


EuChemS-DAC Study Group / Task Force Annual Report for 2021-2022

Study Group / Task Force Name: Bioanalytics Study Group
Study Group / Task Force Members and Affiliations: Head of Study Group: Raluca-Ioana van Staden – Romanian Chemical Society Guenter Gauglitz – Gesellschaft Deutscher Chemiker (GDCh) Jan Labuda – Slovak Chemical Society Jacobus Frederick van Staden – South African Chemical Institute Marcela Alves Segundo – ex officio Coral Barbas Arribas - UCEU San Pablo, Spain Ryszard Lobinski – UPAU, France Ede Bodoki – UMedicine and Pharmacy Iuliu Hatieganu, Cluj Napoca, Romania Mehmet Gumustas – AnkaraU, Turkey Jose M. Pingarron – Spanish Royal Society of Chemistry Viola Horvath – Hungarian Chemical Society
Objectives: The aim of the Bioanalytics study group is to search ways for bringing closer the analytical and bioanalytical chemistry community. Main purpose of this group is besides „listing“ of methods and „applications“ a help for deciding which to use for what and warn about pitfalls. It might be a help for those using analytics in fields like life science, environment and food analysis and not being a really well-trained Analyzer.
Activities and Outputs in 2021-2022 (e.g. reports, publications, seminars, meetings): A workshop on Bioanalysis was organized on the national level in Romania. Sessions at Analytica 2022 Trends in Analytical & Bioanalytical Chemistry: Make, Measure, and Smart Machines (Panne, Riedel, Gauglitz) Trends in Analytical & Bioanalytical Chemistry: Nanoplastics (Ivleva, Gauglitz) Trends in Analytical & Bioanalytical Chemistry: Biosensors (Baeumner, Steiner, Gauglitz) Reports will be published in Mitteilungsblatt GDCh TC of ABC on Trends in Analytical and Bioanalytical Chemistry There are 3 manuscripts in preparation related to the Concept attached to this document. Significant numbers of papers regarding bioanalysis were published in different ISI journals, e.g. K. Nemčková, J. Labuda, Advanced materials-integrated electrochemical sensors as promising medical diagnostics tools: A review, Mater Sci Eng C. 2021;120, 111751. K. Nemčková, V. Svitková, J. Sochr, P. Gemeiner, J. Labuda, Gallic acid-coated silver nanoparticles as perspective anticancer drug nanocarriers: Mechanism of action, stability, and toxicity, Anal. Bioanal. Chem. 2022, 414: 5493–5505. https://doi.org/10.1007/s00216-022-03955-2 J. Blaškovičová, J. Labuda, Effect of triclosan and silver nanoparticles on DNA damage investigated with DNA-based biosensor, Sensors 2022, 22(12), 4332. https://doi.org/10.3390/s22124332
Activities planned for 2022-2023: Planning for special session on Bioanalysis in the coming conference. Preparing reviews related to bioanalysis (topics: sensors, -omics, HPLC, RAMAN), and their publication as open access for increasing the visibility of the study group. Organizing a workshop on bioanalytics in Bucharest, Romania with the main scope of improving the concept on Bioanalytics, and also publish the presented papers in a special issue.
Report submitted by: Prof Dr habil Raluca-Ioana van Staden 
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