. Racles, M. Cazacu „Linear and cyclic siloxanes functionalized with polar groups by thiol-ene addition: Synthesis, characterization and exploring some material behaviour", *J. Mol. Liq.*, **2019**, *282*, 187-196;
3. M. Mioc, S. Avram, V. Bercean, L. Kurunczi, R. M. Ghiulai, C. Oprean, D. E. Coricovac, C. Dehelean, A. Mioc, **M. Balan-Porcarasu**, C. Tatu, C. Soica „Design, synthesis and biological activity evaluation of S-substituted 1*H*-5-mercapto-1,2,4-triazole derivatives as antiproliferative agents in colorectal cancer", *Front. Chem.*, **2018**, *6*, art. no. 373
4. M. F. Zaltariov, M. Hammerstad, H. J. Arabshahi, K. Jovanovic, K. W. Richter, M. Cazacu, S. Shova, **M. Balan**, N. H. Andersen, S. Radulovic, J. Reynisson, K. K. Andersson, V. B. Arion „New iminodiacetate−thiosemicarbazone hybrids and their copper(II) complexes are potential ribonucleotide reductase R2 inhibitors with high antiproliferative activity", *Inorg. Chem.*, **2017**, *56*, 3532−3549
5. C. Peptu, **M. Balan-Porcarasu**, A. Šišková, L. Škultéty, J. Mosnáček „Cyclodextrins tethered with oligolactides - green synthesis and structural assessment", *Beilstein J. Org. Chem.*, **2017**, *13*, 779-792