CURRICULUM VITAE

1. **Surname:** BUCUR
2. **Given name:** BOGDAN
3. **Data and place of birth:** 05.11.1975 - Costesti, Romania
4. **Citizenship:** Romanian
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6. **Tel:** +40-(0)- 74.58.15.204
7. **Languages:** English, French
8. **Area of competence:** Analytical chemistry, amperometric, impedimetric, optic and mass biosensors, enzyme and DNA immobilisation, toxic compound detection by enzymatic inhibition, microorganisms identification by DNA based biosensors, enzymatic biosensors for substrate analysis, flow methods of analysis.
9. **Additional professional skills:** Ability to work in multidisciplinary research teams, experience in international research projects, scientific and administrative research grant management, master and Ph.D. students supervising.
10. **Other qualifications:**

-Qualification for **Maître de conférences** grade by French Education Department for Section 31 (Theoretical, physical and analytical chemistry) Nr. 08231184939/2008 and for Section 64 (Biochemistry and molecular biology) Nr. 09264184939/2009. These were obtained after a peer-review commission has evaluated the scientific and didactic activities and certify that I have the required competence for employment as associated professor in any French University.

-Reviewer for prestigious scientific journals: Biosensors and Bioelectronics, Electrochimica Acta, European Food Research and Technology, Aquaculture, Analytical letters, Microchimica Acta, Sensors

11. **Studies:**

Institution	Period	Diploma
BIOMEM- Centre of Phytopharmacy - University of Perpignan- **France**	Oct. 2002 – Sept. 2005	**Ph.D. Diploma** in co-direction, project: "*Chemical and Biochemical Sensors with Applications for Flow Injection Analysis"*. University of Perpignan awarded the mention **Très Honorable avec Félicitations du Jury**
Faculty of Chemistry – University of Bucharest – **Romania**	Nov. 2000 – Sept. 2005	
Faculty of Chemistry – University of Bucharest – **Romania**	Oct. 1999 – June 2001	**Master Diploma** with the speciality Biosensors in environmental monitoring, project: "*Spectrometric determination of organophosphorus insecticides in a FIA system based on AChE inhibition*"
	Oct. 1994 – June 1998	**License Diploma** with the speciality in Analytical Chemistry, project: "*The use of dialysis separations in flow analysis techniques*"

12. Work experience:

Institution	Function	Period	Description
National Institute of Research & Development for Biological Sciences (INCDSB), Romania	Senior researcher (1st degree since 2017; 2nd degree in 2012)	Mars 2008-present	Biosensors development
LISE-Laboratoire Interfaces et Systèmes Electrochimiques (University P. et M. Curie) Paris, France	Post-doctoral researcher	Mars 2007-Febr. 2008	DNA mass biosensors
Faculty of Chemistry, Polytechnic University of Bucharest (UPB), Romania	Post-doctoral researcher	Dec. 2005-Feb 2007	Biosensors development
National Institute of Research & Development for Biological Sciences (INCDSB), Romania	Post-doctoral researcher	Nov. 2005-Feb 2007	Biosensors development
Technical Institute of Biology (IUT)-University of Perpignan, France	Assistant professor	2004-2005	Laboratory practice of enzymology for undergraduate students (48 and respectively 73 hours)
		2003-2004	
Research Institute for Cereals and Technical Plants -Pitesti - Romania	Chemical engineer	March 1999-Oct.1999	Soil, plants and environmental waters analysis

13. Research stages:

Receiving institution	Supported by	Period	Description
University of Perpignan, **France**, Images (EA 4218)	Brancusi Romania-France bilateral grant (ENZYTOX)	June-July 2011 (1 month)	biosensors for food analysis
Universite Claude Bernard Lyon 1, **France**, Laboratoire de Genie Enzymatique et Biomoleculaire (UMR 5246)	Romanian grant (MICROSEN)	July 2008 (1 month)	enzyme immobilization on microelectrode array
LISE-Laboratoire Interfaces et Systèmes Electrochimiques, UMR 8235, University P. et M. Curie, Paris, **France**	ANR research contract	Mars 2007-Febr. 2008	DNA piezoelectric biosensors
University of Perpignan, Center of Phytopharmacy-**France**	Research contract NOVTECH	Nov. 2004- June 2005	Enzyme immobilization via bioaffinity links, development of several amperometric biosensors based on AChE inhibition, construction of a
	EGIDE - CNRS (French Ministry of	Oct. 2003- June 2004	

	Research scholarships)	Sept. 2002- June 2003	FIA system for neurotoxic insecticide detection. Design and realisation of an enzymatic biosensor for the control of the wine quality.
		Nov. 2001- April 2002	
University of Valencia, Department of Analytical Chemistry- **Spain**	Erasmus-Socrates scholarship from the University of Bucharest	March 2001- June 2001	rFIA detection of ammonium applied for medicines and fertilizers.

14. Participation of international research programs:

Programme	**Period:**
Romania-France bilateral programme Brancusi: " *Enzymatic Biosensors for selective and sensible detection of toxic substances*" ENZYTOX (487/2011); **Partner responsible**	2011-1012
FP7:"*Biosensors and sensors for the industrial biosynthesis process of widely used commercial antioxidants: Nutraceuticals as additives for food and aquaculture promoting public health and safety*", 232522, SENSBIOSYN	2009-2011
"*Biocapteurs pour la détection d'éléments toxiques*" (HABSEACHIP), ANR PRECODD (National Research Agency-France)	2007-2008
FP6:"*Ready to eat food for breakfast and sport activity with high content of nutraceutics preventing disease and promoting public health*", 023044, NUTRA-SNAKS	2006-2009
FP5: "*Novel Technology for Controlling Wine Production and Quality*", HPRN-CT-2002-00186, NOVTECH	2004-2005
FP5: "Sensor Arrays For Environmental, Generic And Routine Detection of Pesticides", QLK3-CT-2000-00481, SAFEGARD	2001-2004
Leonardo da Vinci: "Training module for environmental pollution control", contract nr. RO/02/B/F/PP-141004	2003-2005
FP5: "New biosensors for improved detection of environmental contamination by anticholinesterase pesticides", QLK3-2000-00650, ACHEB	2000-2004
FP4: "*Flow Injection Methods of Analysis for the Improvement the Quality Control of Drinking Water*", INCO-Copernicus ERBIC 15CT980119	1998-2000

