

# CURRICULUM VITAE

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**Locul nasterii** Ramnicu-Sarat  
**Data nasterii** 28 Februarie 1974

**Pozitia actuala** Lector universitar

## **Domenii de competenta:**

Prepararea si caracterizarea biocatalizatorilor de tip enzymatic.

Biocataliza in sisteme complexe (cataliza enzimatica, rezolutie cinetica dinamica, rezolutie cinetica si cataliza pe baza de celule integrale).

Imunoanaliza (ex. competitiva/non-competitiva, omogena/eterogena (ELISA, PFIA, RAIA, etc.), imunoanaliza pe baza de nanoparticule magnetice).

Extractia si concentrarea analitului direct din proba reala pe baza imuno-interactiei anticorp-antigen (ISLM – immuno supported liquid membrane extraction-analysis).

Biosenzori inserati in diferite sisteme analitice (ex. sisteme cu injectare in flux (FI) sau sisteme secventiale (SI)) si cuplati la sisteme de detectie electrochimica si/sau optica (ex. chemiluminescenta/fluorescenta/UV/VIS).

Chimie bio-organica (ex. sinteza traser-ilor in cadrul sistemelor de imunoanaliza).

Automatizare si/sau miniaturizare a sistemelor analitice.

Statistica si chemometrie in Chimia Analitica.

Realizarea de lucrari experimentale virtuale care presupun aplicarea cunostintelor de baza in Chimie Analitica (ex. sisteme de analiza in flux, electrozi selectivi, imunoanaliza).

## **Cursuri Predate:**

*Procese fotocatalitice de depoluare, anul III, Chimia Mediului*

*Procese catalitice de obtinere a principiilor active. Tehnologia obtinerii formelor farmaceutice, anul V, Master Chimia Medicamentelor si Produselor Farmaceutice*

*Cataliza asimetrica si chimie verde, anul V, Master*

## **Publicatii**

Articole:

### In reviste internationale

1. R. J. Seema, E. Borowska, R. Davidsson, M. Tudorache, E. Pontén, J. Emnéus – “A chemiluminescence flow immunosensor based on a porous monolithic metacrylate and

- polyethylene composite disc modified with Protein G", *Biosensors & Bioelectronics*, **2004**, 19, 795-803.
2. M. Tudorache, M. Rak, P. P. Wiczorek, J. Å. Jönsson, J. Emnéus - "Immuno-SLM - a combined sample handling and analytical technique" - *Journal of Immunological Methods*, **2004**, 284, 107-118.
  3. M. Tudorache and J. Emnéus - "Selective immuno-supported liquid membrane (ISLM) extraction, enrichment and analysis of 2,4,6- trichlorophenol", - *Journal of Membrane Science*, **2005**, 256, 143-149.
  4. M. Tudorache and J. Emnéus - "A micro - immuno supported liquid membrane assay ( $\mu$ -ISLMA)", *Biosensors & Bioelectronics*, **2005**, 21, 1513-1520.
  5. M. Tudorache, M. Co, H. Lifgren, J. Emnéus - "Ultrasensitive magnetic particle-based Immuno Supported Liquid Membrane assay (*m*-ISLMA)", *Analytical Chemistry*, **2005**, 77, 7156-7162.
  6. M. Tudorache, I.A. Zdrojewska, J. Emnéus - "Evaluation of progesterone content in saliva using magnetic-particle based immuno supported liquid membrane assay (*m*-ISLMA)", *Biosensors & Bioelectronics*, **2006**, 22, 241-246.
  7. M. Tudorache, C. Bala, R-I. Stefan - "Electrochemical biosensors based on screen-printed electrodes. Applications for environmental and food analyses", capitol de carte in cadrul cartii cu titlul *Recent Advances in Analytical Electrochemistry*, **2007**, ISBN 81-7895-274-2.
  8. M. Tudorache, C. Bala - "Biosensors based on screen-printing technology, and their applications in environmental and food analysis", *Analytical and Bioanalytical Chemistry*, **2007**, 388, 565-578.
  9. M. Tudorache, A. Tencaliec, C. Bala - "Magnetic beads-based immunoassay as a sensitive alternative for atrazine analysis", *Talanta*, **2008**, 77, 839-843.
  10. M. Tudorache, C. Bala - "Sensitive Aflatoxin B1 determination using magnetic particles-based enzyme-linked immunosorbent assay", *Sensors*, **2008**, 8(12), 7571-7580.
  11. A. Mie, M. Sandulescu, L. Mathiasson, J. Emneus, C.T. Reimann - "Analysis of triazines and associated metabolites with electrospray ionization field-asymmetric ion mobility spectrometry/mass spectrometry", *Analytical Science*, **2008**, 24(8), 973-978.

M. Tudorache, J. Norberg, J. Emnéus - "Micro Immuno Supported Liquid Membrane ( $\mu$ -ISLM) extraction", poster presentation at the 8<sup>th</sup> INTERNATIONAL CONFERENCE on MINIATURIZED SYSTEMS for CHEMISTRY and LIFE SCIENCES,  $\mu$ -TAS, Malmö, Sweden, September 2004.

M. Tudorache *Immuno-affinity interactions in sample preparation and analysis*, PhD thesis, **2005** ISBN 91-7422-089-6 (ed. KFS AB, Lund, Suedia).