

INFORMAȚII PERSONALE

Grădinaru Vasile Robert



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Sexul M | Data nașterii 16/10/1974 | Naționalitatea română

EXPERIENȚA PROFESIONALĂ

1999-2000	Asistent universitar Universitatea „Alexandru Ioan Cuza” din Iași
2000-2007	Studii doctorale și postdoctorale Universitățile Konstanz și Freiburg, Germania
2007-2016	Lector universitar Universitatea „Alexandru Ioan Cuza” din Iași (www.uaic.ro)
2016-prezent	Conferențiar universitar Universitatea „Alexandru Ioan Cuza” din Iași

EDUCAȚIE ȘI FORMARE

1989-1993	Studii liceale: Liceul teoretic „Roman-Vodă”, Roman
1993-1997	Studii de licență: Facultatea de Chimie, Universitatea „Alexandru Ioan Cuza”, Iași
1997-1999	Studii de master: Facultatea de Chimie, Universitatea „Alexandru Ioan Cuza”, Iași
2000-2005	Studii doctorale: Facultatea de Biologie, Universitatea Konstanz, Konstanz, Germania Izolarea și purificarea, studii de cinetică și activitate enzimatică a unor enzime umane
2006-2007	Studii postdoctorale: Facultatea de Medicină, Institutul de Biochimie și Biologie moleculară, Universitatea din Freiburg, Freiburg, Germania Clonarea și studiul interacțiunii unor chaperoni din <i>N. Crasa</i> .
Septembrie 2013	Bursa DAAD Specializarea Biofizică, Facultatea de Biologie, Universitatea din Konstanz, Konstanz, Germania
23-29 Septembrie 2014	Bursa de predare LLP-Erasmus Universitatea de Tehnologie Chimică și Metalurgie, Sofia, Bulgaria

COMPETENTE PERSONALE

limba maternă	româna
limba străine	engleză și germană
Competențe digitale	Utilizarea unor programe de birou (office), software-uri specifice (chemdraw, origin, kaleidagraph, curvfit) și a unor baze de date specifice (genomică, proteomică)

Competențe dobândite la locul de muncă

Tehnici de amplificare (PCR), separare (electroforeză în geluri de agaroză), manipulare și analiză a ADN-ului. Tehnici de clonare în procariote utilizând plasmizi. Expertiză în multiplicarea bacteriilor și drojdiilor la scară mai mică sau cu ajutorul fermentatorului. Studii antimicrobiene pe bacterii gram-negative.

Tehnici de fracționare și purificare a proteinelor sau enzimelor: precipitare, dializă, centrifugare și ultracentrifugare purificarea acestora prin cromatografie (de schimb ionic, de interacții hidrofobe, de afinitate, de permeabilitate). Analiza purității proteinelor: electroforeză în condiții native sau denaturante. Expertiză în domeniul enzimologiei respective în imunodectia proteinelor sau complexilor proteici prin tehnica ELISA sau Western blot

Efectuarea de teste rapide pentru depistarea substanțelor toxice.

Tehnici de analiză spectrală și de spectrometrie de masă aplicate în studiul biomoleculilor.

Proiecte de cercetare științifică

Director de proiect: Tinere Echipe RP7/2007, Investigarea acil-CoA dehidrogenazelor umane și mecanismelor de reacție catalizate de acestea.

Membru în 8 proiecte: 1451/2005, GAR 241/2007, PC 2746/ 2007, PC 4300/2008, 2023/2008, PN-II-PTPCCA-2013-4-1149, PN-III-P4-ID-PCE-2016-0377, PN-III-P2-2.1-PED-2016-0869.



