CURRICULUM VITAE

Name: **AMUZESCU P. BOGDAN**
Date and place of birth: November 27, 1965, Bucharest, Romania
Marital status: divorced
Children: one daughter (born on April 4, 1994)
Address: Str. Ariesul Mare 7, Bucharest 060792, Romania
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EDUCATION

1972 - 1976	Elementary school no. 80 in Bucharest
1976 - 1980	Secondary school (gymnasium) no. 117 in Bucharest
1980 - 1984	"Nicolae Balcescu" college in Bucharest (former and present St. Sava National College), mathematics-physics class; Diploma
1985 - 1991	Faculty of Medicine of the "Carol Davila" University of Medicine and Pharmacy in Bucharest; Diploma
1999 - 2000	Master in neurobiology, University of Bucharest
2000 - 2003	PhD student, Faculty of Biology, University of Bucharest; thesis title: “Properties of ion channels in biomembranes” Supervisor: Prof. Maria-Luisa Flonta, Co-promotors: Prof. Willy van Driessche, Prof. Gordon Reid
2000 - 2003	Research fellowship, Dept Mol. Cell Biol, Faculty of Medicine, KU Leuven (Prof. Willy van Driessche)
2003 - 2004	Postdoctoral research fellowship, Cardiac Electrophysiology Group, Center for Experimental Surgery & Anaesthesiology, KU Leuven (Prof. K. Mubagwa)

TRAINING

1986-1992	Member of the research team of Andrei Dumitru Iacobas, PhD, lecturer, at the Dept. of Biophysics, Faculty of Medicine; attempts to set up an experimental line for patch-clamp in order to correlate the data obtained in macroscopic and microscopic (single-channel) experiments, with substantial help and encouragement from Prof. Peter N.R. Usherwood, Faculty of Zoology, University of Nottingham, U.K.
1990-1992	Studies concerning the serodiagnosis of HIV infection and research methods in immunology (ELISA, immunoblotting, immunofluorescence, PBMCs separation, lymphocyte cultures) in the Laboratory of Retrovirology, “Stefan S. Nicolau” Institute of Virology, under the direction of I.V. Patrascu, MDV, PhD, and in the Dept. of Microbiology, Faculty of Medicine in Craiova, under the direction of Prof. Constantin Voiculescu; contribution to the establishment of a laboratory for HIV serodiagnosis in Craiova; clinical and serological study of HIV infection in children.
1992-1994	Training in hematology and immunology at the Clinic of Hematology (head Prof. Dan Colita, MD), Fundeni Hospital, Bucharest, under the direction of George M. Grigoriu, MD, assistant lecturer; study of clinical and laboratory features and up-to-date literature in autoimmune diseases, bone marrow grafting.
1993	Course of medical informatics
1993	Course of homeopathy
1994-1995	Training in internal medicine-hepatology at the IInd Medical Clinic, Bucharest University Hospital, under the direction of Prof. Dan Olteanu, MD; study of immune mechanisms and immune modulator therapies in liver diseases (prednisone, azathioprine, human recombinant interferon).
1995-1997	English-Romanian translations: Steven Weinberg – Dreams of a Final Theory; Part three: Genetics and human diseases from Harrison’s Principles of Internal Medicine, thirteenth edition.
1999-present	Member of the electrophysiology research team, Dept. Animal Physiol. & Biophysics, Faculty of Biology, University of Bucharest
2000-2003	Several 3-months training periods at Dept Mol. Cell Biol, Faculty of Medicine, KU Leuven with Prof. Willy van Driessche: fluctuation analysis and impedance analysis in tight epithelia,

two-microelectrode voltage clamp recordings in *Xenopus* oocytes expressing αβγ rENaC

2001 1-month training programme in patch-clamp recordings on neurons in slices at the Physiologisches Institut, Justus Liebig Universität Gießen under the supervision of Prof. Werner Vogel and Prof. Andreas Scholz

2003-2004 postdoctoral researcher in the Cardiac Electrophysiology Group, Center for Experimental Surgery & Anaesthesiology, KU Leuven (Prof. K. Mubagwa): electrophysiology (whole-cell patch clamp on ventricular cardiomyocytes) and molecular biology study of a nonspecific cation conductance blocked by divalent cations in cardiomyocytes

