

## Violeta Ristoiu, Ph.D

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## RESUMÉ

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### Education

- 2018 Habilitation degree in Biology from the University of Bucharest, with the thesis “*Investigating new mechanisms of modulating dorsal root ganglia neurons’ excitability under metabolic stress or due to neuro-immune interactions*”
- 2002 PhD degree *Magna cum laudae* from the University of Bucharest, Faculty of Biology with the thesis “*Functional characteristics of spinal neurons: tolbutamide-sensitive K<sup>+</sup> channels and type I K<sup>+</sup> channel*”
- 1986-1991 Research Assistant and undergraduate student in **Biology**  
Thorough studies in **Medical Biology**  
Bucharest University, Faculty of Biology, B.Sc. in Biology
- 1982-1986 **Sanitary High-School** Braila, graduated *Magna cum laudae*
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### Training

- 2016 Training in the Science of Laboratory Animals, workshop organized by the Romanian Association for the Science of Laboratory Animals
- 2015 Fulbright Visiting Scholar at University of Omaha Medical Center, Department of Pharmacology and Experimental Neuroscience, Nebraska, USA
- 2012-2013 Trainee under POSDRU/86/1.2/S/60281 project, “The reinforcement of competencies - oriented higher education”
- 2008-2009 Visiting Scientist at Alnylam Pharmaceuticals, Cambridge, MA, USA
- 2007 Four months Visiting Professor at the Okazaki Institute for Integrative Bioscience, Japan
- 2007 One month training in **imunocitochemistry** at the University of Antwerpen, under a Belgian-Romanian Bilateral Program
- 2000 One month scholarship at the Mansfield College, Oxford, under the Oxford Colleges Hospitality Scheme
- 1998 Two weeks course on “**Ion Channel Patch Clamp Electrophysiology**” at the University of Copenhagen, August Krogh Institute
- 1996-1998 6 months training (separated by years in 1+4+1) in **patch-clamp technique** at the University of Hamburg, Eppendorf Hospital, Institute of Physiology within a TEMPUS Programme
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### National and International Awards

- 2008-2009, “Foundation Sante” and AIPT (Association for International Practical Training) Fellowship
  - 2006, NIDA (National Institute on Drug Abuse) Scholarship to participate at *Pain Mechanisms and the Development of Analgesic*, Keystone, USA
  - 1996, Tempus Fellowship, University of Hamburg, Eppendorf Hospital, Institute of Physiology, Germany
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## **Professional work record**

**University of Bucharest, Faculty of Biology, Department of Anatomy, Physiology and Biophysics, Professor, March 2019 -present**

- Education activities (lectures, practical courses, co-ordinating student final thesis).
- Research project manager in neurobiology.

**University of Bucharest, Faculty of Biology, Department of Anatomy, Physiology and Biophysics, Associate Professor, March 2004 – January 2018**

- Education activities (lectures, practical courses, co-ordinating student final thesis).
- Author of two Human Anatomy and Physiology textbooks and of a practicum of Animal Physiology.
- Research project manager in neurobiology.

**University of Bucharest, Faculty of Biology, Department of Anatomy, Physiology and Biophysics, Senior Lecturer, January 2000 - February 2004**

- Education activities (lectures, practical courses, coordinating student final thesis).
- Co-author of a national textbook of Biology for high-school students.

**University of Bucharest, Faculty of Biology, Department of Anatomy, Physiology and Biophysics, Teaching Assistant, 1994 - January 2000**

- Established and co-ordinated the collaboration with **INTERNICHE** (*International Network of Individuals and Campaigns for Humane Education*) under a World Bank financed program.
- Involved in interviewing prospective students for awarding TEMPUS scholarships and for admission at the Neurobiology Master Program.
- Education activities (lectures, practical courses, coordinating student final thesis, admission process in the university).
- Coordinated the team who translated the book “*Introduction à la neurobiologie moleculaire*” by Zach Hall, a 1994 French edition.

**University of Bucharest, Faculty of Biology, Department of Animal Physiology, Junior Assistant, 1991-1994**

- Education activities (practical courses, admission process in the university).

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## **Research experience**

### **International grants as project coordinator**

2017-2020 “Iba-1 (+) macrophages contribution to peripheral neuropathic pain development” financed by International Centre for Genetic Engineering and Biotechnology, Italy

### **National research grants as project coordinator**

2020-2022 PED -“Validation of Iba1 protein as a therapeutic target in human microglia”, financed by UEFISCDI, Romania

2018-2021 PCCDI – “Biocompatible system for sustaining peripheral nerve regeneration”, co-PI in collaboration with Dr. Monica Neagu from the National Institute “Victor Babes” – a subproject of the complex project “Innovative advanced approaches for predictive regenerative medicine”, Director: Prof. Dr. Marieta Costache

2014-2016 PARTNERSHIPS, 205, “Validation of the combined use of RNAi technology and mass spectrometry for the identification of therapeutic targets in microglia, important for neuropathic pain and Alzheimer disease”

2011-2016 IDEAS, 117, “Cellular and molecular mechanisms of diabetic neuropathy: implications of the immune system and of the glycation agents”.

2007-2009 CNCSIS, “Effects of polyunsaturated fatty acids on TRPV1 channels expressed in dorsal root ganglia neurons. Implications for pain mechanisms”.