Lucrări indexate ISI publicate

1. Zaharia, M., Mihai, M., Roman T., Zbancioc, G., Pui, A., **Grădinaru, V.R.**, Logigan, C., Drochioiu, G. (2020), Unusual ferrite induced photohydrolysis of dinitrophenols to nonaromatic and nontoxic derivatives, *J. Photochem. Photobiol. A*, 394, 1 mai 2020, 112497.
2. Ilieva, D.M., Argirova, M., Angelova, L.Y., **Grădinaru, V.R.**, Drochioiu, G., Surleva, A. (2020), Application of chemical and biological tests for estimation of current state of a tailing dump and surrounding soil from the region of Târnița, Suceava, România, *Environ Sci Pollut Res*, 27, 1386–1396.
3. Hababescu, L., Jureschi, M., Petre, B.-A., Mihai, M., **Grădinaru, R.-V.**, Murariu, M., Drochioiu, G. (2020), Histidine-Lacked A β (1–16) Peptides: pH-Dependent Conformational Changes in Metal Ion Binding, *Int. J. Pept. Res. Ther.*, article in press.
4. Murariu, M., Hababescu, L., Ciobanu, C.I., **Grădinaru, V. R.**, Pui, A., Drochioiu, G., Mangalagiu, I. (2019), Interaction of amyloid A β (9–16) peptide fragment with metal ions: CD, FT-IR, and fluorescence spectroscopic studies, *Int. J. Pept. Res. Ther.*, 25(3), 897–909.
5. Necula, R., Gille, E., Dirtu, A.C., Sandu, I., **Grădinaru, V. R.**, Petcu, A., Drochioiu, G. (2018), Heavy metal-induced cuticular alkane changes of tall fescue (*Festuca arundinacea*) plantlets, *Rev. Chim. (Bucharest)*, 69 (7), 1682–1686.
6. Pintilie, O., Ion, L., Surleva, A., Zaharia, M., **Grădinaru, R.**, Drochioiu, G., Balan, A., Sandu, I., Monitoring methods which influence plants viability in genetic conservation: enzymatic assay, *Rev. Chim. (Bucharest)*, 67(4), 687–691, 2016.
7. Andrieș, C., Manea, M., Pocanschi, C.L., Pui, A., Drochioiu, G., **Grădinaru, V. R.** (2017), Coordination behavior of Coenzyme A towards gold ions: Spectroscopic, mass spectrometric and microbiological studies, *Bulg. Chem. Commun.*, 49(3), 621–628.
8. Ciobanu, C.I., Ștefănescu, R., Niculaua, M., Teslaru, T., **Grădinaru, R.** and Drochioiu, G. (2016), Letter: Mass spectrometric evidence for iron binding to the neuroprotective peptide NAP and its Cys5 mutant, *Eur. J. Mass Spectrom.*, 22, 97–104.
9. Zaharia, M., Tudorachi, L., Pintilie, O., Drochioiu, C., **Grădinaru, R.** and Murariu, M. (2016), Banned dinitrophenols still trigger both legal and forensic issues, *Environ Forensics*, 17(1), 120–130.
10. Surleva, A., Zaharia, M., Pintilie, O., Sandu, I., Tudorachi, L. and **Grădinaru, V.R.** (2016) Improved ninhydrin based reagent for spectrophotometric determination of ppb levels of cyanide, *Environ Forensics*, 17(1), 48–58.
11. Drochioiu, G. Ciobanu, C.I., Băncilă, S., Ion, L., Petre A.B., Andrieș, C., **Grădinaru, R.V.** and Murariu, M. (2016), Ultrasound-based protein determination in maize seeds, *Ultrasonics Sonochemistry*, 29, 93–103.
12. Ion, L., Ciobanu, C.I., Murariu, M., **Grădinaru, R.V.** and Drochioiu, G. (2016) SDS-induced peptide conformational changes: From Triglycyl-glycine to Amyloid- β Oligomers Associated with Alzheimer's Disease, *Int. J. Pept. Res. Ther.*, 22, 45–55.
13. Bancila, S., Pintilie, O. **Grădinaru, R.**, Sandu, I., Drochioiu, G., Balan, G. G. (2016) Interaction of heavy metal ions with glycyl-L-tryptophan in the presence of amyloid- β peptides, *Rev. Chim. (Bucharest)*, 67 (5), 974–977.