EMPLOYMENTS

1991 - 1992 Stagiary physician in Constanta Departmental Hospital, Laboratory of Nuclear Medicine and Ist Medical Clinic

1991 - 1992 Associated assistant in the Department of Biophysics, Biotechnology, Medical Informatics and Biostatistics, Faculty of Medicine, "Ovidius" University of Constanta

1992 - 1994 Secondary physician (specialization in clinical hematology) in Fundeni Hospital, Clinic of Hematology

1994 - 1995 Secondary physician (specialization in internal medicine) in Bucharest University Hospital, IInd Medical Clinic

1995 - 2000 Specialist physician (internal medicine) in Bolintin Hospital

2000 - 2002 Assistant Lecturer, Dept. Animal Physiol. & Biophysics, Univ. of Bucharest

2002 - 2005 Lecturer, Dept. Animal Physiol. & Biophysics, Univ. of Bucharest

2005 - present Associate Professor, Dept. Animal Physiol. & Biophysics, Univ. of Bucharest

2014 -2015 Application Scientist, Cytocentrics Bioscience GmbH, Rostock, Germany

TEACHING

neurobiophysics, anatomy&physiology, data processing, clinical diagnosis & therapy

RESEARCH GRANTS

Program/Project	Position	Duration
World Bank Grant D-22 "Development of an advanced studies & PhD program in molecular physiology centered on neurobiology & membrane biophysics of excitable and nonexcitable cells" (100000 USD)	researcher	1999 - 2002
World Bank Grant PU-19 "Modernizing and optimizing physiology teaching via equilibrated use of interactive computer-assisted training and electrophysiology techniques"(225000 USD)	researcher	1999 - 2002
World Bank Grant B-50 "Molecular Physiology: Electrophysiology techniques and computer modeling of cellular/molecular interactions" (525000 USD)	researcher	1999 - 2002
Flanders-Romania bilateral agreement BIL96 (180000 EUR)	researcher	2000
Flanders-Romania bilateral agreement BIL00 (74000 EUR)	researcher	2001 - 2003
Volkswagen Foundation research grant: "Generation of spontaneous activity in damaged nerve: novel experimental approaches" (135000 EUR)	researcher	2001 - 2004
NATO grant CLG976246 "Mechanisms of diabetic neuropathic pain in the primary sensory neurone" (20000 USD)	researcher	2000 - 2002
Postdoctoral research grant–Dept. Exp. Surgery&Anaesthesiology, KULeuven, Belgium (15000 EUR)	researcher	2003 - 2004
CERES 1/3/2002 "In vitro study of changes within the intracellular signaling network during energy deprivation stress" (10000 EUR)	researcher	2002 - 2003
VIASAN 199/2003 "Modulation mechanisms of ion channels activated by tissue acidosis in peripheral nerve fibers and blood vessels" (50000 EUR)	researcher	2003 - 2005
CEEX 67/2005 "Health protection by development of new complex instruments (laboratory-on-a-chip)" (28570 EUR)	researcher	2005 - 2008
CNCSIS 1030/2006 "Modulation of ENaC/Deg ion channels by intracellular divalent cations and their roles in neuronal ischemia-putative pharmacological targets in	grant coordinator	2006 - 2007

stroke therapy " (22857 EUR)		
CEEX 3191/2005 "Molecular, cellular, and integrated pain mechanisms-medical applications" (100000 EUR)	researcher	2005 - 2010
PNCDI2 Cooperation Grant 61-010/2007 "Mathematical modeling of the electrical activity of neurons and cardiomyocytes – isolated and in tissue – applied to prediction of arrhythmia and response to antiarrhythmics" (500000 EUR)	researcher	2007 - 2010
PNCDI2 Cooperation Grant 80/2012 "Cellular Therapeutic Approaches for Regenerative Stroke Therapy " (465000 EUR)	Scientific manager	2012-2016
POC EU-funded structural grant P_37_675 "Development of automated patch-clamp technologies for pro-arrhythmogenic risk testing of drug candidates" (~1000000 EUR)	Management team member	2016-2020
PCE grant 39/2022: PN-III-P4-PCE-2021-1422 "Drug safety profiles of two newly-aproved antiepileptics by in vitro screening for pro-arrhythmogenic risk and BBB drug transport" (250000 EUR)	researcher	2022-2024