### **National research grants as team member**

- 2016-2019 POC 146/2016, "Development of automated patch-clamp technologies for pro-arrhythmogenic risk testing of drug candidates", (<http://cipa3.unibuc.ro/home-2/>).  
26.10.2016 - 03.05.2018, **Acquisitions Manager**  
04.05.2018 - 25.10.2019, **Senior Researcher II**
- 2005-2008 CEEEX, 27, "Study of molecular mechanisms of diabetic neuropathy on cultured dorsal root ganglion neurons maintained in diabetic conditions".
- 2005-2008 CEEEX, 31, "Molecular, cellular and integrative mechanisms of pain. Clinical implications".
- 2002-2004 CERES, 1/3, "*In vitro* investigations of the energetic restriction stress-induced changes of the intracellular signalling cascade", collaborators of UMF "Carol Davila", Bucharest.
- 2003-2006 VIASAN, 199, "Modulation mechanisms of ionic channels activated by tissular acidosis in peripheral nervous fibers and blood vessels"
- 2003 CNCSIS, A15/221, "Generation of spontaneous excitatory activity in lesioned nerves: new experimental approaches".
- 2001 World Bank, C326, "Neuronal excitability in diabetic neuropathy and generation of spontaneous activity in lesioned nerves".
- 1999 CNCSIS, A28/30, "Physiology of K<sup>+</sup> channel involved in maintaining resting membrane potential in rat axons".
- 1998- 2002 World Bank, PU-19, "The modernization and optimization of physiology teaching through a balanced use of computer-assisted and electrophysiological methods".
- 1998 -2002 World Bank, D-22, "Development of a Master and PhD Program in molecular physiology, with an emphasis on neurobiology and membrane biophysics in excitable and non-excitable cells".
- 1998 - 2002 World Bank, B-50, "Molecular physiology: Electrophysiological techniques and computer modelling of cellular and molecular interactions".
- 1995 TEMPUS, S-JEP 09373-95 (a ~200, 000 ECU project concerning the organisation of the Master in Neurobiology), member in the team who worked for the proposal.

### **International research grants as partner team leader**

- 2015-2017 IASP Collaborative Research Grant, "Targeting Microglial Potassium Channels to treat pain", Co-project manager together with Dr. Marc Suter from University of Lausanne, Switzerland
- 2013-2014 Scientific Exchange Program (Sciex-NMS) with University of Lausanne, Switzerland, Home mentor
- 2014 Bilateral Romania-Japan 767/2014, "The role of P2X7 receptor in the modulation of the microglia response in neuropathic pain", Co-project manager together with Assoc. Prof. Koji Shibasaki, Department of Molecular and Cellular Neurobiology, Gunma University Graduate School of Medicine, Maebashi, Japan
- 2012-2014 Bilateral Romania-Greece 577/2012, "The role of small GTP-ases and ASIC channels in normal and pathological cortex", Co-project manager together with Dr. Domna Karagogeos from Institute of Molecular Biology and Biotechnology, Heraklion, Crete

### **International research grants as team member**

- 2004-2006 Estee Lauder Inc., USA, "Anti-inflammatory effects of plant extracts".

### **International research grants as visiting scientist**

- 2008-2009 Alnylam Pharmaceuticals, Boston, US, "Assess the efficacy of macrophage marker Iba-1/Aif-1 silencing on pain"
- 2008-2009 Alnylam Pharmaceuticals, Boston, US, "Development of ALN-TTR, an RNAi therapeutic for the treatment of transthyretin amyloidosis".
- 2007 NIPS Japan, "Identification of critical determinants which potentiate TRPV1 activity under diabetic conditions" in Prof. Makoto Tominaga's lab.

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## **Technical skills**

### ***Cell Biology***

- Cell culture experience: dorsal root ganglia neurons primary culture, microglia and monocyte/macrophage cell lines. Immunocytochemistry and immunohistochemistry

### ***Electrophysiology and Imaging techniques***

- Patch-clamp on primary and cell line culture, calcium imaging using Calcium Green-1 and Fura-2 fluorescent dyes and fluorescent microscopy.

### ***Molecular Biology and Biochemistry techniques***

- Gene silencing with anti-sense RNA, branched DNA assay, ELISA and Multiplex technology for cytokine/chemokine measurement, RT-PCR, Western blot, In-cell Western
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## **Papers in ISI journals as main author**

- Gheorghe RO, Deftu A, Filippi A, Grosu A, Bica-Popi M, Chiritoiu M, Chiritoiu G, Munteanu C, Silvestro L, **Ristoiu V.**, 2020, Silencing the Cytoskeleton Protein Iba1 (Ionized Calcium Binding Adapter Protein 1) Interferes with BV2 Microglia Functioning. *Cell Mol Neurobiol.* 40(6):1011-1027
- Deftu AT, Ciorescu R, Gheorghe RO, Mihăilescu D, **Ristoiu V.** CXCL1 and CXCL2 Inhibit the Axon Outgrowth in a Time- and Cell-Type-Dependent Manner in Adult Rat Dorsal Root Ganglia Neurons. *Neurochem Res.* 2019 Sep;44(9):2215-2229
- Deftu AF, Filippi A, Gheorghe RO, **Ristoiu V.**, 2018, CXCL1 activates TRPV1 via Gi/o protein and actin filaments. *Life Sci.* 193:282-291
- Deftu A, Filippi A, Shibasaki K, Gheorghe RO, Chiritoiu M, **Ristoiu V.** CXCL1 and CXCL2 chemokines modulate the activity of TRPV1+/*IB4+* cultured rat dorsal root ganglia neurons upon short-term and acute application, *Journal of Physiology and Pharmacology*, 68 (3): 385-395, 2017
- Filippi A, Caruntu C, Gheorghe RO, Deftu A, Amuzescu B, **Ristoiu V.** Catecholamines reduce TRPV1 desensitization in cultured dorsal root ganglia neurons, *Journal of Physiology and Pharmacology*, 67 (6): 843-850, 2016
- Gheorghe, R.O., Soca, A., Chiritoiu M., Deftu, A.F., Flonta, M.L., **Ristoiu, V.**, 2018. Long-term exposure to CXCL2 has cytotoxic effects on HEK293T cells stably expressing TRPV1, *Romanian Biotechnological Letters*, 23 (3), pp.13647-13653
- Deftu TA, Deftu AF, **Ristoiu V.** Long-term incubation with CXCL2, but not with CXCL1, alters the kinetics of TRPV1 receptors in cultured DRG neurons, *Archives of Biological Sciences*, 69(00):74-74, 2016
- **Ristoiu V.** Contribution of macrophages to peripheral neuropathic pain pathogenesis, mini-review, *Life Sciences* 93(23): 870-81, 2013
- Ton Thi Bich H, Chen Q, Gaina G, Tucureanu C, Georgescu A, Strungaru C, Flonta ML, Sah DW, **Ristoiu V.** Activation profile of dorsal root ganglia Iba-1 (+) macrophages varies with the type of lesion in rats, *Acta Histochemica*, 115(8): 840-50, 2013
- **Ristoiu V.** Shibasaki K, Uchida K, Zhou Y, Ton TBH, Flonta ML, Tominaga M, Hypoxia-induced sensitization of transient receptor potential vanilloid 1 involves activation of hypoxia-inducible factor-1  $\alpha$  and PKC, *Pain*, 152(4): 936-945, 2011
- Ton TBH, Marin A, Dinu C, Banciu D, Flonta ML, **Ristoiu V.** Hypoxia and high glucose activate TTX-R  $\text{Na}^+$  channels through PKA and PKC, *Acta Neurobiologiae Experimentalis*, 70 (4): 351-61, 2010
- **Ristoiu V.** Pluteanu F, Flonta ML, Reid G, Few cultured rat primary sensory neurones express a tolbutamide-sensitive current, *Journal of Cellular and Molecular Medicine*, 6(2): 271-274, 2002