14. Andrieș, C., Manea, M., Drochioiu, G. and **Grădinaru, V.R.** (2015) New insights into coenzyme A interaction with mercury ions provided by mass spectrometric and circular dichroism spectroscopic approaches, *Eur. J. Mass Spectrom.*, 21, 97–102.
15. **Grădinaru, R.V.** and Apell, H. J. (2015) Probing the Extracellular Access Channel of the Na,K-ATPase, *Biochemistry*, 54 (15), 2508–2519.
16. Zaharia, M., **Grădinaru, R.** (2015) Interaction of Human Hemoglobin with Methotrexate, *Journal of Applied Spectroscopy*, 82(2), 285–292.
17. Zaharia, M., Borhan, A., Gherca, D., Pui, A., **Grădinaru, R.**, Zbancioc, G. and Drochioiu, G. (2014) Letter: Study on the mechanism of ferrite-induced dinitrophenol photodegradation, *Eur. J. Mass Spectrom.* 20, 193–197.
18. Asaftei, I.V., Alexandroaei, M., Bîrsa, M. L., Luca, A.C., **Grădinaru, R.** (2014), The action of a penicillinase with attenuated activity on a penicillin G substrate, *Rev. Chim.-Bucharest*, 65 (8), 903–906.
19. Zaharia, M., Jurcoane, S., Maftai, D., Pui, A., Dumitras-Hutaru, C. A. and **Grădinaru, R.** (2013) Yeast biodegradation of some pesticide dinitrophenols, *Rom. Biotech. Lett.*, 18 (2), 8144–8151.
20. Hăbășescu, L., Zbancioc, G., **Grădinaru, R.**, Murariu, M., Ferencz, L., Drochioiu, G. (2013) Copper binding to SG and EE peptides as a function of pH. Implication for understanding amyloidogenesis, *Rev. Roum. Chim.*, 58(6), 501–509.
21. Zaharia, M., Maftai, D., Dumitras-Hutaru, C. A., Pui, A., Lagobo, Z.C., Pintilie, O. and **Grădinaru, R.** (2013) Biodegradation of pesticides DINOCA and DNOC by yeast suspensions in a batch system, *Rev. Chim. (Bucharest)*, 64 (4), 388–392.
22. Tanase, C., Volf, I., Vintu, S., **Grădinaru, R.** and Popa, V. I. (2013) Potential applications of wastes from energy and forestry industry in plant tissue culture, *Cellulose Chem. Technol.*, 47 (7–8), 553–563.
23. Cozaciuc, I. A., Postolachi, R., **Grădinaru, R.** and Pui, A. (2012) Synthesis and characterization of uranyl (VI) chiral Schiff-base complexes derived from salicylaldehyde and L-aminoacids, *J. Coord. Chem.*, 65(12), 2170–2181.
24. Ciobanu, C., Grădinaru, L. M., **Grădinaru, R.V.**, Vlad, S (2012) Water soluble elastin adsorption onto UV-activated green polyurethane surfaces, *Dig. J. Nanomater. Bios.*, 7(1), 97–106.
25. Copcia, V.-E., **Grădinaru, R.**, Mihai, G.-D., Bilba, N., Sandu, I. (2012), Antibacterial Activity of Nanosized ZnO Hosted in Microporous Clinoptilolite and Mesoporous Silica SBA-15 Matrices, *Rev. Chim.-Bucharest*, 63 (11), 1124–1131.
26. **Grădinaru, R.**, Ionas, A., Pui, A., Zbancioc, G., Drochioiu, G. (2011), Interaction of inorganic mercury with CoA-SH and acyl-CoAs, *Biometals*, 24, 1115–1121.
27. Murariu, M., **Grădinaru, R. V.**, Mihai, M., Jurcoane, S., Drochioiu, G. (2011), Unexpected effect of nickel complexes of some histidine-containing peptides on *Escherichia coli*, *Roum. Biotechnol. Lett.*, 16(3), 6242–6246.
28. Vlad, S., Ciobanu, C., **Grădinaru, R.V.**, Grădinaru, L. M., Nistor, A. (2011) Antibacterial evaluation of some polyurethane membranes modified by zinc oxide nanoparticles, *Dig. J. Nanomater. Bios.*, 6(3), 921–930.
29. Ciobanu, C., Grădinaru, L. M., **Grădinaru, R.V.**, Drobota, M., Vlad, S (2011) Bovine serum albumin adsorption onto UV-activated green polyurethane surfaces, *Dig. J. Nanomater. Bios.*, 6(4), 1751–1761.

