Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Mihai Radu**
Address(es)	Via Forli' 2, scala B, 3^{0} piano, int 11, Verona (VR), 37134
Telephone(s)	Office 045-8027561; Mobile 3463676681
E-mail	mihai.radu@univr.it
Nationality	Romanian
Residence	Verona, Italy
Date of birth	1958, November, 14
Gender	Male

Work experience

Dates	*2012-present*
Occupation or position held	Postdoctoral researcher
Main activities and responsibilities	*Main activities*: research focused on the role of brain endothelial cells in epilepsy. R*esponsabilities*: calcium imaging, cell cultures (brain endothelial cells – primary and immortalized cells), installation of new set-ups (patch clamp and calcium imaging), preparing samples for qRT-PCR, WB and IF analysis
Name and address of employer	University of Verona, Department of Neurological and Movement Sciences, Strada Le Grazie 8, 37134, Verona, Italy
Type of business or sector	Research.

Dates	*1987-2011*
Occupation or position held	Researcher (1987-2001), senior researcher (2001-present).
Main activities and responsibilities	*Main activities*: research in the field of cellular and molecular biophysics: protein-lipids bilayer interaction, oxidative stress involved in ionizing radiation effects on living matter and in large impact diseases (diabetes, cardiovascular and neuronal diseases), biocompatibility of materials, development of fluorescence techniques for molecular and cellular investigation *Responsibilities*: project management and execution.
Name and address of employer	Horia Hulubei National Institute for Physics and Nuclear Engineering (IFIN-HH), Atomistilor 407, Magurele, 077125, Romania
Type of business or sector	Research.

Dates	*2003-2011*
Occupation or position held	Associate Professor
Main activities and responsibilities	*Main activities*: education (courses in the field of effects of electrical fields on living matter and fluorescence microscopy) and research (effects of variable electrical fields on cells in suspensions) *Responsibilities*: teaching, project execution.

Name and address of employer	Carol Davila University of Medicine and Pharmacy (UMF Carol Davila), Department of Biophysics and Cellular Biotechnology; Eroilor Sanitari Street 8, Bucharest, Romania
Type of business or sector	Education and Research
Dates	*2002-2005*
Occupation or position held	Associate Professor
Main activities and responsibilities	*Main activities*: education in biophysics (theoretical and practical courses in Physics and Biophysics) *Responsibilities*: teaching
Name and address of employer	University of Bucharest, Faculty of Biology, Department of Animal Physiology and Biophysics, Splaiul Independentei, 91-95, Bucharest, Romania
Type of business or sector	Education
Dates	*1983-1987*
Occupation or position held	Physics teacher.
Name and address of employer	No 1 Highs School, Cugir, Alba county, Romania
Type of business or sector	Education
Visiting scientist	*Nov01,1999-Oct30, 2000:* Postdoctoral fellow at Department of Biophysics and Biophysical Chemistry, Faculty of Chemistry, University of Bielefeld, Bielefeld, Germany: research in the field of DNA passage through lipid bilayer investigated by voltage clamp and fluorescence techniques *May15-Aug08, 2002; Aug04-Sep29, 2003; Nov01-Dec22,2003; Jan01-Mar12, 2004:* Stages in a postdoctoral position at Department of Physiology, Faculty of Medicine, Hasselt University, Hasselt, Belgium (former LUC, Diepenbeek, Belgium), Research in the field of concentration of cytosolic ions and membrane lipids organisation by microfluorimetry technique (wide field fluorescence microscopy, confocal microscopy, FRET). *Jan 2012-present*: postdoctoral fellow at Faculty of Medicine, Univeristy of Verona, Italy; research focused on the neurovascular unit role in neurodegenerative diseases.
Review panels, editorial boards, and affiliation to professional societies	*1995-present:* Referee (occasionally) for the journals in different topics (e.g.: Bioelectrochemistry, Journal of Peptide Science, British Journal of Medicine and Medical Research, etc.) *2010*: Member in the scientific panels for evaluation of project proposals (Biology committee) at the national scientific grants competition. *2007-present:* Editorial board, Romanian Journal of Biophysics (www.biophysicsnet.ro/rjb) *1995-present:* Member of Romanian Society of Pure and Applied Biophysics (affiliated to EBSA and IUPAB); 2004-2006, secretary of Bucharest branch *2005-present:* Member of Bioeletrochemistry Society *2009-present:* Member of European Society of Microscopy *2011-prezent:* Member of Biophysical Society
Publications	50 papers (see Publication list) in peer review journals, 3 book chapters, 1 patent (registered application), ~270 citations (according to Google Scholar), **Hirsh index 7**

Education and training

Dates	***1990-1999***
Title of qualification awarded	**PhD (in Physics/Biophysics)**
Principal subjects/occupational skills covered	Title of thesis: Study on the interaction of variable electric fields with the cellular suspensions
Name and type of organisation providing education and training	Babes-Bolyai University, Cluj Napoca, Romania
Level in national or international classification	ISCED 8