15. Participation of research programs supported by Romanian government:

Programme	**Period**	**Function**
"Integrated research and sustainable solutions to protect and restore Lower Danube Basin and coastal Black Sea ecosystems/ Cercetare integrată și soluții sustenabile pentru protecția și restaurarea ecosistemelor din bazinul inferior al Dunării - zona costieră a Mării Negre", cod 18/16.11.2022, Apel nr. PNRR-III-C9-2022 – I5	2023-2026	**Partner responsible**
"*Sensitive and selective detection of neurotoxic insecticides based on cholinesterase biosensors coupled with solid phase extraction* " PN-III-P2-2.1-PED-2016-0367; Contract UEFISCDI nr. 45PED/2017	2017-2018	**Director of project**
"*New molecularly imprinted polymers (MIPs) developed for the sensitive and fast analysis of nitrofuran based antibiotics*" PN-II-PT-PCCA-2013-	2014-2016	**Partner responsible**

4-0203; Contract UEFISCDI Nr. 197/2014		
”*New biosensors for analysis of less investigated toxic substances in foods*” TE-100; Contract UEFISCDI Nr. 4/2010	2010-2013	**Director of project**
“*Micro-biosensors for pesticides detection from enviromental and food samples (Microsen)*” Contract PNCDI 2 Nr. 11049-01-2007	2007-2010	**Partner responsible**
“*Fast methods for toxins monitoring during food production to increase safety (SAFEFOOD)*” Contract PNCDI 2 Nr. 61-030-2007;	2007-2010	Researcher
“*Amperometric biosensors network for simultaneous analysis of methanol and ethanol (BAME)*” - Contract Nr. 156/2006-BIOTECH	2006-2008	**Partner responsible**
“*Analytical characterisation of the redox biosystems for practical applications”*, Contract Nr. 3163/2005-UEFISCU, project for post-doctoral researchers	2005-2006	Researcher
“*Biomimetic system for selective and sensitive detection of some organophosphorus toxic substances (BIOSIF)”*, Contract Nr. 35/2005-Romanian Space Agency	2005-2006	Researcher
“*Florescence Based Sensor for Oxygen Partial Pressure Determination*”, Contract Nr. 3-137/2003-CERES	2003-2005	Researcher
"Amperometric sensors based on self-assembled monolayers for phenols determination in waters", Contract Nr. 39339 /2002, ANSTI grant for Ph. D. students (Td)	2002-2004	**Director of project**
"*Flow techniques for preconcetration and chemical treatment of the samples in environmental pollution monitoring*", Contract 6154/2000, ANSTI	2000-2003	Researcher
"*Chemical and biochemical sensors for automatic flow analysis with applications in product quality control and environmental pollution*", Contract 37116/2000, CNCSIS	2000-2002	Researcher
"*Automatic methods of flow analysis of organophosphorus insecticides and phenols from waters*", Contract No. 6154/20.10.2000, ANSTI grant for undergraduate students (Ts)	2000-2001	**Director of project**

16. Professional references:

Name	Institution	Contact
Dr. Hubert Perrot	LISE-Laboratoire Interfaces et Systèmes Electrochimiques (Université P. et M. Curie) Paris, UPR 15 du CNRS,	Case Courrier n°133, 4, place Jussieu, 75252 Paris Cedex 05, France, Tel : 33-(0)1-44-27-72-16, e-mail : hubert.perrot@upmc.fr
Prof. Dr. Jean-Louis Marty	BIOMEM, Centre de Phytopharmacy, University of Perpignan, France	Av. Paul Alduy, No 52, 66860, Perpignan, France Tel: 33(0)468662254 e-mail: sensbiotech@gmail.com

Prof. Dr. Jose Martynez Calatayud	Department of Analytical Chemistry, University of Valencia, Spain	Avda. Blasco Ibáñez, No 13, 46010, Valencia, Spain Tel/Fax: 34 96 354 40 62 e-mail: jose.martinez@uv.es

17. List of articles & patents:

Articles with rang A:

1. M. C. Radulescu, M. P. Bucur, **B. Bucur**, A. Iosageanu, G. L. Radu: "*4-Phenyl isothiocyanate modified electrode based on diazonium electrodeposition for heavy metals detection in pharmaceuticals*" Talanta, 295, 128339, 2025, DOI: 10.1016/j.talanta.2025.128339

2. M. P. Bucur, M. C. Radulescu, **B. Bucur**, G. L. Radu: "*Acetylcholinesterase and butyrylcholinesterase co-immobilized on a copper containing Prussian blue modified electrode for the broad screening of insecticide*s" Analytical Bioanalytical Chemistry, 416, 5059–5070, 2024, DOI: 10.1007/s00216-024-05443-1

3. M. C. Radulescu, M. P. Bucur, **B. Bucur**, G. L. Radu: "*Electrochemical Detection Of Heavy Metals In Raw Materials Using a Glassy Carbon Electrode Modified With 4-Aminothiophenol*", Journal of The Electrochemical Society, 169, 106513, 2022, DOI: 10.1149/1945-7111/ac9716

4. M. P. Bucur, **B. Bucur**, E. Bacalum, V. David, G. L. Radu: „*Ternary water–organic solvent mixtures used for insecticide SPE extraction and analysis with acetylcholinesterase biosensor*", Analytical Biochemistry, 654, 2022, 114843, DOI: 10.1016/j.ab.2022.114843