### Papers in ISI journals as contributor

- Anton R, Ghenghea M, **Ristoiu V**, Gattlen C, Suter MR, Cojocaru PA, Popa-Wagner A, Catalin B, Deftu AF. Potassium Channels Kv1.3 and Kir2.1 But Not Kv1.5 Contribute to BV2 Cell Line and Primary Microglial Migration. *Int J Mol Sci*. 2021 Feb 19;22(4):2081. doi: 10.3390/ijms22042081
- Gattlen C, Deftu AF, Tonello R, Ling Y, Berta T, **Ristoiu V**, Suter MR. The inhibition of Kir2.1 potassium channels depolarizes spinal microglial cells, reduces their proliferation, and attenuates neuropathic pain. *Glia*. 2020 Oct;68(10):2119-2135. doi: 10.1002/glia.23831
- Moldovan C, Dobrescu L, **Ristoiu V**, Firtat B, Dinulescu S, Brasoveanu C, Ion M, Dobrescu D, Gheorghe R, Pascalau AM, Pogarasteanu M, Coculescu BI, Oproiu AM, Experimental measurements in the acquisition of biosignals from a neuronal cell culture for an exoprosthesis command, *Revista de Chimie*, Volume 69 (10): 2948-2952, 2018
- Manole E, Bastian A, **Ristoiu V**, Zurac S, Neagu M, The Effects of Exogenous Modulation on the Peripheral Nerve Regeneration after Injury and Primary Surgical Repair, *Biomedical Journal of Scientific & Technical Research*, doi: 10.26717/BJSTR.2018.04.001043, 2018
- Deftu AF, **Ristoiu V**, Suter MR, Intrathecal administration of CXCL1 enhances potassium currents in microglial cells, *Pharmacology*, doi: 10.1159/000486865, 2018
- Alexandru N, Andrei E, Niculescu L, Dragan E, **Ristoiu V**, Georgescu A, Microparticles of healthy origins improve endothelial progenitor cell dysfunction via microRNA transfer in an atherosclerotic hamster model, *Acta Physiologica*, doi: 10.1111/apha.12896, 2017
- Ulareanu R, Chiritoiu G, Cojocaru F, Deftu A, **Ristoiu V**, Stanică L, Mihailescu DF, Cucu D, N-glycosylation of the Transient Receptor Potential Melastatin 8 (trpm8) channel is altered in pancreatic cancer cells, *Tumor Biology*, 39(8), doi: 10.1177/1010428317720940, 2017
- Deftu AF, Fiorenzani P, Ceccarelli I, Pinassi J, Gambaretto M, **Ristoiu V**, Paulesu LR, Aloisi AM, Macrophage Migration Inhibitory Factor (MIF) modulates formalin induced behaviors in rats, *Animal Biology*, doi 10.1163/15707563-00002502, 2016
- Pluteanu F, **Ristoiu V**, Flonta ML, Reid G,  $\alpha$ 1-adrenoceptor-mediated depolarization and  $\beta$ -mediated hyperpolarization in cultured rat dorsal root ganglion neurones, *Neuroscience Letters* 329(3): 277-280, 2002
- Babes A, Lőrinczi E, **Ristoiu V**, Flonta ML, Reid G, Slowed inactivation at positive potentials in a rat axonal  $K^+$  channel is not due to preferential closed-state inactivation: differences between inactivation of native and cloned  $K^+$  channels, *Physiological Research*, 50(6): 557-565, 2001

### Papers in BDI journals as main author

- Deftu AF, Deftu AT, **Ristoiu V**, The effect of the glial conditioned medium on brain and spinal cord microglial cells in culture, *Romanian Journal of Biophysics*, 26(1): 063-068, 2016
- **Ristoiu V**, Flonta ML, Types of receptors and ionic channels in the primary sensory nociceptive neurons from dorsal root ganglia (I), *Analele Universitatii Bucuresti*, XLIX, 39-47, 2000
- **Ristoiu V**, Flonta ML, Types of receptors and ionic channels in the primary sensory nociceptive neurons from dorsal root ganglia (II), *Analele Universitatii Bucuresti*, XLIX, 49-55, 2000
- **Ristoiu V**, Flonta ML, Interactions between neurotransmitters and receptors, review, *Romanian Journal of Biophysics*, 9 (3-4): 11-127, 1999
- Flonta ML, **Ristoiu V**, Procaine increases the water permeability in frog intestine, *Romanian Journal of Biophysics*, 4 (4): 199-202, 1994