PRIZES

1st prize for a scientific communication, Romanian Neuroscience Society, 2005

REVIEWER

Invited reviewer: European Journal of Pharmacology, Central European Journal of Biology (currently Open Life Sciences), Romanian Journal of Biophysics, American Journal of Modern Physics, European Journal of Biophysics, Journal of Physical Chemistry and Biophysics, Journal of Neuroscience Methods

COORDINATION ACTIVITY

2007-present: **Coordinator** of ***the Group of Mathematical Modeling of Complex Biological Systems***, part of the Research Center in Neurobiology, Department of Biophysics & Physiology, Faculty of Biology, University of Bucharest (http://neurobiologie.bio.unibuc.ro)

2006-2008: **Coordinator** of Grant CNCSIS A 1030/2006 - "Modulation of ENaC/Deg ion channels by intracellular divalent cations and their roles in neuronal ischemia-putative pharmacological targets in stroke therapy"

2004-2012: **Advisory board**, Romanian Society of Neuroscience, Bucharest, Romania

2001-present: Teaching staff & co-organizer of the Master in Neurobiology Programme, launched in 1996 by the initiative of Prof. univ. dr. Maria-Luisa Flonta, a programme where over time several prestigious researchers started their scientific carreer. This programme is internationally recognized and included within the NENS network (Network of European Neuroscience Schools).

RESEARCH INTERESTS AND EXPERTISE

Areas of expertise:

- Mathematical modeling&analysis of complex biological systems (heart, neuronal networks)
- Membrane biophysics and transport phenomena in biomembranes
- Thermodynamics of biological systems
- Molecular electrophysiology&pharmacology – the patch-clamp technique
- Thermotransduction, nociception and pain

- Molecular pathophysiology and experimental models of various diseases: inflammatory and neuropathic pain, diabetic neuropathy, neuronal and myocardial ischemia, Alzheimer's disease
- Cardiomyocyte electrophysiology, modeling and pharmacology; Cardiac safety pharmacology

Professional memberships:
Biophysical Society, Safety Pharmacology Society, American Association for the Advancement of Science, Federation of American Societies for Experimental Biology, Federation of European Neuroscience Societies, Romanian Society of Neuroscience, Romanian Society of Pure and Applied Biophysics

Achievements:
39 original scientific papers, of which 23 in international ISI-quoted journals, and presentations at >140 internal or international scientific meetings. >365 citations (682 – Google Academic), Hirsch index: 12 (WOS), 15 (Google Academic)

I took part in successful completion of 8 international research grants and 6 internal (Romanian) research grants (1 as grant coordinator). I also had an important contribution in submission of 3 European grant applications, one as Principal Investigator: FP7-206374-1 (ERC-2007-StG), FP7-268842 (ERC-2010-AdG_20100317), 278982(FP7-HEALTH-2011-two-stage).

MAIN SCIENTIFIC RESULTS

- set up of a system for delivery of thermal stimuli to cells during patch-clamp recordings and/or ion imaging experiments, followed by a detailed study of the effects of cooling on capsaicin- or proton-elicited TRPV1 currents in cultured dorsal root ganglia primary sensory neurons

- description and analysis of a biphasic effect of Zn^{2+} on native and heterologously expressed epithelial Na^{+} channels (ENaC)

- study of permeation, gating, and regulation properties of a nonselective cation current in ventricular myocytes inhibited by intracellular magnesium and blocked by extracellular divalent and trivalent cations (I_{MIC} – magnesium-inhibited cation current) leading to its identification as TRPM7, and proof of its role in heavy metal ion transport, intracellular Mg^{2+} homeostasis, and activation by exogenous free oxygen radicals