5. M. C. Radulescu, M. P. Bucur, **B. Bucur**, G. L. Radu: "*Rapid Determination of 5-Nitrofuran Ring Antibiotics in Complex Samples Using a Boron-Doped Diamond Electrode and Differential Pulse Voltammetry*", Analytical Letters, 2021, 54(14), 2363-2375, DOI: 10.1080/00032719.2020.1862140

6. A. Chira, **B. Bucur**, G.-L. Radu: "*Investigation of the corrosion inhibition properties of new phenyl aldehyde organic layers functionalized with different amino alcohols electrodeposited on copper*", Comptes Rendus Chimie, 2021, 24(1), 21-31 DOI: 10.5802/crchim.59

7. M. C. Radulescu, M. P. Bucur, **B. Bucur**, G. L. Radu: "*Ester flavorants detection in foods with a bienzymatic biosensor based on a stable Prussian blue-copper electrodeposited on carbon paper electrode*", Talanta. 2019,199, 541–546, DOI: 10.1016/j.talanta.2019.02.094

8. M.-P. Bucur, **B. Bucur**, G.-L. Radu: "*Simple, selective and fast detection of acrylamide based on glutathione S-transferase*", RSC Advances, 8, 23931-23936, 2018; DOI: 10.1039/C8RA02252F

9. E. Rusen, A. Diacon, A. Mocanu, F. Rizea, **B. Bucur**, M. P. Bucur, G.-L. Radu, E. Bacalum, M. Cheregi, V. David: "*Synthesis and retention properties of molecularly imprinted polymers for antibiotics containing a 5-nitrofuran ring*", RSC Advances, 2017, 7, 50844–50852, DOI: 10.1039/c7ra10196a

10. A. Chira, **B. Bucur**, G.-L. Radu: "*Electrodeposited Organic Layers Formed from Aryl Diazonium Salts for Inhibition of Copper Corrosion*", Materials, 10, 235, 2017; DOI: 10.3390/ma10030235

11. M. C. Radulescu, M. P. Bucur, A. Alecu, **B. Bucur**, G. L. Radu: "*Electrochemical Determination of Hydrogen Peroxide Using a Prussian Blue-Copper Modified Platinum Microelectrode*", Analytical Letters, 49(13), 2006-2017, 2016; DOI: 10.1080/00032719.2015.1131706

12. M.P. Bucur, M.C. Radulescu, **B. Bucur**, G.L. Radu: „*Low-interferences Determination of the Antioxidant Capacity in Fruits Juices Based on Xanthine Oxidase and Mediated Amperometric Measurements in the Reduction Mode*", Analytical Sciences, 32(2), 135-140, 2016; DOI: 10.2116/analsci.32.135

13. M.C. Radulescu, M.P. Bucur, **B. Bucur**, G.L. Radu: „*Biosensor based on inhibition of monoamineoxidases A and B for detection of β-carbolines*", Talanta 137, 94–99, 2015; DOI: 10.1016/j.talanta.2015.02.013

14. A. Chira, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Electrode-modified with nanoparticles composed of 4,4'-bipyridine-silver coordination polymer for sensitive determination of Hg(II), Cu(II) and Pb(II)"*, New Journal of Chemistry, 38(11), 5641-5646, 2014 DOI: 10.1039/c4nj01245c

15. I. Mihai, A. Vezeanu, C. Polonschii, S. David, S. Gáspár, **B. Bucur**, C. Blaszykowski, S. Sheikh, M. Thompson, A. Vasilescu: "*Low-Fouling SPR Detection of Lysozyme and Its Aggregates*", Analytical Methods 2014, 6, 7646–7654 DOI: 10.1039/C4AY01237B

16. A. Chira, B. Bucur, M.C. Radulescu, T. Galaon, G.L. Radu: "*Study of Electrochemically Modified Electrode with Synthesized N-benzyl-4,4'-bipyridine with Anti-Fouling Properties for Oxygen and Hydrogen Peroxide Detection*", International Journal of Electrochemical Science, 9, 4493 – 4511, 2014 DOI:10.1016/S1452-3981(23)08108-7

17. M. C. Radulescu, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Bienzymatic Biosensor for Rapid Detection of Aspartame by Flow Injection Analysis*", Sensors, 14, 1028-1038, 2014 DOI: 10.3390/s140101028

18. O. I. Covaci, **B. Bucur**, G. L. Radu: "*Acrolein detection based on alcohol dehydrogenase inhibition*", International Journal of Environmental Analytical Chemistry, 93(3), 325-334, 2013 DOI:10.1080/03067319.2011.581374

19. M. P. Bucur, **B. Bucur**, G. L. Radu: "*Critical Evaluation of Acetylthiocholine Iodide and Acetylthiocholine Chloride as Substrates for Amperometric Biosensors Based on Acetylcholinesterase*", Sensors, 13, 1603-1613, 2013, DOI:10.3390/s130201603

20. O. I. Covaci, A. Sassolas, G. A. Alonso, R. Muñoz, G. L. Radu, **B. Bucur**, J.-L. Marty: "*Highly sensitive detection and discrimination of LR and YR microcystins based on protein phosphatases and an artificial neural network*", Analytical and Bioanalytical Chemistry, 404, 711–720, 2012, DOI: 10.1007/s00216-012-6092-6

21. G. García-Martinez, E.A. Bustabad, H. Perrot, C. Gabrielli, **B. Bucur**, M. Lazerges, D. Rose, L. Rodriguez-Pardo, J. Fariña, C. Compère, A.A. Vives: "*Development of a Mass Sensitive Quartz Crystal Microbalance (QCM)-Based DNA Biosensor Using a 50 MHz Electronic Oscillator Circuit*" Sensors, 11(8), 7656-7664, 2011, DOI:10.3390/s110807656

