

CURRICULUM VITAE

Name: **AMUZESCU P. BOGDAN**

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-promoters: 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 $\alpha\beta\gamma$ 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 stroke therapy" (22857 EUR)	grant coordinator	2006 - 2007

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-approved 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 career. 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 therapeutic 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 proarrhythmic risk predictors and arrhythmogenesis mechanisms for several drugs, including chloroquine and hydroxychloroquine, cenobamate

- exploration of the cellular and molecular mechanisms of photobiomodulation with NIR laser and biophoton emission

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 (I_h) 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, *IEEEExplore® 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>

INVITED LECTURES / CHAIRMANSHIP

Effects of different transitional elements (group VIIIb-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.
3. Babes A., Amuzescu B., Flonta M.-L., Reid G. (2001) : Temperature sensitivity of capsaicin-induced activity in VR1-like channels from rat dorsal root ganglion neurones. *J. Physiol.* 536P, S257.
4. Amuzescu B., Babes A., Krause U., Scholz A., Flonta M.-L., Reid G. : Cooling reduces open probability of VR1-related channels in rat primary sensory neurons. (poster) 31th Society for Neuroscience Meeting, San Diego, California, 10-15 November, 2001 (<http://sfn.scholarone.com/itin2001>).
5. Van Driessche W., Segal A., Flonta M.-L., Amuzescu B. : Zinc is a voltage-dependent blocker of native and heterologously expressed epithelial Na⁺ channels. (poster) 47th Biophysical Society Meeting, San Antonio, Texas, 1-5 March, 2003 (abstract in *Biophysical Journal*, 84(2S):530A Abstract: 2590-Pos) (<http://www.biophysics.org/abstractsearch/Default.asp>).
6. Gwanyanya A., Amuzescu B., Vereecke J., Mubagwa K. : TRPM6/7-like cardiac ion channels: divalent cation permeation and regulation by pH. (poster) Spring Meeting 2004 of the Belgian Society for Fundamental and Clinical Physiology and Pharmacology, Gent, 8 May, 2004. *Pflügers Archiv – European Journal of Physiology* 448(6):R7
7. Gwanyanya A., Amuzescu B., Vereecke J., Mubagwa K. : Magnesium-inhibited cation channel in cardiac myocytes: intracellular ATP-dependent activation and G protein-mediated modulation (poster) Autumn Meeting 2004 of the Belgian Society for Fundamental and Clinical Physiology and Pharmacology, Leuven, 20 November, 2004. *Pflügers Archiv – European Journal of Physiology*, 449(6):R10
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