- study of the permeation and gating properties of ASIC1a, analysis of single-channel recordings and validation of an 8-state linear connectivity Markov model for gating, correlation analysis of adjacent events durations, demonstration of an effect of extracellular trypsin on Ca^{2+} permeability and on activation by amitriptyline and FMRF-amide; the activatory effect of low concentrations of amitriptyline (within the therapeutical range) on ASIC1a conductance and gating, evidenced in whole-cell and single-channel experiments, may contribute to the well-known but incompletely understood analgesic effect of tricyclic antidepressants

- set up of detailed electrophysiology models for cardiomyocytes from different cardiac territories starting from a reduced compartmented model of guinea pig ventricular cardiomyocyte (Faber-Rudy 2007) comprising Markov models for the L-type Ca^{2+} channel and ryanodine receptor and Ca^{2+} dynamics between various intracellular compartments (network and junctional sarcoplasmic reticulum, bulk myoplasm, and the "subspace" between t tubules

and junctional sarcoplasmic reticulum), to be further used for “in silico” models of human heart electrophysiology and pharmacology

- mathematical study of an early ventricular cardiomyocyte model (Luo-Rudy I 1991) using the tools of dynamic systems analysis and bifurcation theory, for different values of model parameters, and finding configurations of parameters leading to sustained oscillations, important in defining arrhythmogenic mechanisms

- automated patch-clamp recordings on hiPSC-cardiomyocytes, development of a patented complex in vitro pharmacology assay on hiPSC-CM integrating all the 3 stages of the CiPA paradigm, study of proarrhytmogenic risk predictors and arrhythmogenesis mechanisms for several drugs, including chloroquine and hydrohychloroquine, cenobamate

- exploration of the cellular and molecular mechanisms of photobiomdulation with NIR laser and biophoton emmission

PUBLICATIONS

1. Iacobas A.D., Amuzescu B., Ciontu Cristina (1990) : Procedeu de realizare a micropipetelor pentru culegerea curentilor ionici unicanal din biomembrane; Brevet RO-102203. Monitorul Oficial, Bucuresti.

2. Iacobas A.D., Amuzescu B., Ciontu Cristina (1990) : Aspecte energetice si informationale in studiile de bioelectrogeneza. in "Aspecte energetice si informationale in ecosisteme" (ed. Marioara Godeanu), A.O.S. Braila.

3. Iacobas A.D., Amuzescu B., Ciontu Cristina (1990) : Sistem de filtrare, detectie si prelucrare numerica a semnalelor canalelor ionice. in "Cibernetica aplicata", Ed. Acad., Bucuresti.

4. Reid G., Amuzescu B., Zech E., Flonta M.-L. (2001) : A system for applying rapid warming or cooling stimuli to cells during patch clamp recording or ion imaging. J. Neurosci. Methods 111(1):1-8. (38 citations)

5. Babes A., Amuzescu B., Krause U., Scholz A., Flonta M.-L., Reid G. (2002) : Cooling inhibits capsaicin-induced currents in cultured rat dorsal root ganglion neurones. Neurosci. Lett.. 317(3):131-134. (43 citations)

6. Amuzescu B., Ion S., Popescu D., Movileanu L., Avram S., Macri B., Flonta M.-L. (2002) : Thermal group motion creates stochastic pores in plane phosphatidylcholine bilayers. Romanian J. Biophys. 12 (1-2): 37-52.

7. Pena F., Neaga E., Amuzescu B., Nitu A., Flonta M-L (2002) : Amitriptyline has a dual effect on the conductive properties of the epithelial Na channel. J Pharm. Pharmacol. 54:1393-1398. (5 citations)

8. Amuzescu B., Segal A., Flonta M-L., Simaels J., Van Driessche, W. (2003) : Zinc is a voltage-dependent blocker of native and heterologously expressed epithelial Na^+ channels. Pflügers Arch. 446: 69-77. (6 citations)

9. Gwanyanya A., Amuzescu B., Zakharov S., Macianskiene R., Sipido K., Bolotina V., Vereecke J., Mubagwa K. (2004) : Magnesium-inhibited, TRPM6/7-like channel in cardiac myocytes: permeation of divalent cations and pH-mediated regulation. J. Physiol., 559(3): 761-776. (92 citations)