Dates	***1979-1983***
Title of qualification awarded	**Bachelor of science / Master of science (in Physics)**
Principal subjects/occupational skills covered	Basic education in physics, one year specialization in Biophysics
Name and type of organisation providing education and training	Faculty of Physics, University of Bucharest, Romania
Level in national or international classification	ISCED 6

Training fellowships

1993, June 14-26: Scholarship at NATO Advanced Course Structure, Biogenesis and Dynamics of Biological Membranes, Institut D'Etuds Scientifique de Cargese, France,
1994, September 26-October 14: Scholarship at ICTP Trieste, College on biophysics: structure and function of biopolymers – experimental and theoretical techniques, Trieste, Italy
1995, November 19-December 14: Scholarship at Department of Chemistry (practical training in electrochemistry techniques), University of Coimbra, Coimbra, Portugal
2002, April 15-28: Scholarship at University of Konstanz, Special Course in Membrane Biophysics, Konstanz, Germany
2011, May 11-16: Scholarship at Erice School of Biophysics – Course on Channels and Transporters, Ettore Majorana Scientific Cultural Fundation, Erice, Italy

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s)

Self-assessment

European level (*)	**Understanding**		**Speaking**		**Writing**
Language	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B1	B2	B2
French	A1	A1	A1	A1	A1

Social skills and competences

I am a serious and friendly person, easy relating with others, with an equilibrate style in relationships. I am a good negotiator. This was one of the reasons for that I was nominated for the position of head of department

Organisational skills and competences

I consider that I have the abilities to work in a programmed way with defined tasks and deadlines. I was involved in 4 national research projects as project leader and in the period of 2009-2011 I had the position of head at the Department of Life and Environmental Physics in IFIN-HH. I am the head of BioEval Laboratory which is working under the quality management standard ISO 17025.

Technical skills and competences

I have the ability to work with laboratory equipments and tools. I am familiar with standard cellular and molecular biophysics laboratory instruments as: spectroscopy (UV-VIS, fluorescence), microscopy (bright field, fluorescence, confocal), biochemistry (electrophoresis, multireader plates), cellular cultures techniques, ionizing radiation measurements instruments etc.

Computer skills and competences

Familiar in using PC (MS Office, Microcal Origin, Matlab, statistical analysis, programming)

Driving licence

Yes, vehicle category: B

November 09, 2015
Mihai Radu

List of publications

Papers in refereed journals

1) I. Petcu, A. Brezeanu, **M. Radu** (1989) Behaviour of Vegetal Protoplasts in Fusogen Electric Fields, *Rev. Roum. Biol. - Biol. Veget*. 34: 121-128.

2) **M. Radu** (1990) Cellular electrorotation A General Theoretical Model, *St. Biophys*. 137: 117-124.

3) **M. Radu** (1990) Cellular Rotation in Pulsed Rotating Electric Fields, *Rev. Roum. Phys*. 35: 507-512.

4) I. Petcu, **M. Radu**, D. Avram, T. Vassu, A. Brezeanu (1990) Electrofusion on Yeast Protoplasts, *Rev. Roum. Biol. - Biol. Veget*. 35: 115-120.

5) D. Avram, I.Petcu, **M. Radu**, F. Dan, R. Stan (1992) Electrically induced protoplast fusion for ergosterol producing yeast strain improvement, *J. Basic Microbiol*. 32: 369-372.

6) **M. Radu**, G. Cogalniceanu, A. Brezeanu (1994) Control of Nicotiana Tabacum Callus Growth by Alternating and Pulsed Electric Field, *Electro and Magnetobiology* 13: 195-201.

7) I. Petcu, D. Fologea, **M. Radu** (1997) Kinetic of electroinduced pores as a probe of membrane modification produced by ionising radiation, *Bielectrochem. Bioenerg*. 42: 179-186.

8) **M. Radu**, I. Petcu, A. Sommer, D. Avram (1996) Changes in membrane electrical parameters of yeast following chemical treatment for protoplast isolation, *Bioelectrochem. Bioenerg*. 40: 159-166.

9) **M. Radu**, I. Petcu, A. Sommer, D. Avram (1998) Stimulation of tobacco shoot regeneration by alternating weak electric field, *Bioelectrochem. Bioenerg* 44: 257-260.

10) D. Fologea, T. Vassu Dimov, I. Stoica, O. Csutak, **M. Radu** (1998) Increase of Saccharomices Cerevisiae Plating Efficiency after Treatment with Bipolar Electric Pulses, *Bioelectrochem. Bioenerg* 46: 285-287.

11) A. Bejan, R. Moraru, **M. Radu**, Gr. Turcu (1998) Adaptation response of rats contaminated with low-doses of tritiated water and postirradiated with a high dose of gamma rays, *Rev. Roum. Biol. (Physiologie Animale)* 43: 141-145.

12) G. Cogalniceanu, **M. Radu**, D. Fologea, A. Brezeanu (1998) Are the Electric Field Effects Coupled with the Hormonal Reception of Cells in Plant Callus Culture? *Rom Biotechnol. Lett*. 3: 201-206

13) D. Fologea, A. Brezeanu, **M. Radu**, P. Cornea, I. Vatafu (1999) Gene transfer by electroporation into tobacco intact petiole tissue, *Electro Magnetobiol*. 18: 1-6.