22. M. C. Radulescu, A. Chira, M. Radulescu, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Determination of Silver(I) by Differential Pulse Voltammetry Using a Glassy Carbon Electrode Modified with Synthesized N-(2-Aminoethyl)-4,4'-Bipyridine*", Sensors, 10(12), 11340-11351, 2010; DOI: 10.3390/s101211340

23. M. P. Bucur, **B. Bucur**, C. M. Radulescu, O. I. Covaci, G. L. Radu: "*L-cysteine determination based on tyrosinase amperometric biosensors without interferences from thiolic compounds*", Analytical Letters, 43(15), 2440–2455, 2010; DOI: 10.1080/00032711003725540

24. O. I. Covaci, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Optimization of acetylcholinesterase immobilization on microelectrodes based on nitrophenyl diazonium for sensitive organophosphate insecticides detection*", Microchimica Acta, 169(3), 335-343, 2010 ; DOI: 10.1007/s00604-010-0336-y

25. M. C. Radulescu, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Quality control method based on quartz crystal microbalance and WGA for flour milled from germinated wheat*", European Food Research and Technology, 229, 833–840, 2009; DOI: 10.1007/s00217-009-1120-2

26. **B. Bucur**, G. L. Radu, C. N. Toader: "*Analysis of methanol–ethanol mixtures from falsified beverages using a dual biosensors amperometric system based on alcohol dehydrogenase and alcohol oxidase*", European Food Research and Technology, 226, 1335-1342, 2008; DOI: 10.1007/s00217-007-0662-4

27. M. P. Dondoi, **B. Bucur**, A. F. Danet, C. N. Toader, L Barthelmebs, J. L. Marty: "*Organophosphorous insecticides extraction and oxidation on column for analysis with a acetylcholinesterase (AChE) biosensor*", Analytica Chimica Acta, 578(2), 162–169, 2006; DOI: 10.1016/j.aca.2006.07.002

28. **B. Bucur**, D. Fournier, A. F. Danet, J.-L. Marty: *"Biosensors based on highly sensitive acetylcholinesterases for enhanced carbamate insecticides detection*", Analytica Chimica Acta, 562(1), 115-121, 2006; DOI: 10.1016/j.aca.2005.12.060

29. **B. Bucur**, E. Mallat, A. M. Gurban, Y. Gocheva, C. Velasco, J. L. Marty, T. Noguer: "*Strategies to develop malic acid biosensors based on malate quinone oxidoreductase (MQO)*", Biosensors and Bioelectronics, 21(12), 2290-2297, 2006; DOI: 10.1016/j.bios.2005.10.022

30. **B. Bucur**, M. Dondoi, A. F. Danet, J.-L. Marty: "*Insecticide identification using a FIA system with biosensors based on various cholinesterases*", Analytica Chimica Acta, 539, 195-201, 2005; DOI: 10.1016/j.aca.2005.03.026

31. **B. Bucur**, A. F. Danet, J.-L. Marty: "*Cholinesterase immobilisation on the surface of screen-printed electrodes based on Concanavalin A affinity*", Analytica Chimica Acta, 530(1), 1-6, 2005; DOI: 10.1016/j.aca.2004.09.009

32. **B. Bucur**, A. F. Danet, J.-L. Marty: "*Versatile method of cholinesterase immobilisation via affinity bonds using Concanavalin A applied to the construction of a screen-printed biosensor*", Biosensors and Bioelectronics, 20(2), 217-225, 2004; DOI: 10.1016/j.bios.2004.02.024

33. **B. Bucur**; S. Andreescu; J.-L. Marty: "*Affinity Methods to Immobilize Acetylcholinesterases for Manufacturing Biosensors*", Analytical Letters, 37(8), 1571 – 1588, 2004; DOI: 10.1081/AL-120037588

34. F. Danet, **B. Bucur**, M.C. Cheregi, M. Badea, S. Serban: "*Spectrophotometric determination of organophosphoric insecticides in a FIA system based on AChE inhibition*", Analytical Letters, 36(1), 59-73, 2003; DOI: 10.1081/AL-120017263

Articles with rang B:

1. A. Chira, **B. Bucur**, T. Galaon, G.L. Radu: "*Study of the synthesis and environmental removal of 4,4'-dipyridine derivatives*", Environmental Engineering and Management Journal, 14(2), 269-275, 2015

2. O.I. Covaci, **B. Bucur**, L. Galateanu, F. Craciunoiu, G.L. Radu: "*Construction, activation and modification of platinum microelectrodes for (bio)sensors development*", Digest Journal of Nanomaterials and Biostructures, 6(2), 731-738, 2011

3. M. P. Bucur, **B. Bucur**, J. L. Marty, G. L. Radu: "*In vitro investigation of anticholinesterase activity of four biochemical pesticides: spinosad, pyrethrum, neem bark extract and veratrine*", Journal of Pesticide Science, 39(1), 48–52, 2014; DOI: 10.1584/jpestics.D13-062

4. **B. Bucur,** M. P. Bucur, G. L. Radu, "*Improvement of the storage stability for biosensors based on alcohol oxidase immobilized by entrapment in a photopolymerisable matrix*", Rev. de Chimie, 58(11), 1145-1148, 2007

5. I. Bineva, R. Voicu, A. Dinescu, R. Gavrila, R. Muller, D. Esinenco, **B. Bucur**, M. Diaconu, L. G Radu: "*SiO2 microcantilevers designed for biosensing: Experiments and Simulations*", Romanian Journal of Information Science and Technology, 10(1), 13-23, 2007

6. **B. Bucur**, M. C. Icardo, J. M. Calatayud: "*Spectrophotometric determination of ammonia by an rFIA assembly*", Rev. Roum. Chim., 52(2), 101-108, 2006