### Papers in BDI journals as contributor

- Amuzescu B, Airini R, Ghica L, Epureanu FB, Deftu AF, Cucu D, **Ristoiu V**, Mihăilescu D, Radu B, Novel approaches to proarrhythmogenic risk testing using automated patch-clamp platforms, *Romanian Journal of Biophysics*, 27(1): 013-022, 2017
- Neagoe I, Ristoiu V, Flonta ML, Characteristics of Quercetin Insertion in Planar Lipid Bilayers, *Romanian Journal of Biophysics*, 9(1-2): 33-38, 1999

### Publications in Proceedings as abstract

- N. Alexandru, E. Dragan, **V. Ristoiu**, L. Niculescu, A. Georgescu. Role of microparticles as microRNA messengers in reestablishing of atherosclerosis-associated endothelial progenitor cell dysfunction. presentation as *Science at a Glance* at the '85th European Atherosclerosis Society Congress' (EAS2017), Prague, Czech Republic, 23-26 April 2017, Abstract SAG014, in *Atherosclerosis*, August issue, Volume 263, Page e33 (2017). DOI:<http://dx.doi.org/10.1016/j.atherosclerosis.2017.06.127>.
- Alvarez R, Borland T, Chen Q, Milstein S, Nguyen T, Hinkle G, Kuchimanchi S, Costigan J, **Ristoiu V**, Wang G, Cole G, Dorkin R, Akinc A, Nechev L, Kosovrasti V, Tchangov L, Tracy M, Jeffs L, MacLachlan I, Lutwyche P, Martins D, Costelha S, Saraiva MJ, Sah DW, ALN-TTR, an RNAi therapeutic for the treatment of transthyretin-mediated amyloidosis, *Amyloid-Journal of Protein Folding Disorders*, 17, Suppl. 1, 51-52, 2010
- Alvarez R, Borland T, Chen Q, Milstein S, Nguyen T, Hinkle G, Kuchimanchi S, Costigan J, **Ristoiu V**, Wang G, Cole G, Dorkin R, Akinc A, Nechev L, Kosovrasti V, Tchangov L, Tracy M, Gamba-Vitalo C, Jeffs LB, MacLachlan I, Lutwyche P, Ribiero T, Saraiva MJ, Sah DW, Development of ALN-TTR, an RNAi therapeutic for the treatment of transthyretin amyloidosis, *Hepatology*, 50(6), 5A-6A, 2009
- **Ristoiu V**, Shibazaki K, Flonta ML, Tominaga M, Identification of critical determinants which potentiate TRPV1 activity under diabetic conditions, *Journal of Physiological Sciences*, 59, Suppl 1, 376, 2009
- **Ristoiu V**, Dinu CE, Flonta ML, Cultured rat primary sensory neurons exposed to hypoxic/hyperglycemic conditions exhibit altered Na<sup>+</sup> and TRPV1 currents, *European Journal of Pain*, Volume 10, S49, 1754-3207, 2006
- Babes A, Lorinczi E, Pluteanu F, **Ristoiu V**, Flonta ML, Reid G, Slowing of inactivation at positive potentials in a rat axonal K<sup>+</sup> channel is not due to preferential closed state inactivation, *Eur J Neurosci*, 12, Suppl 11, 381, 2000
- **Ristoiu V**, Babes A, Flonta ML, Reid G, Slowing of inactivation of a rat axonal K<sup>+</sup> channel at positive potentials reveals differences from inactivation behaviour of cloned K<sup>+</sup> channels, *J Physiol*, 518, P:111P, 1999
- Ardelean I, **Ristoiu V**, Flonta ML, Zarnea G, Respiratory and photosynthetic response on salt stressed *Synechocystis* PCC 6803, *Photosynthesis: from Light to Biosphere*, Vol. IV, 525-528, Sinauer Press, 1995

### Oral communications at international conferences

- Deftu A, Filippi A, Gheorghe RO, Chirițoiu G, Grosu A, Floare M, Tuchilus A, **Ristoiu V**, The silencing of Iba-1 protein alters the proliferation profile of microglial cells, *Microglia 2018, EMBO workshop*, EMBL Heidelberg, 2018
- Gheorghe RO, Repić T, Zbarcea C, Tanase A, Negres S, Chiritoiu G, Sapunar D, **Ristoiu V**, Intra-ganglionic delivery of Iba-1 siRNA is reducing the SNL-induced neuropathic pain, *European Pain School*, Siena, Italy, 2017
- Deftu AT, Marculescu R, **Ristoiu V**, CXCL1 and CXCL2 chemokines affects neurites outgrowth in dorsal root ganglion neurons, *European Pain School*, Siena, 2016
- **Ristoiu V**, TRPV1 receptor: new modalities of sensitization and/or activation in peripheral nervous system, *DNF Symposium*, Lausanne, Switzerland, 2014