30. Hansen, S. H., Andersen, M. L., Cornett, C., **Grădinaru, R.**, Grunnet, N. (2010) A role for taurine in mitochondrial function, *J. Biomed. Sci.*, 17 (Suppl): S23, 1-8.
31. **Grădinaru, R.**, Luca, A.-M., Cretescu, I., Danac, R. (2010) Fluorescent Conjugates ; pH stability, dye-DNA interaction and biological activity, *Rev. Chim.-Bucharest*, 61 (9), 903-906.
32. Costin, D. T., **Grădinaru, R.**, Nemțoi, G. and Popa, K. (2010) Insight on the $^{204}\text{Tl}^+$ -*Escherichia Coli* system, *Rev. Roum. Chim.*, 55 (2), 153-156.
33. **Grădinaru, R.**, Valu, S.O., Postolache, S., Pavel, C.C., Sandu, I., Popa, K. (2009), On the influence of ETS-10 porosity and surface properties in retention of some nanoions and nanomolecules, *Environ. Eng. Manag. J.*, 8, 901-905.
34. **Grădinaru, R.**, Murariu, M., Dragan, E.-S., Drochioiu, G. (2007), Protein determination based on the buret absorption in the UV range and copper binding to peptide, *Roum. Biotechnol. Lett.*, 12(3), 3235.
35. **Grădinaru, R.**, Schowen, R. & Ghisla, S. (2007) Solvent isotope effects in reactions of human medium-chain acyl-CoA dehydrogenase active site mutants, *Biochemistry*, 46(9): 2497-2509.
36. Drochioiu, G., Oniscu, C., **Grădinaru, R.**, Murariu. (2004) The biostructural theory versus the chemiosmotic theory, *Roum. Biotechnol. Lett.*, 9(2), 1579-1586.
37. Ciugureanu, C., Murarescu, E. D., **Grădinaru, R.** (2000) Synthesis and study of some 2-imino-1,3-thiazetidine derivatives, *Rev. Chim.-Bucharest*, 51(8), 615-620.