7. M. P. Dondoi, A. F. Danet, **B. Bucur**, M. C. Cheregi: "*Organophosphorus pesticide determination with a potentiometric biosensor based on acetylcholinesterase*", Rev. de Chimie, 56, 4, 327-330, 2005

8. A. Radu, **B. Bucur**, M. Cheregi, A. F. Danet, S. Kalinowski*: "Spectrometric determination of phenols from waters using an automated flow injection analysis system*", Rev. de Chimie, 52, 1-2, 2001

Book chapters & review articles:

1. M. P. Bucur, M. C. Radulescu, G. L. Radu, **B. Bucur**: "*Cavitation-Effect-Based Treatments and Extractions for Superior Fruit and Milk Valorisation*" Molecules 2023, 28, 4677, DOI: 10.3390/molecules28124677
2. **B. Bucur**, C. Purcarea, S. Andreescu, A. Vasilescu: "*Addressing the selectivity of enzyme biosensors: Solutions and perspectives*", Sensors, 21(9),3038, 2021, DOI: 10.3390/s21093038
3. **B. Bucur**, F.-D. Munteanu, J.-L.Marty, A. Vasilescu: "*Advances in enzyme-based biosensors for pesticide detection*", Biosensors, 8(2),27, 2018 DOI: 10.3390/bios8020027
4. **B. Bucur**, S.I. Hosu, A. Vasilescu: „*Biosensors for Characterisation of Bioactive Compounds from Wines*", Frontiers in Bioactive Compounds, 2016, Vol. 1, 147-189 (Constantin Apetrei) ed. Bentham Science Publishers. ISSN: 2468-6395 DOI: 10.2174/9781681083414116010008
5. **B. Bucur**: "*Technological Barriers in the Use of Electrochemical Microsensors and Microbiosensors for in vivo Analysis of Neurological Relevant Substances*", Current Neuropharmacology, 10(3), 197-211, 2012 DOI: 10.2174/157015912803217350
6. M. P. Bucur, **B. Bucur**, G. L. Radu: "*Metoda enzimatica de analiza a L-cisteinei fara interferente din partea compusilor tiolici*", Tehnici experimentale in bioanaliza, Vol IX, Coord. G. L. Radu, Ed. Printech, ISBN 978-606-521-869-7, pag 57-72, 2012
7. **B. Bucur**, M.P. Bucur, G. L. Radu: "*Retea de biosensori amperometrici pentru analiza simultana a metanolului si etanolului*", Tehnici experimentale in bioanaliza, Vol VII, Coord. G. L. Radu, Ed. Printech, ISBN 978-606-521-078-3, pag 1-29, 2008
8. S. Andreescu, **B. Bucur**, J. L. Marty: "*Affinity Immobilization of Tagged Enzymes*", Immobilization of Enzymes and Cells, Second Edition, Coord: J. M. Guisan, Humana Press, ISBN 1-58829-290-8, 2006
9. **B. Bucur**, A. Danet, J. L. Marty, G. L. Radu: "*Metode de analiza in flux*", Elemente de bioelectroanaliza, Coord. G. L. Radu, Ed. Printech, ISBN 973-718-367-3, pag 107-132, 2005
10. **B. Bogdan**, M. Campas, B. Prieto-Simon, S. Andreescu, J. L. Marty: "*Enzymatic biosensors for screening carbamate insecticides: Application to environmental and food monitoring*", Ecological Chemistry and Engineering, 13(5), 339-348, 2006
11. M. Campas, **B. Bucur**, S. Andreescu, J.-L. Marty: "*Application of oriented immobilisation methods to enzyme sensors*", Current Topics in Biotechnology, 1, 95-107, 2004

Romanian patents

1. Patent claim A00387/16.06.2026 C. Radulescu, M.P. Bucur, **B. Bucur**, A. Teban-Man, M. D. Nicoară, H. L. Banciu: "*Biosenzor bienzimatic pentru screeningul prezentei insecticidelor si guanitoxinei într-o singură măsurătoare din probe de apă*"
2. Patent claim A00231/10.06.2025 C. Radulescu, M.P. Bucur, **B. Bucur**, G.L. Radu: „*Electrozi screen-printati de aur modificati prin electrodepunere cu un strat organic de grupari isotiocianat pentru analiza sensibila a ionilor de fier (II) si plumb (II)"*
3. Patent A RO33210B1/2022 E. A.-M Rusen., A. Diacon, A. Mocanu, E. Bacalum, M. Cheregi, V. David, **B. Bucur**, P.M. Bucur, G.L. Radu:. „*Polimer imprentat molecular, obţinut prin polimerizare în masă pentru nitrofurantoină pentru realizarea de coloane de extractive în faza solidă şi senzori electrochimici*"
4. Patent No: RO125232-B1/2012. **B. Bucur**, M. P. Bucur, G. L. Radu, C. Radulescu "*Metoda pentru determinarea concentratiilor de methanol si etanol din amestecuri fara separarea analitilor*"
5. Patent No: RO127566 B1/2013 L. A. Galateanu, M. Bazu, E. Virgil, O. I. Covaci, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Microbiosenzor enzymatic pentru detectia insecticidelor organofosforice*"
6. Patent No: RO127776 B1/2016 O. I. Covaci, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Metoda pentru determinarea rapida a acroleinei*"

18. Oral presentations:

1. M.P. Bucur, M.C. Radulescu, **B. Bucur**, M.D. Nicoara, A. Teban-Man, H. L. Banciu: "*Butyrylcholinesterase biosensor for guanitoxin screening in cyanobacterial blooms" DANUBIUS-RO 2026 , Bucharest, Romania, 7-8 July 2026*