### Oral communications at national conferences

- **Ristoiu V**, Neuro-immune interactions in neuro-inflammation. The role of microglia and macrophages. *Neurosciences, Neurotechnology, Neuroinformatics and Neuro-psychopharmacology Workshop*, Bucharest, June 2019
- **Ristoiu V**, The role of cytoskeleton in the interaction between immune cells and neurons, *The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2018
- Gheorghe RO, Zbârcea CE, Tănase A, Gherghiceanu M, Chirițoiu G, Sapunar D, Flonta ML, **Ristoiu V**, Local administration of therapeutic agents at the level of dorsal root ganglia - a new method to treat neuropathic pain, *The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2018
- Deftu A, Anton RE, Bica-Popi M, Bogdan C, gattlen C, Decosterd I, Suter MR, **Ristoiu V**, Potassium channels after spared nerve injury, *The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2018
- Caragea V, **Ristoiu V**, Genzel L, Investigating cumulative memory in rodents by using the novel Object Space Task, *The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2018
- Deftu A, Gheorghe RO, Grosu A, Filippi A, Chirițoiu G, Burlacu E, **Ristoiu V**, Controlling microglia mobility via interactions with the cytoskeleton, *1st International Conference on Neuroscience, Neuroinformatics, Neurotechnology and Neuro-Psycho- Pharmacology*, Bucharest, Romania, 2018
- Caragea V, **Ristoiu V**, Genzel L, The Object Space Task, *1st International Conference on Neuroscience, Neuroinformatics, Neurotechnology and Neuro-Psycho- Pharmacology*, Bucharest, Romania, 2018
- Gheorghe RO, Zbârcea CE, Tănase A, Gherghiceanu M, Chirițoiu G, Sapunar D, Flonta ML, **Ristoiu V**, SiRNA therapy for neuropathic pain treatment, *National Conference of Doctoral Schools from Universitaria Consortium*, Iasi, Romania, 2018
- Necula MG, Ion R, **Ristoiu V**, Cimpean A, In vitro inflammatory response to TiO<sub>2</sub> nanostructure materials, *National Conference of Doctoral Schools from Universitaria Consortium*, Iasi, Romania, 2018
- Gheorghe RO, Zbârcea CE, Tănase A, Gherghiceanu M, Chirițoiu G, Sapunar D, **Ristoiu V**, SiRNA interference therapy for neuropathic pain, *The 8th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2017
- Deftu A, Filippi A, Gheorghe RO, Chirițoiu G, Grosu A, Floare M, Tuchilus A, **Ristoiu V**, Altering microglia functionality by interfering with cytoskeleton proteins, *The 8th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2017
- **Ristoiu V**, Modulation of microglia/macrophages activity by interactions with the cytoskeleton, *The Research Institute of the University of Bucharest*, 2017
- Gheorghe RO, Repić T, Sapunar D, Flonta ML, **Ristoiu V**, Intra-ganglionic delivery of Iba-1 siRNA is reducing the SNL-induced neuropathic pain - pilot study, *The 7th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2016
- Ulareanu R, Chiritoiu G, Deftu AF, **Ristoiu V**, Cucu D. Glycosylation modulates transient receptor potential channels in pancreatic cancer, *The Symposium Nicolae Cajal of the Romanian Academy of Medical Sciences*, Bucharest, 2016
- **Ristoiu V**, Deftu AF, Modulatory effects of CXCL1 chemokine on TRPV1 channels, *The 4th Conference of the National Neuroscience Society of Romania*, Bucharest, 2013
- **Ristoiu V**, Iba-1 protein - a possible new therapeutic target for neuropathic pain treatment? *Diaspora in Scientific Research and Higher Education in Romania, Perspectives in Neuroscience*, Bucharest, 2012
- **Ristoiu V**, Dinu C, Flonta ML, Effects of short-term exposure to hypoxic/hyperglycemic conditions on the cultured rat primary sensory neurons, *Neuroscience 2005 - International Symposium Timisoara-Munich*, Timisoara, 2005
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### Posters at international conferences