10. Neaga E., Amuzescu B., Dinu C., Macri B., Pena F., Flonta M.-L. (2005) : Extracellular trypsin increases ASIC1a selectivity for monovalent versus divalent cations. J. Neurosci. Methods 144: 241-248. (19 citations)

11. Pena F., Amuzescu B., Neaga E., Flonta M.-L. (2006): Thermodynamic properties of hyperpolarization-activated current (Ih) in a subgroup of primary sensory neurons, Exp. Brain Res., 173(2):282-290. (13 citations)

12. Marin A., Prica C., Amuzescu B., Neaga E., Flonta M.-L. (2008): ASIC1a activation by amitriptyline and FMRF-amide is removed by serine proteases, Channels 2(6):419-428. (9 citations)

13. Popescu D., Popescu A.G., Amuzescu B. (2010): Pulsatory liposomes – a possible biotechnological device for controlled drug delivery. I. The liposome swelling, Rom. J. Biophys. 20(1):37-46.

14. Popescu D., Popescu A.G., Amuzescu B., Maries E. (2010): Pulsatory liposomes – a possible biotechnological device for controlled drug delivery. II. The pore appearance, Rom. J. Biophys. 20(2):171-181.

15. Popescu A.G., Popescu D., Ion S., Amuzescu B. (2010): Pulsatory liposomes – a possible biotechnological device for controlled drug delivery. III. The liposome relaxation, Rom. J. Biophys. 20 20(3):223-234.

16. Bichir C.L., Georgescu A., Amuzescu B., Nistor G., Popescu M., Flonta M.-L., Corlan A.D., Svab I. (2011): Limit cycles by FEM for a one-parameter dynamical system associated to the Luo-Rudy I model, ROMAI J. 6(2):27-39.

17. Corlan A.D., Amuzescu B., Milicin I., Iordachescu V., Poenaru E., Corlan I., De Ambroggi L. (2011): Intercellular conductance variability influences early repolarization potentials in a myocardial tissue model with stochastic architecture, Advanced Topics in Electrical Engineering (IEEE Proceedings, ISSN 2068-7966):1-4. http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5952183 (3 citations)

18. Chioncel V., Paun D., Amuzescu B., Sinescu C. (2012): Evolution features of hypertensive patients with primary aldosteronism – prospective study, J. Med. Life 5(3): 354-359. (2 citations)

19. Kusko M., Craciunoiu F., Amuzescu B., Halitzchi F., Selescu T., Radoi A., Popescu M., Simion M., Bragaru A., Ignat T. (2012): Design, fabrication and characterization of a low-impedance 3D electrode array system for neuro-electrophysiology, Sensors (Basel) 12(12):16571-16590. (9 citations)

20. Amuzescu B., Georgescu A., Nistor G., Popescu M., Svab I., Flonta M.-L., Corlan A. (2012): Stability and sustained oscillations in a ventricular cardiomyocyte model, Interdisciplinary Sciences: Computational Life Sciences 4(1):1-18. (6 citations)

21. Amuzescu B., Scheel O., Knott T. (2014): Novel automated patch-clamp assays on stem cell-derived cardiomyocytes: will they standardize in vitro pharmacology and arrhythmia research? J. Phys. Chem. Biophys. 4(4):153. http://dx.doi.org/10.4172/2161-0398.1000153

22. Chevalier M., Amuzescu B., Gawali V., Todt H., Knott T., Scheel O., Abriel H. (2014): Late cardiac sodium current can be assessed using automated patch-clamp, F1000Research http://f1000research.com/articles/3-245/v1 (14 citations)

23. Scheel O., Frech S., Amuzescu B., Eisfeld J., Lin K.-H., Knott T. (2014): Action potential characterization of human induced pluripotent stem cell-derived cardiomyocytes using automated patch-clamp technology, Assay Drug Dev. Technol. 12(8):457-69. (69 citations)

24. Halitzchi F., Jianu L., Amuzescu B. (2015): Electrophysiology and pharmacology study of a human neuroblastoma cell line, Rom. Rep. Phys. 67(2):439-451 (7 citations)