2. M.P. Bucur, M.C. Radulescu, **B. Bucur**, A. Teban-Man, M.D. Nicoara, H. L. Banciu, G. L. Radu: "*Bienzymatic biosensors for electrochemical screening of neurotoxic compounds based on acetylcholinesterase and butyrylcholinesterase*", XXIX Transfrontier Meeting on Sensors and Biosensors (TMSB 2025), Tarragona, Spain, 18-19 September 2025

3. M.P. Bucur, M.C. Radulescu, **B. Bucur**, A. Teban-Man, M.D. Nicoara, H. L. Banciu, G. L. Radu: "*Neurotoxic compounds screening using biosensor with co-immobilized acetylcholinesterase and butyrylcholinesterase on electrodes modified with CuNPs and stabilized Prussian blue*", 11th international workshop on biosensors for food safety and environmental monitoring, Marrakech-Morocco- October 3-5, 2024

4. P. Bucur, **B. Bucur**, Gabriel Lucian Radu: "*Fast detection of acrylamide based on amperometric measurements using glutathione S-transferase*", 8th international workshop on biosensors for food safety and environmental monitoring, Rabat-Morocco- October 12 - 14, 2017

5. M. C. Radulescu, M. P. Bucur, **B. Bucur**, G. L. Radu: "*Stable Prussian blue-copper modified (micro)electrodes for sensitive enzymatic biosensors based on oxidases*, 7th International Workshop on Biosensors for Food Safety and Environmental Monitoring, Erfoud, Morocco, November 19 - 21, 2015

6. A. Chira, **B. Bucur**, T. Galaon, G.L. Radu: "*Study of the synthesis and degradation of 4.4'-dipyridine derivatives*",2nd International Conference on Chemical Engineering ICCE2014, Iași, Romania, November 5 - 8, 2014

7. M. C. Radulescu, **B. Bucur**, M.P. Bucur, G. L. Radu: "*Biosensor Based on Inhibition of Monoamine Oxidases A and B for Detection of B-Carbolines"*, ELSEDIMA International Conference – 18 – 19 September 2014, Cluj-Napoca, Romania

8. M. C. Radulescu, **B. Bucur**, M.P. Bucur, G. L. Radu: "*Carboline analysis with an amperometric biosensor based on monoamine oxidase inhibition*", New Trends on Sensing - Monitoring - Telediagnosis for Life Sciences, Brasov, Romania, July 24-26, 2014

9. A. Chira, **B. Bucur**, M.C. Radulescu, G.L. Radu: "*Electrochemically modified electrodes with synthesized 4,4'-bipyridine derivatives*", 3th Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences "IC-ANMBES 2014", Brasov, Romania, 14-15 June 2014

10. M.P. Bucur, **B. Bucur**, M.C. Radulescu, G.L. Radu: "*Low interferences determination of antioxidant capacity based on xanthine oxidase and mediated amperometric measurements in reduction mode*", 7th Symposium of the Analytical Division of the Portuguese Society of Chemistry, Coimbra, Portugal, 14-15 April 2014

11. M. C. Radulescu, **B. Bucur**, M. P. Bucur, G. L. Radu: "Bi-*enzymatic Biosensor for Rapid Detection of Aspartame in Commercial Products*", Sixth International Workshop on "Biosensor for food Safety and Environmental Monitoring", Essaouira-Morocco- 03 - 05 October, 2013

12. O. I. Covaci, **B. Bucur**, Gabriel Lucian Radu: "*Cholinesterase Immobilization on Pt Microelectrodes Based on Diazonium Chemistry*", XV Rencontre Transfrontalière Capteurs et Biocapteurs, 16-17 Sept. 2010, Sant Carles de la Ràpita, Spain

13. **B. Bucur**, M. Lazerges, H. Perrot, E. Antoine, C. Compère: "*Acoustic Characterization of DNA Hybridization. Application to the Detection of Toxic Elements*", 213th ECS Meeting, 18-22 May 2008, Phoenix, USA

14. **B. Bucur**: "*Neurotoxic insecticides analysis based on AChE inhibition using heterogenous oxidation of the analyte*", Int. Conf. New EU Member States and the Security Research, 23-24 November 2006, Bucharest, Romania

15. B. Prieto-Simon, A.-M. Gurban, **B. Bucur**, E. Mallat, T. Noguer, J.-L. Marty: "*Different strategies for developing L-malate biosensors*". Dixième Rencontre Transfrontalière Capteurs et Biocapteurs, 15-16 Septembre 2005, Albi, France

16. T. Noguer, A.-M. Gurban, **B. Bucur**, E. Mallat, B. Prieto-Simon and J.-L. Marty: "*Different strategies for developing L-malate biosensors*", 10th International Seminar on Electroanalytical Chemistry & Third Sino-France Workshop on Surface Electrochemistry of Molecules of Biological Interest and Biosensor Application, 16-19 October 2005, Changchun, China

17. **B. Bucur**, A.F. Danet, D. Fournier, J. L. Marty: "*Sensitive carbamate detection using screen-printed electrodes with engineered Drosophila melanogaster acetylcholinesterases*", The 8th World Congress on Biosensors, 24-26 May 2004, Granada, Spain

18. M. Badea, N. Taus, M. Bandac, A. Plotogea, G. Coman, A. Brezina, L. Dima, A-M. Gurban, **B. Bucur**, S. Gocan, D. Fournier and J-L. Marty, "*Studies regarding biosensors that use genetic modified cholinesterase for some pollutant detection*", V- congres National de Farmacologie, Terapeutica si Toxicologie Clinica, 9-12 June 2004, Calimanesti, Romania

19. **B. Bucur,** S. Andreescu**,** J. L. Marty, *"Affinity Methods To Immobilize Acetylcholinesterases For Manufacturing Biosensors",* International Workshop on "Biosensors for Food Safety and Environmental Monitoring", 9-11 Oct. 2003, Marrakech, Morocco