Lucrări BDI publicate

1. Surleva, A., Marinova, A., Ivanova, V., **Grădinaru, R.**, Georgieva, S. (2017) Enzyme based methods for lactate determination, *Journal of Chemical Technology and Metallurgy*, 52(3), 513-525.
2. Zaharia, M., Drochioiu, G., Zbancioc, **Grădinaru, R.** (2016) Beyond dinitriphenol interaction with tryptophan-based compounds, *Acta Chemica Iași*, 24(1), 43-49.
3. Pintilie, O., Zaharia, M., Cisma, A., Murariu, M., **Grădinaru, R.**, Balan, G.G., Drochioiu, G., Sandu, I. (2016) Assessment of Alcohol Production by Uncoupling Oxidative Phosphorylation on Some Pollutants, *Yeast*, 24(1), 43-49.
4. Zaharia, M., Pintilie, O., Cosma, A., **Grădinaru, R.**, Drochioiu, G., Murariu, M., Sandu, I. (2014) Toxicitatea și utilitatea compușilor dinitrofenolici ca medicament, *Revista Tehnoscopia*, 2 (11), 12-17.
5. Surleva, A., Zaharia, M., Ion, L., **Grădinaru, R.**, Drochioiu, G., Mangalagiu, I. (2013) Ninhydrin-based spectrophotometric assays of trace cyanide, *Acta Chemica Iași*, 21, 57-70.
6. Zbancioc, G., **Grădinaru, R.**, Drochioiu, G., Mangalagiu, I. (2011) Nicotine and tobacco alkaloids: A GC-MS approach, *International Journal of Criminal Investigation*, 2(1), 3-10.
7. Drochioiu, G., Sandu, I., **Grădinaru, R.**, Zbancioc, G., Mangalagiu, I. (2011) Ninhydrin-based forensic investigations: II. Cyanide analytical toxicology, *International Journal of Criminal Investigation*, 1(4), 213-226.
8. Vițelaru, C., Dascălu, A., **Grădinaru, V.R.**, Popa, K. and Borcia, C. (2011) Liquid Scintillation Counting Applied for Studying the Influence of Microorganisms on the U(IV) to U(VI) Oxidation Process, *Acta Chemica Iași*, 19, 117-123.
9. Zbancioc, G., Moldoveanu, C., **Grădinaru, R.**, Drochioiu, G., Olteanu, G., Mangalagiu, I. (2011) The metabolism of drugs / toxics in the body. Case study: BZP, *International Journal of Criminal Investigation*, 1(1), 17-24.
10. Drochioiu, G., Adochitei A., Habasescu, L., Zbancioc, G., Pui, A., **Grădinaru, R.**, Rusu, E. (2009) CD and FT-IR study of some adducts of albumin with toxic dinitrophenyl derivatives, *Bull. Polytechnic Inst. Iasi*, 55 (4), 23-28.
11. **Grădinaru, R.**, Drochioiu, G., Grădinaru, L., Ghisla, S. (2007), Human medium-chain acyl-CoA dehydrogenase. Charge transfer complexes studies with E99G-, E376Q- and E99G/E376Q-MCAD mutants, *Analele Stiintifice ale Universitatii Al I Cuza din Iași*, Chimie, 15 (1), 106-110.
12. **Grădinaru, R.**, Damoc, N. E., Grădinaru, L., Mangalagiu, I., Drochioiu, G. (2004) UV Protein Assay Based on the Biuret Reaction, *Analele Stiintifice ale Universitatii Al I Cuza din Iași*, Chimie, 12, 5-10.
13. Sunel, V., Basu, C., Ciugureanu, C., **Grădinaru, R.** (1999) Syntheses of new antimetabolites with α -amino acids support, *Analele Stiintifice ale Universitatii Al I Cuza din Iași*, Chimie, 7(2), 335-340.
14. Nicolaescu, T., Simion, C., Barabula, D., Dorohoi, D. **Grădinaru, R.** (1998) Synthesis and physico-chemical characterization of some 4-styryl-coumarin derivatives, *Analele Stiintifice ale Universitatii Al I Cuza din Iași*, Chimie, 6, 23-28.

Lucrări publicate în revistele și volumele conferințelor cu referenți (neindexate)