25. Iordache F., Constantinescu A., Andrei E., Amuzescu B., Halitzchi F., Savu L., Maniu H. (2016): Electrophysiology, immunophenotype, and gene expression characterization of senescent and cryopreserved human amniotic fluid stem cells, J. Physiol. Sci. 66:463-476 http://link.springer.com/article/10.1007/s12576-016-0441-8/fulltext.html (13 citations)

26. Filippi A., Caruntu C., Gheorghe R.O., Deftu A., Amuzescu B., Ristoiu V. (2016): Catecholamines reduce TRPV1 desensitization in cultured dorsal root ganglia neurons, J. Physiol. Pharmacol. 67(6):843-850 (20 citations)

27. Amuzescu B., Cocina G., S. Florica (2016): Miniature electrode array and system for experimental surface EEG recordings, Rom. J. Biophys. 26(2):69-82 http://www.rjb.ro/articles/445/RJB2-2016_a1.pdf

28. Amuzescu B., Airini R., Ghica L., Epureanu F.B., Deftu A.F., Cucu D.M., Ristoiu V.P., Mihailescu D.F., Radu B.M. (2017): Novel approaches to proarrhythmogenic risk testing using automated patch-clamp platforms, Rom. J. Biophys. 27(1):13-22 http://www.rjb.ro/articles/449/Amuzescu-2_SH.pdf

29. Mann S.A., Heide J., Knott T., Airini R., Epureanu F.B., Deftu A.-F., Deftu A.-T., Radu B.M., Amuzescu B. (2019): Recording of multiple ion current components and action potentials in human induced pluripotent stem cell-derived cardiomyocytes via automated patch-clamp, J. Pharmacol. Toxicol. Meth. 100:106599 (17 citations)

30. Airini R., Iordache F., Alexandru D., Savu L., Epureanu F.B., Mihailescu D., Amuzescu B., Maniu, H. (2019): Senescence-induced immunophenotype, gene expression and electrophysiology changes in human amniocytes, J. Cell. Mol. Med. 23(11):7233-7245 (6 citations)

31. Iacobas S., Amuzescu B., Iacobas D.A. (2021): Transcriptomic uniqueness and commonality of the ion channels and transporters in the four heart chambers, Sci. Rep. 11(1):2743 (12 citations)

32. Amuzescu B., Airini R., Epureanu F.B., Mann S.A., Knott T., Radu B.M. (2021): Evolution of mathematical models of cardiomyocyte electrophysiology, Math. Biosci. 334:108567 (20 citations)

33. Deftu A.T., Amuzescu B. (2022) Protective Effects of Nanosof® Suspension on Cultured Cells Exposed to H2O2, Biointerface Research in Applied Chemistry, 12(2):2548-2559 https://biointerfaceresearch.com/?page_id=8308, https://doi.org/10.33263/BRIAC122.25482559 (1 citation)

34. Thomet U., Amuzescu B., Knott T., Mann S.A., Mubagwa K., Radu B.M. (2021): Assessment of proarrhythmogenic risk for chloroquine and hydroxychloroquine using the CiPA concept, Eur. J. Pharmacol. 913:174632 (11 citations)

35. Coman A., Amuzescu B., Nistor G. (2023): Theoretical Assumptions in Conductivity and Dielectric Properties Assessment of Biological Tissues - Errors and Resulting Consequences, IEEEXplore® 2023 13th International Symposium on Advanced Topics in Electrical Engineering (ATEE) (https://ieeexplore.ieee.org/document/10108270)(https://doi.org/10.1109/ATEE58038.2023.10108270)

36. Shaher S.A.A., Galateanu B., Hudita A., Maitham A., Mihailescu D.F., Amuzescu B. (2023): An *in vitro* model of aspartame cytotoxicity via heterologous expression of NMDA receptors, Farmacia 71(3):581-590 https://doi.org/10.31925/farmacia.2023.3.17 (1 citation)