20. A. F. Danet, S. Serban, **B. Bucur***: "FIA Assembly for Organophosphoric Insecticides Determination in Waters by Utilisation of Acetylcholinesterase"*, 7th International Symposium on Analytical Chemistry KAC 2001, Sept. 26-29, 2001, Bucharest, Romania

21. A. Povarna, C. Ceausu, M. Mihailescu, A. Visan, R. Bucur, **B. Bucur**: *"The monitorization of ARPECHIM-Pitesti petrochemical activity impact on the quality on the Dambovnic River water in period 1990-1998"*, First national conference oil and pollution, 1999, Ploiesti, Romania

19. Poster presentations:

1. B. Bucur, M.C. Radulescu, M.P. Bucur, G. L. Radu: "*Electrochemical sensors based on phenyl isothiocyanate diazonium salts for toxic compounds detection in complex samples*", XXII European Conference on Analytical Chemistry Euroanalysis, 01-04.09.2025, Barcelona, Spain
2. M.P. Bucur, M.C. Radulescu, **B. Bucur**, A. Teban-Man, M. D. Nicoara, H. L. Banciu, G. L. Radu: "*Acetylcholinesterase and butyrylcholinesterase bienzymatic biosensors for electrochemical screening of neurotoxic compounds*", 35th Anniversary World Congress on Biosensors, 18-24.05.2025, Lisabona, Portugal
3. M.C. Radulescu, M.P. Bucur, **B. Bucur**, G. L. Radu: "*Electrochemical method for dopamine and dopamine sulfate discrimination based differential measurements with a bioelectrode system using an arylsulfatase biosensor*", 35th Anniversary World Congress on Biosensors, 18-24.05.2025, Lisabona, Portugal
4. M.P. Bucur, M.C. Radulescu, **B. Bucur**, G. L. Radu: "*Insecticides screening using biosensor with co-immobilized acetylcholinesterase and butyrylcholinesterase*", Littoral24 - the 17th EUCC Conference, 4-27.09.2024, Constanta, Romania
5. M.P. Bucur, M.C. Radulescu, G. L. Radu, **B. Bucur**: "*Cholinesterase Biosensor for neurotoxin monitoring based on highly stable Prussian blue-copper mediator electrodeposited on diazonium modified surfaces*", ISEAC-41 International Conference on Environmental & Food Monitoring, 20-24 November 2023, Amsterdam
6. M.P. Bucur, **B. Bucur**, G.L. Radu: "*Immobilization of cholinesterase in sol-gel protective microporous matrix for insecticide detection in organic-solvents mixtures*", Electrochemistry for Nano & Nano for Electrochemistry ElecNano8, 29-31 May 2018, Nancy, France
7. M.C. Radulescu, M.P. Bucur, **B. Bucur**, G.L. Radu: "*Carbon fiber composite paper electrodes modified with stable Prussian blue-copper used for bienzymatic determination of sweeteners in food*", Electrochemistry for Nano & Nano for Electrochemistry ElecNano8, 29-31 May 2018, Nancy, France
8. A. Chira, **B. Bucur**, M. P. Bucur, G. L. Radu: "*Electrode-modified with nanoparticles composed of 4,4'-bipyridine-silver coordination polymer for sensitive determination of Hg(II), Cu(II) and Pb(II)*", 8th International Workshop on Surface Modification for Chemical and Biochemical Sensing – SMCBS'2017, Zelechów, Poland, November 3-7, 2017
9. M.C. Radulescu, **B. Bucur**, M.P. Bucur, G.L. Radu: "*Amperometric biosensor for the determination of aspartame in soft drinks*", Simpozionul International Prioritatile chimiei pentru o dezvoltare durabila Priochem *IX*, Bucharest, Romania, Octomber 30-31, 2013
10. A. Chira, **B. Bucur,** M.C. Radulescu, G.L. Radu: "*Synthesis of 4,4'-Dipyridine Derivatives for Immobilization on the Electrode Surface*", XXII International Symposium on Bioelectrochemistry and Bioenergetics, Bochum, Germany 17-22 March 2013
11. A. Chira, **B. Bucur,** G.L. Radu: "*Use of N-(p-Nitrobenzyl)-4.4'-Dipyridine for Electrodes Modification Based on Diazonium Chemistry*", The 63rd Annual Meeting of the International Society of Electrochemistry ISE, Prague, Czech Republic, 19-24 August, 2012
12. O.I. Covaci, **B. Bucur,** G.L. Radu: "*Investigation of the inhibition of dehydrogenases by acrolein.*", 37th International Symposium on Environmental Analytical Chemistry ISEAC-37, Anvers, Belgium, 22-25 May 2012
13. M.P. Bucur, **B. Bucur**, G.L. Radu, J.-L. Marty: "*Characterisation of the biopesticide - acetylcholin esterases interactions*", 37th International Symposium on Environmental Analytical Chemistry ISEAC-37, Anvers, Belgium, 22-25 May 2012

14. M.C. Rădulescu, A. Chira, **B. Bucur**, G.L. Radu:" *Evaluation of wheat flour quality based on QCM monitoring of lectin–carbohydrate interaction*", 5th International workshop on Biosensors for Food Safety and Environmental Monitoring, Ouarzazate, Morocco, 06-08 October 2011

15. M. Lecroq, **B. Bucur**, G.L. Radu, J.L. Marty, M.P. Bucur:" *Study of potential interactions between bio-pesticides and acetylcholinesterases*", 5th International workshop on Biosensors for Food Safety and Environmental Monitoring, Ouarzazate, Morocco, 06-08 October 2011

16. O. I. Covaci, **B. Bucur**, G.L. Radu: "*Acrolein analysis method based on inhibition of alcohol dehydrogenase*", 5th International workshop on Biosensors for Food Safety and Environmental Monitoring, Ouarzazate, Morocco, 06-08 October 2011