1. Drochioiu, G., Cloșcă, C.-M., Ion, L., Pelin, I., **Grădinaru, R.-V.** (2019), Bacteriorhodopsin from Halobacterium Salinarium is a key compound of bioenergetics (Conference paper) International Multidisciplinary Scientific GeoConference Sureying Geology and Mining Ecology (SGEM), 19 (6.1), 575-582.
2. Mihai, A.I., Drochioiu, G., Murariu, M., **Grădinaru, R.-V.**, Zaharia, M. (2018), Evaluation of nutrient pollution in red, Băta Doamnei and Izvorul Muntelui lakes in Neamț county, Romania (Conference paper) International Multidisciplinary Scientific GeoConference Sureying Geology and Mining Ecology (SGEM), 18 (5.1), 353-360.
3. Drochioiu, G., Surleva, A., Iacoban, C., Halim, E.M., **Grădinaru, R.** (2017) Eco-friendly methods for heavy metal removing from Târnița mining area, *Metal ions in biology and medicine*, SGEM, 17(51), 297-304.
4. Surleva, A., Marinova, A., Ivanova, V., **Grădinaru, R.** and Georgieva, S. (2017) Enzyme based methods for lactate determination, *Journal of Chemical Technology and Metallurgy*, 52(3), 513-525.
5. Zaharia, M., Drochioiu, G., Zbancioc, **Grădinaru, R.** (2016) Beyond dinitriphenol interaction with tryptophan-based compounds, *Acta Chemica Iași*, 24(1), 43-49.
6. Zaharia, M., Pintilie, O., Cosma, A., **Grădinaru, R.**, Drochioiu, G., Murariu, M., Sandu, I. (2014) Toxicitatea și utilitatea compușilor dinitrofenolici ca medicament, *Revista Tehnoscopia*, 2(11), 12-17.



7. Surleva, A., Zaharia, M., Ion, L., **Grădinaru, R.**, Drochioiu, G., Mangalagiu, I. (2013) Ninhydrin-based spectrophotometric assays of trace cyanide, *Acta Chemica Iași*, 21, 57-70.
8. Zbancioc, G., **Grădinaru, R.**, Drochioiu, G., Mangalagiu, I. (2011) Nicotine and tobacco alkaloids: A GC-MS approach, *International Journal of Criminal Investigation*, 2(1), 3-10.
9. Drochioiu, G., Sandu, I., **Grădinaru, R.**, Zbancioc, G., Mangalagiu, I. (2011) Ninhydrin-based forensic investigations: II. Cyanide analytical toxicology, 1(4), 213-226.
10. Vițelaru, C., Dascălu, A., **Grădinaru, V.R.**, Popa, K. and Borcia, C. (2011) Liquid Scintillation Counting Applied for Studying the Influence of Microorganisms on the U(IV) to U(VI) Oxidation Process, *Acta Chemica Iași*, 19, 117-123.
11. Zbancioc, G., Moldoveanu, C., **Grădinaru, R.**, Drochioiu, G., Olteanu, G., Mangalagiu, I. (2011) The metabolism of drugs / toxics in the body. Case study: BZ, *International Journal of Criminal Investigation*, 1(1), 17-24.
12. Drochioiu, G., Adochitei A., Habasescu, L., Zbancioc, G., Pui, A., **Grădinaru, R.**, Rusu, E. (2009) CD and FT-IR study of some adducts of albumin with toxic dinitrophenyl derivatives, *Bulletin of the Polytechnic Institute of Jassy*, 55(4), 23-28.
13. Drochioiu, G., Jurcoane, S., Murariu, M., Danac, R., **Grădinaru, R.** (2008) Biodegradation of some dinitrophenyl derivatives used as herbicides and metabolic inhibitors, *European BioRemediation Conference*, 4, 1-3.
14. Drochioiu, G., Manea, M., Murariu, M., Popa, K., **Grădinaru, R.**, Przybylski, M. (2008) Metal-induced changes of amyloid proteins associated with neurodegenerative diseases, *Metal ions in biology and medicine*, 10, 664-669.
15. **Grădinaru, R.**, Kieweg, V., Kuchler, B., Ghisla, S. (2002) On the role of the 376-functional group in catalysis by medium chain acyl-CoA-dehydrogenase, *Flavins and Flavoproteins*, 14, 193-198

Brevete obținute

Zaharia, M., **Grădinaru, R.**, Zaharia E. A., Murariu, M., Drochioiu, G. (2015) Metodă spectrofotometrică de determinare a activității agenților decuplanți ai fosforilării oxidative, A/00057/27.01.2015, OSIM București.

Data
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