- Deftu A, Gheorghe R, Filippi A, Chiritoiu G, Grosu A, Burlacu E, **Ristoiu V**, Silencing Iba-1 protein alters not only cytoskeleton-dependent activities, but also proliferation in BV2 microglia, *The XIV European Meeting on Glial Cells in Health and Disease, Porto, Portugal, 2019*
- Gheorghe RO, Zbarcea C, Tanase A, Gherghiceanu M, Chiritoiu G, Sapunar D, Flonta ML, **Ristoiu V**, Local administration of therapeutic agents at the level of dorsal root ganglia – a new method to treat neuropathic pain, *The XIV European Meeting on Glial Cells in Health and Disease, Porto, Portugal, 2019*
- Anton RE, **Ristoiu V**, Deftu AF, Potassium channels are important for the mobility of BV2 microglia, *FENS Regional Meeting, Belgrade, Serbia, 2019*
- Grosu AV, Gaina G, Deftu AF, Gheorghe RO, **Ristoiu V**, Iba-1 silencing alters mobility of BV2 microglia, *FENS Regional Meeting, Belgrade, Serbia, 2019*
- Ghenghea M, Tuchiluş A, **Ristoiu V**, Deftu AF, Kv1.3 and Kv1.5 channels are involved in BV2 cells' migration, *FENS Regional Meeting, Belgrade, Serbia, 2019*
- Stratan C, Gaina G, Gheorghe RO, **Ristoiu V**, Spatial interactions between Iba-1 (+) macrophages and CGRP (+) DRG neurons, *FENS Regional Meeting, Belgrade, Serbia, 2019*
- Bica-Popi MM, Gheorghe RO, Deftu AF, **Ristoiu V**, Iba-1 silencing interferes with P2X7 functioning in BV2 microglia, *FENS Regional Meeting, Belgrade, Serbia, 2019*
- Armăşescu F, Brănescu B, **Ristoiu V**, Deftu AF, Kir2.1 channels contribute to different microglia cells functions, *FENS Regional Meeting, Belgrade, Serbia, 2019*
- Gheorghe RO, Zbârcea CE, Tănase A, Gherghiceanu M, Chiritoiu G, Sapunar D, Flonta ML, **Ristoiu V**, SiRNA therapy for neuropathic pain, *5<sup>th</sup> International Seminar on behavioral methods, Krakow, 2018*
- Gheorghe RO, Filippi A, Deftu AF, Chiritoiu G, Tuchilus A, **Ristoiu V**, Iba-1 silencing in BV2 microglia cell line interferes phagocytosis and cell migration, *The XIII European Meeting on Glial Cells in Health and Disease, Edinburgh, Scotland, 2017*
- Deftu AF, Gattlen C, Ristoiu V, Decosterd I, Suter M, Potassium channels in dorsal horn microglial cells after spared nerve injury, *The XIII European Meeting on Glial Cells in Health and Disease, Edinburgh, Scotland, 2017*
- Alexandru N, Andrei E, Dragan E, **Ristoiu V**, A. Georgescu. The effects of circulating endothelial progenitor cell and platelet microparticle microparticle administration on platelet-endothelial progenitor cell interplay in atherosclerotic disease. *The 15th Biennial Meeting of the International Society for Applied Cardiovascular Biology (ISACB), Banff, Alberta, Canada, 7-10 September 2016, Abstract No. P21, p.18.*
- Gheorghe RO, Repić T, Sapunar D, **Ristoiu V**, Intra-ganglionic delivery of Iba-1 siRNA is reducing the SNL-induced neuropathic pain, *The 10th FENS Forum of Neuroscience, Copenhagen, 2016*
- Filippi A, Gheorghe RO, Deftu AF, **Ristoiu V**, Iba-1 silencing in BV2 microglia cell line interferes with P2x7 functioning, *The 10th FENS Forum of Neuroscience, Copenhagen, Denmark, 2016*
- Gheorghe RO, Deftu AF, Filippi A, **Ristoiu V**, CXCL1 activates TRPV1, a receptors involved in inflammation and pain, *The Science of Pain and its Management, London, 2015*
- Deftu AF, **Ristoiu V**, Decosterd I, Suter MR, The chemokine CXCL1 can modulate the activity of TRPV1 and K<sup>+</sup> channels, *1st DNF Symposium, Lausanne, Switzerland, 2014*
- Deftu AF, **Ristoiu V**, Decosterd I, Suter MR, The chemokine CXCL1 can modulate the activity of TRPV1 and K<sup>+</sup> channels, *The 15th World Congress on Pain, Buenos Aires, Argentina, 2014*
- Ton Thi Bich H, Deftu A, Gaina G, Flonta ML, Georgescu A, **Ristoiu V**, Early diabetic neuropathy is associated with Iba-1 (+) immune cells activation in spinal cord and dorsal root ganglia, *14<sup>th</sup> World Congress on Pain, Milano, Italy, 2012*
- Ton TBH, Chen Q, Gaina G, Flonta ML, Georgescu A, Sah DW, **Ristoiu V**, Iba-1 (+) immune cells have different activation profile in two experimental neuropathic pain models, *FENS, Barcelona, Spain, 2012*
- Alvarez R, Borland T, Chen Q, Milstein S, Nguyen T, Hinkle G, Kuchimanchi S, Costigan J, **Ristoiu V**, Wang G, Cole G, Dorkin R, Akinc A, Nechev L, Kosovrasti V, Tchangov L, Tracy M, Gamba-Vitalo C,

Jeffs L, MacLachlan I, Lutwyche P, Ribiero T, Joao Saraiva M, Sah DW, Development of ALN-TTR, an RNAi therapeutic for the treatment of transthyretin amyloidosis., *Keystone Symposia: RNA Silencing: Mechanism, Biology and Application*, Keystone, CO, USA, 2010

- Alvarez R, Borland T, Chen Q, Milstein S, Nguyen T, Hinkle G, Kuchimanchi S, Costigan J, **Ristoiu V**, Wang G, Cole G, Dorkin R, Akinc A, Nechev L, Kosovrasti V, Tchangov L, Tracy M, Gamba-Vitalo C, Jeffs L, MacLachlan I, Lutwyche P, Ribiero T, Joao Saraiva M, Sah DW, ALN-TTR, a new RNAi therapeutic for the treatment of transthyretin amyloidosis., *Cambridge HealthTech Institute: Drug Formulation Meeting*, Philadelphia, PA, USA, 2009
- Alvarez R, Borland T, Chen Q, Milstein S, Nguyen T, Hinkle G, Kuchimanchi S, Costigan J, **Ristoiu V**, Wang G, Cole G, Dorkin R, Akinc A, Nechev L, Kosovrasti V, Tchangov L, Tracy M, Gamba-Vitalo C, Jeffs L, MacLachlan I, Lutwyche P, Ribiero T, Joao Saraiva M, Sah DW, Treating transthyretin amyloidosis with ALN-TTR, a new RNAi therapeutic, *Keystone Symposia: Therapeutic Modulation of RNA using Oligonucleotides*. Alberta, Canada, 2009
- Alvarez R, Borland T, Chen Q, Milstein S, Nguyen T, Hinkle G, Kuchimanchi S, Costigan J, **Ristoiu V**, Wang G, Cole G, Dorkin R, Akinc A, Nechev L, Kosovrasti V, Tchangov L, Tracy M, Gamba-Vitalo C, Jeffs L, MacLachlan I, Lutwyche P, Ribiero T, Joao Saraiva M, Sah DW, Development of ALN-TTR, an RNAi therapeutic for the treatment of transthyretin amyloidosis., *RNAi, MicroRNAs-2009 Boston Meeting*, Waltham, MA, USA, 2009
- **Ristoiu V**, Flonta ML, Short-term exposure to hypoxic/hyperglycemic conditions is associated with functional changes of TRPV1 currents, *2nd International Congress on Neuropathic Pain*, Berlin, Germany, 2007
- **Ristoiu V**, Dinu CE, Flonta ML, Cultured rat primary sensory neurons exposed to hypoxic/hyperglycemic conditions exhibit altered Na<sup>+</sup> and TRPV1 currents, *Pain in Europe, The 5<sup>th</sup> Congress of European Federation of IASP*, Istanbul, Turkey, 2006
- **Ristoiu V**, Dinu CE, Flonta ML, Short-term exposure of cultured rat primary sensory neurons to hypoxic/hyperglycemic conditions alters the excitability of the cells, *FENS*, Vienna, Austria, 2006
- Dinu CE, **Ristoiu V**, Flonta ML, Altered kinetics of the Na<sup>+</sup> channels in cultured rat primary sensory neurons exposed for short-term to hypoxic/hyperglycemic conditions, *Physiological Society International Workshop on the study of Nociception from Periphery to Brainstem*, Kiev, Ukraine, 2006
- **Ristoiu V**, Dinu CE, Flonta ML, Altered kinetics of the Na<sup>+</sup> and TRPV1 channels in cultured rat primary sensory neurons exposed for short-term to hypoxic/hyperglycemic conditions, *Pain mechanisms and the development of analgesics*, Keystone, Colorado, USA, 2006
- **Ristoiu V**, Flonta ML, Reid G, A subpopulation of cultured rat primary sensory neurons exhibit a novel pattern of voltage-gated currents, *Frontiers in Neurodegenerative Disorders and Ageing: Fundamental Aspects and Clinical Perspectives*, Antalya, Turkey, 2003
- Babes A, **Ristoiu V**, Flonta ML, Reid G, Slowing of inactivation at positive potentials in a neuronal K<sup>+</sup> channel is not due to preferential closed-state inactivation, *Satellite Meeting of the 9th World Congress on Pain*, Prague, 1999