37. Shaher S.A.A., Mihailescu D.F., Amuzescu B. (2023): Aspartame safety as a food sweetener and related health hazards, Nutrients 15:3627 (28 p.) https://doi.org/10.3390/nu15163627 (14 citations)

38. Iordache F., Petcu (Ionescu) A., Pisoschi A.M., Stanca L., Geicu O.I., Bilteanu L., Curutiu C., Amuzescu B., Serban A.I. (2024): PCR array profiling of miRNA expression involved in the differentiation of amniotic fluid stem cells toward endothelial and smooth muscle progenitor cells, Int. J. Mol. Sci. 25(1):302 (14 p.) https://doi.org/10.3390/ijms25010302 (1 citation)

39. Amuzescu B., Corlan A.D., Radu B. (2023): Inhibitory effects of cenobamate on multiple human cardiac ion channels and possible arrhythmogenic consequences, (in preparation for resubmission, preprint available at https://www.researchsquare.com/article/rs-3735338/v1)

40. Mateias A.L., Armasescu F., Amuzescu B., Corlan A.D., Radu B.M. (2024): Inhibitory effects of cenobamate on multiple human cardiac ion channels and possible arrhythmogenic consequences, Biomolecules 14:1582 (19 p.) https://doi.org/10.3390/biom14121582

41. Şulea T.A., Draga S., Mernea M., Corlan A.D., Radu B.M., Petrescu A.-J., Amuzescu B. (2025): Differential inhibition by cenobamate of canonical human Nav1.5 ion channels and several point mutants, Int. J. Mol. Sci. 26:358 (19 p.) https://doi.org/10.3390/ijms26010358

42. Armasescu F., Amuzescu B., Gheorghe R.-O., Ghenghea M., Ristoiu V., Ciurea J., Gruia I. (2025): Fiber-optic-guided near-infrared laser exposure induces depolarization of cultured primary sensory neurons and modifies biophysical properties of human Nav1.5 channels, J Photochem Photobiol B 269:113191 (12 p.) https://doi.org/10.1016/j.jphotobiol.2025.113191

43. Negoiţă A.-I., Amuzescu B., Mihăilescu D.F., Bordea C. (2025): The serotonergic system and its role in thermoregulation, Physiologia 5:37 (32 p.) https://doi.org/10.3390/physiologia5040037

44. Negoiţă A.-I., Amuzescu B., Mihăilescu D.F., Banciu D.D., Banciu A. (2026): Expression of serotonin transporter (SERT) and receptors 5-HTR1A and 5-HTR2A in an animal model of hypothermia, Neurosci Lett 870:138448 https://doi.org/10.1016/j.neulet.2025.138448

45. Iordache F, Dulceanu M, Holban AM, Badaluta AV, Pisoschi AM, Vasile BS, Amuzescu B, Curutiu C (2026): 3D Bioprinting of Blood Vessel Model for Improving Wound Healing, Int J Mol Sci 27(9):4019 https://doi.org/10.3390/ijms27094019

46. Radu B., Amuzescu B. (2026): New discoveries in the field of neuropharmacology (editorial). Biomolecules 16:901 (5 p.) https://doi.org/10.3390/biom16060901

47. Magercu M., Ristoiu V., Amuzescu B., Dulamea A. (2026): Effectiveness of native and enhanced extracellular vesicle preparations assessed in animal models of multiple sclerosis: a meta-analysis. Biomolecules 16:1454 (28 p.) https://doi.org/10.3390/biom16101454

INVITED LECTURES / CHAIRMANSHIP

Effects of different transitional elements (groupVIIIb-IIb) and of certain lanthanides on the apical Na^+ channels of A6 cells. BIL 96 symposium, KU Leuven, 2000.

Extracellular trypsin improves Na^+ selectivity of ASIC1a, presentation at Sensing Physiology : a Symposium on Biosensors and Cell Physiology, Limburgs Universitair Centrum, Diepenbeek, December 5, 2003.

Magnesium-inhibited, TRPM6/M7 like channels in cardiomyocytes: divalent cation permeation and pH-mediated regulation. Neuroscience 2005 International Symposium Timisoara-München, Timisoara, 14-15 October, 2005.