17. O.I. Covaci, A. Sassolas, G. Alonso, **B. Bucur**, G.L. Radu, J.-L. Marty: "*Artificial neural network for LR and YR microcystin discrimination based on protein phosphatases*", 18-22 September 2011, Chania, Grecia

18. G. García-Martinez, E.A. Bustabad, H. Perrot, C. Gabrielli, **B. Bucur**, M. Lazerges, D. Rose, L. Rodriguez-Pardo, J. Fariña, C. Compère, A. Arnau: "*Design and implementation of a DNA biosensor based on a 50MHz QCM electronic oscillator circuit*", 35th Annual Conference of the IEEE Industrial Electronics Society, IECON 2009; Porto, Portugal, 3-5 November 2009

19. E.A. Bustabad, G. García, L. Rodriguez-Pardo, J. Fariña, H. Perrot, C. Gabrielli, **B. Bucur**, M. Lazerges, D. Rose, C. Compère, A. Arnau: "*A biosensor for detection of DNA sequences based on a 50MHz QCM electronic oscillator circuit*" IEEE SENSORS 2009, Christchurch, New Zealand, 25-28 October 2009

20. **B. Bucur**, M. Bucur, C. Radulescu, G. L. Radu: "*Détection de la l-cystéine et glutathion dans des suppléments alimentaires en utilisant des biocapteurs avec tyrosinase sans interférences cause par des thiols*", Journées d'Électrochimie, 6-10 july 2009, Sinaia, Romania

21. O. I. Covaci, **B. Bucur**, M. Bucur, G. L. Radu: "*Utilisation du p-nitrobenzène diazonium pour greffer des groupes amines sur des microélectrodes pour l'immobilisation des enzymes*", Journées d'Électrochimie, 6-10 july 2009, Sinaia, Romania

22. M. P. Bucur, **B. Bucur**, I. Vasilescu, G. L. Radu: "*Tyrosinase based amperometric biosensors for the determination of L-cysteine*", 12th International Conference On Electroanalysis, ESEAC 2008, 16-20 june 2008, Prague, Czech Republic

23. **B. Bucur**, M. P. Bucur, G. L. Radu: "*Improvement of storage stability for amperometric biosensors based on alcohol oxidase immobilized by entrapment in a photopolymerisable matrix*", 12th International Conference On Electroanalysis, ESEAC 2008, 16-20 june 2008, Prague, Czech Republic

24. M. P. Bucur, **B. Bucur**, M. Diaconu, G. L. Radu: "*Bienzymatic system for the amperometric determination of methanol-ethanol mixtures from falsified alcoholic beverages*", 3rd International workshop on biosensors for food safety and environmental monitoring, Fez, Morocco, 18-20 October 2007

25. M. P. Bucur, **B. Bucur**, G. L. Radu: "*Analysis of methanol - ethanol mixtures from falsified beverages using a dual biosensors amperometric system based on alcohol dehydrogenase and alcohol oxidase*", Euroanalysis XIV, Antwerp, Belgium, 9-14 September 2007

26. M. P. Dondoi, **B. Bucur**, A.F. Danet, J.L. Marty, G. L. Radu: "*Amperometric biosensor for insecticide analysis in buffer containing water miscible organic solvents after heterogeneous extraction and heterogeneous oxidation of the analyte",* 11th International Conference on Electroanalysis ESEAC-Bordeaux, France, 11-15 June 2006

27. M. Dondoi, A. F. Danet, M. C. Cheregi, M. Badea, **B. Bucur**: "*Determination of organophosphorus pesticides with a potentiometric biosensor based on acetylcholinesterase*", Euroanalysis 13th, 5-10 Sept. 2004, Salamanca, Spain

28. A.F. Danet, M. Dondoi, N. Iliescu, **B. Bucur**, D. Neagu: "*Anodic Stripping Voltametric Determination of Cooper (II) with Salicylaldoxime Carbon Paste Electrodes*", Romanian International Conference on Chemistry and Chemical Engineering – RICCCE 13,16-20 Sept. 2003, Bucharest, Romania

29. A.F. Danet, C. Velea, D. Murarasu, **B. Bucur**: "*Enzymatic Chemiluminescent Determination of Glucose using a FIA assembly*", Romanian International Conference on Chemistry and Chemical Engineering –RICCCE 13,16-20 Sept. 2003, Bucharest, Romania

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32. **B. Bucur**, A. Teruel Alaman, M. Catalá Icardo, J. Martínez Calatayud *"Spectrophotometric determination of inorganic nitrogen by an rFIA assembly",* The 11th International Conference on Flow Injection Analysis (ICFIA) and The 38th Semi-annual Meeting of the Japanese Association for Flow Injection Analysis, 16-20 Dec. 2001, Chiang Mai, Thailand

33. A. F. Danet, M. Cheregi, A. Radu**, B. Bucur**: *"Automate FIA apparatus for phenols determination*", Procedes a membrane dans la protection de l'environnement, Polytechnic University of Bucharest in collaboration with Univ. Montpellier II, 2000, Bucharest, Romania

34. A. F. Danet, M. Cheregi, A. Radu**, B. Bucur***: "Low concentration of phenol determination using flow injection analysis with spectrometric detection and a solid phase extraction system"*, The 27th National session of chemistry, 6-8 Oct. 2000, Calimanesti-Caciulata, Romania

35. A. F. Danet, A. Radu, M. Cheregi, **B. Bucur***: "Automated method of phenol analysis using FIA"*, The 27th National session of chemistry, 6-8 Oct. 2000, Calimanesti-Caciulata, Romania

36. A. F. Danet, M. Cheregi, A. Radu**, B. Bucur***: "Determination of phenols by using flow injection analysis method ",*3rd International Conference of Balkan Environmental Association on Transboundary Pollution, 23-26 Nov. 2000, Bucharest, Romania