#### **Posters at national conferences**

- Ghenghea M, Armășescu F, Floare M, Caragea V, Ristoiu V, Deftu A, Electrophysiology measurements on Kv1.3, Kv1.5 and Kir2.1 potassium channels in the microglial cells, *The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2018
- Grosu AV, Deftu AF, Ristoiu V, Transmigration, chemotaxis, chemokinesis and invasion is altered in microglial cells after Iba-1 silencing, *The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2018
- Burlacu EA, Gheorghe RO, Ristoiu V, The effects of silencing the Iba-1 protein on cell adhesion of BV2 microglial cell line, *The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2018

- Anton RE, Ristoiu V, Deftu AF, Microglial migration mediated by potassium channels, The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation, Bucharest, 2018
- Bica-Popi M, Deftu AF, Ristoiu V, The effect of Iba-1 silencing on the calcium signal mediated by P2X7 in microglia cells, The 9th Conference of the National Neuroscience Society of Romania (SNN) with international participation, Bucharest, 2018
- Filippi A, Caruntu C, Gheorghe RO, Deftu A, Amuzescu B, **Ristoiu V**, Catecholamines sensitize TRPV1 receptors from dorsal root ganglia neurons, *The 7th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2016
- Deftu AF, **Ristoiu V**, Decosterd I, Suter M, Intrathecal administration of CXCL1 alters potassium currents in lumbar spinal cord microglia, *The 7th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2016
- Deftu AT, Marculescu R, Lungu DA, **Ristoiu V**, CXCL1 and CXCL2 chemokines affects neurites outgrowth in dorsal root ganglion neurons, *The 7th Conference of the National Neuroscience Society of Romania (SNN) with international participation*, Bucharest, 2016, **1st Prize in the poster session**
- Alexandru N, Dragan E, Andrei E, **Ristoiu V**, Niculescu L, Georgescu A, Microparticles as microRNAs messengers improving atherosclerosis-associated endothelial progenitor cells dysfunction, The 8th National Congress with international participation and 34th Annual scientific session of the Romanian Society for Cell Biology, June 08-12, 2016, Oradea (RO), *Abstract in Bulletin of RSCB* No. 44, p. 77, 2016.
- Ulareanu R, Chiritoiu G, Deftu A, Cojocaru F, **Ristoiu V**, Cucu D, The Role of Thermosensible Ion Channel TRPM8 in Pancreatic Cancer, *National Conference of Biophysics*, Cluj-Napoca, 2016
- Ciorescu R, Gheorghe RO, Deftu AF, Deftu AT, **Ristoiu V**, Long term exposure to CXCL1 and CXCL2 has a limited effect on the neurites growth which doesn't involve TRPV1, *The 13th National Conference of Biophysics*, Timisoara, 2015
- Gheorghe RO, Deftu AF, Filippi A, **Ristoiu V**, CXCL1 activates TRPV1 receptors in an actin filaments dependent manner, *The 6th Conference of the National Neuroscience Society of Romania*, Bucharest, 2015
- Deftu AF, Filippi A, Gheorghe RO, Chiritoiu M, **Ristoiu V**, The acute application of CXCL1 activates TRPV1 receptors, *The 5th Conference of the National Neuroscience Society of Romania*, Bucharest, 2014
- Gheorghe RO, Chiritoiu M, **Ristoiu V**, CXCL2 chemokine has both trophic and cytotoxic effects on HEK293 cells, *The 5th Conference of the National Neuroscience Society of Romania*, Bucharest, 2014
- Deftu AF, Deftu AT, **Ristoiu V**, The chemokine CXCL1 modulates TRPV1 activity, *The 12th National Conference on Biophysics*, Iasi, 2013
- Deftu AF, Deftu AT, Pana MA, **Ristoiu V**, Short-term incubation with CXCL1 chemokine reduces TRPV1 desensitization, *The 3rd Conference of the National Neuroscience Society of Romania*, Bucharest, 2012
- **Ristoiu V**, Iba-1 protein - a possible new therapeutic target for neuropathic pain treatment? *Diaspora in Scientific Research and Higher Education in Romania, Perspectives in Neuroscience*, Bucharest, 2012
- Ton TBH, Marin A, Dinu C, Banciu D, Flonta ML, **Ristoiu V**, Hypoxia and high glucose activate TTX-R Na<sup>+</sup> channels through PKA and PKC, *National Meeting of the Romanian Society for Biophysics*, Bucharest, 2010 - **Best poster award**
- Ton TBH, Marin A, Dinu C, Banciu D, Flonta ML, **Ristoiu V**, PKA and PKC modulate voltage-dependent Na<sup>+</sup> channel under hypoxia and high glucose, *Biophysics & Bioelectrochemistry for Medicine: Basic Concepts, New Techniques and Application Perspective*, Vulcan, Brasov, 2010
- Selescu T, Amuzescu B, Dumitru S, Cocina G, **Ristoiu V**, Flonta ML, Multiple effects of ω-3 polyunsaturated fatty acids on vanilloid receptors (rTRPV1wt) expressed in HEK293 cells, *Annual Meeting of the Physics Faculty*, Bucharest, 2010
- Marin A, Banciu DD, Istrate B, **Ristoiu V**, Model of synaptic plasticity modulation by hypoxia, *Annual Meeting of the "Victor Babes" Institute*, Bucharest, 2009