Magnesium-inhibited TRPM6/M7 like channels in cardiomyocytes. 2nd International Conference of the Romanian Neuroscience Society, Bucharest, 1-3 September, 2006.

Co-chair (with Dr. Thomas Dierk, Heidelberg Univ.), Platform session BC: Cardiac electrophysiology, 53rd Biophysical Society Annual Meeting, Boston, March 4, 2009.

Myocardial TRPM7 channels: biophysical properties and involvement in cardiac diseases. 3rd International Conference on Clinical & Experimental Cardiology, Chicago, April 15-17, 2013

Diaryldiamidines Interaction with ASIC1a as a Basis for Novel Pharmacological Targets in Neuronal Ischemia, Drug Discovery for Ion Channels XIV - Satellite Meeting to 58th Biophysical Society Meeting, San Francisco, CA, 14 Feb 2014

A New CiPA-compliant Cardiac Safety Pharmacology Automated Patch-Clamp Assay, Ncardia Applications Workshop 2018, Cologne, November 7-9 2018, abstract p. 13

In vitro and *in silico* cardiac safety drug testing: advancing the CiPA paradigm, invited lecture within the CIVIS Summer School “Drug Design and Discovery”, Dept. Pharmacy, School of Health Science, National and Kapodistrian University of Athens, July 4-8, 2022

Introduction to cardiac channelopathies: basics and clinical aspects. Phenotypic analysis to diagnosis and principles of therapy using iPSC cardiomyocytes, invited lecture within the “Rare Diseases” BiP-CIVIS Summer School, Institute MarMaRa (Marseille Maladies Rares), Aix-Marseille Université, June 27, 2025

PRESENTATIONS AT CONFERENCES PUBLISHED IN ABSTRACT

1. Babes A., Amuzescu B., Krause U., Scholz A., Flonta M.-L., Reid G. (2001) : Cooling inhibits capsaicin- and proton-induced currents in cultured rat dorsal root ganglion neurones. J. Physiol. 533P:57P-58P. (1 citation)

2. Babes A., Amuzescu B., Krause U., Scholz A., Flonta M.-L., Reid G. (2001) : Capsaicin-induced currents in cultured rat dorsal root ganglion neurones are inhibited by cooling. Pflügers Arch. 441:R159.

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142. *Amuzescu B., Mateiaș A.L., Armăşescu F., Draga S., Şulea T., Corlan A.D., Radu B.M.*: Electrophysiological and pharmacological properties of human Nav1.5 channels: experimental and simulation studies, SNN 2024 Conference "Nervous System-Body-Environment Connections in Health and Disease", Bucharest, October 31-November 2, 2024

143. *Nuțu M.A., Vătămanu C., Mateiaș A.L., Amuzescu B.*: Effects of Diesel exhaust particles on cell lines and nervous tissue, poster presentation at SNN 2024 Conference "Nervous System-Body-Environment Connections in Health and Disease", Bucharest, October 31-November 2, 2024

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148. *Amuzescu B.*: Exploring biophysical and pharmacological properties of Nav1.5 channels with experimental and simulation methods, 12th Balkan Physics Union Congress BPU12, Politechnica University, Bucharest, July 8-12, 2025 (https://indico.bpu11.info/event/3/sessions/53/#20250709)

149. *Amuzescu B.*: In vitro and in silico cardiac safety drug testing: advancing the CiPA paradigm, 9th International Symposium New Frontiers in Cardiovascular Research, Faculty of Biology, University of Bucharest, August 25-28, 2025 (https://www.newfrontierscardiovascularresearch.com/scientific-program)

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152. *Vatamanu C., Nutu M.A., Amuzescu B.*: Cytotoxic and metabolic effects of Diesel microparticles on different cellular components of the central nervous system, Students Scientific Session, Faculty of Biology, May 22, 2026

153. *Costake D., Amuzescu B., Popescu I.*: Neuronal oscillators: synchrony analysis of a thalamo-cortical network, Annual Meeting of the National Neuroscience Society of Romania, Bucharest, May 28-30, 2026

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15.10.2026 **Bogdan Amuzescu**