- Dinu CE, **Ristoiu V**, Flonta ML, Effects of NGF on Na<sup>+</sup> channels in cultured rat primary sensory neurons exposed for short-term to hypoxic/hyperglycemic conditions, *The Second International Conference of the National Neuroscience Society of Romania*, Bucharest, 2006
- Niculescu D, **Ristoiu V**, Flonta ML, The Effects of Diabetic Conditions (Hypoxia/ Hyperglycemia) on K<sup>+</sup> Channels of Rat DRG Nociceptive Neurons, *The 2<sup>nd</sup> International Conference of the National Neuroscience Society of Romania*, Bucharest, 2006
- **Ristoiu V**, Dinu CE, Flonta ML, Effects of short-term exposure to hypoxic/hyperglycemic conditions on the cultured rat primary sensory neurons, *Neuroscience 2005 - International Symposium Timisoara-Munchen*, Timisoara, 2005
- **Ristoiu V**, Vasuta C, Flonta ML, Reid G, Short-term exposure of cultured rat primary sensory neurons to hypoxic/hyperglycemic conditions is not the main factor involved in neuropathic pain generation, *First Symposium of the Romanian Society of Neuroscience*, Bucharest, 2004

#### **Books in International Publishing House as chapter co-author**

- Opris I, Casanova MF (Eds), *The Physics of the Mind and Brain Disorders*, chapter *Building elements of the adaptive and pathological pain neural networks* by Flonta ML, **Ristoiu V**, Springer Verlag, 2017, 32 p, ISBN 978-3-319-29674-6

#### **Books in National Publishing House**

- Flonta ML, **Ristoiu V**, Deftu AF, *Neurobiology of Cognition*, 2<sup>nd</sup> edition, University of Bucharest Publishing House, 2016, 320 p, ISBN:978-606-16-0725-9
- Flonta ML, **Ristoiu V**, Deftu AF, *Neurobiology of Cognition*, 1<sup>st</sup> edition, University of Bucharest Publishing House, 2013, 202 p, ISBN:978-606-16-0324-4
- Flonta ML, Lapadat Marcu M, **Ristoiu V**, *Concepts of Anatomy and Physiology*, University of Bucharest Publishing House, 2007, 387 p, ISBN:978-973-737-359-5
- **Ristoiu V**, Lapadat Marcu M, *Elements of Anatomy and Physiology*, University of Bucharest Publishing House, 2006, 2<sup>nd</sup> edition, 318 p, ISBN: 978-973-737-175-1
- **Ristoiu V**, Pluteanu F, Babes A, *Animal Physiology Practicum*, University of Bucharest Publishing House, 2004, 190 p, ISBN:973-575-865-2
- Toma N, **Ristoiu V**, Toma AF, *Biology*, 10th grade textbook, University of Bucharest Publishing House, 2000, 284 p, ISBN:973-30-2842-8
- **Ristoiu V**, Balasoiu AG, Marinescu F, Mihailescu G, translation of the Zach Hall's *Introduction in Molecular Neurobiology*, University of Bucharest Publishing House, 1997, 564 p, ISBN:973-575-228-X

#### **Books in National Publishing House as chapter co-author**

- Vacariu G, Stefanov G (Eds), *Mind-brain Problem in the Cognition Neuroscience*, chapter *Conscience*, Flonta ML, **Ristoiu V**, University of Bucharest Publishing House, 2013, pg 9-44, 169 p, ISBN 978-606-16-0224-7

#### **Member in Scientific Societies**

Member of the International Society for Neurochemistry (ISN)  
 Member of the International Association for the Study of Pain (IASP)  
 Member of the Romanian Society of Pure and Applied Biophysics (SRBPA)  
 Member of the National Neuroscience Society (SNN)

### **Scientific Assignments**

Reviewer at Journal of Neurochemistry, Neuroscience letters, Journal of Pain Research, Mediators of Inflammation, Pain Research and Treatment, Journal of Immunological Research, Acta Histochemica, Acta Endocrinologica, Histology and Histopathology, Journal of Cell Identity  
Reviewer for Fulbright Scholar Program applications

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### **Other information**

*Languages:* English - fluent; French - well

*Computer skills:* Microsoft Office, Pclamp, Origin, GraphPad, Web-browsers, E-mail software

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Prof. Dr. Violeta Ristoiu