14) G. Cogalniceanu, **M. Radu**, D. Fologea, A. Brezeanu (2000) Short high voltage pulses promote adventive shoot differentiation from intact tobacco seedlings, *Electro Magnetobiol*. 19: 177-187.

15) G. Cogalniceanu, M. Carasan, **M. Radu**, D. Fologea, A. Brezeanu (2001) The influence of external electric field on the in vitro post cotyledonary development of Nicotiana tabacum L. cv. Xanthi Seedlings, *Rom. Biotechnol. Lett*. 5: 45-54.

16) I. Smets, A. Caplanusi, S. Despa, Z. Molnar, **M. Radu**, M. vandeVen, M. Ameloot, P. Steels (2004) Ca2+ uptake in mitochondria occurs via the reverse action of the Na+/Ca2+ exchanger in metabolically inhibited MDCK cells, *Am J Physiol Renal Physiol*. 286: F784-794.

17) **M. Radu**, M. Ionescu, N. Irimescu, K. Iliescu, R. Pologea Moraru, E. Kovacs (2005) Orientation behavior of retinal photoreceptors in alternating electric fields, *Biophys J*. 89: 3548-3554.

18) S. Baron, A. Caplanusi, M. vandeVen, **M. Radu**, S. Despa, M. Ameloot, P. Steels, I. Smets (2005) Role of mitochondrial Na+ concentration, measered by CoroNa Red, in the protection of metabolically inhibited MDCK cells, *J Am Soc Nephrol*. 16: 3490 – 3497.

19) C. Balut, P. Steels, **M. Radu**, M. Ameloot, W. Van Driessche, D. Jans (2006) Effects of Membrane Cholesterol Depletion on Na+ Transport in A6 Renal Epithelial Cells, *Am J Physiol Cell Physiol.* 290: C87 - C94.

20) I. Dorobanţu, L. Hărănguş, **M. Radu**, A. Iordan, D.I. Corol (2006) The Equilibrium Kinetics of the Enzymatic Labeled Anti 8ohdg Antibody-immunosorbent System in the Presence of Free Antigen, *Rom. J. Biophys*. 16(2): 149-155.

21) M. Cutrubinis, D. Chirita, D. Savu, C.E. Secu, **M. Radu**, M. Secu, C. Ponta (2007) Preliminary study on detection of irradiated foodstuffs from the Romanian market, *Rad. Phys. Chem*. 76: 1450–1454.

22) M.A. Acasandrei, I.M. Petcu, **M. Radu**, D. Gazdaru, A. Popescu, I. Dorobantu (2007) Radiolytic oxidation of the immunogenic conjugate testosterone-3-carboxymethyloxim-bovine serum albumin and rabbit antitestosterone antiserum, *Rom Rep Phys*. 59: 83-89.

23) M. Bacalum, **M. Radu** (2007) Insertion of proteins in the lipid bilayer of liposomes revealed by FRET, *Rom. J. Biophys*. 17: 129-138.

24) F. Ciobanu, **M. Radu**, M. Moisescu, M. Surleac, L. Bajenaru, T. Savopol, E. Kovacs (2007) Electroporation of malignant cells for enhanced uptake of therapeutic drugs, *Rom. J. Biophys*. 17: 212-217.

25) M. Nae, D. Gazdaru, A. Acasandrei, R. Georgescu, B.M. Macri, **M. Radu** (2008) A fluorescence approach of the gamma radiations effects on gramicidin A inserted in liposomes, *J. Pept. Sci.* 14: 1003-1009.

26) I. Dorobantu L. Harangus, **M Radu** (2009) Synthesis of enzymatic marker 3,6-dicholoro-2-methoxy-benzoic-alcaline phosphatase and evaluation of the affinity against homologue antipesticide antibody, *Rom. J. Biophys*. 19: 63-72.

27) B.M. Radu, A.D. Iancu, A. Marin, **M. Radu**, D.D. Banciu, C. Stavaru, D.L. Radu (2009) Basic features of sensory neurons from dorsal root ganglia in TCR-HA$^{+/-}$/RIP-HA$^{+/-}$ mice, *Rom. J. Biophys*. 19(2): 83-95.

28) M. Bacalum, H. Weingart, **M. Radu** (2009) Interaction between ceftazidime and bacterial porin ompf analyzed by fluorescence, *Rom. J. Biophys*. 19: 105-116.

29) B.M. Radu, **M. Radu**, D.D. Banciu (2009) Synchronous and periodic calcium oscillations in neuronal networks formed by sensory neurons in primary culture, *Rom. J. Biophys*. 19(4): 227-237.

30) M. Florescu, C. Stoicescu, S. Magda, I. Petcu, **M. Radu**, C. Palombo, M. Cinteza, R. Lichiardopol, D. Vinereanu (2010) Supranormal cardiac function in athletes related to better arterial and endothelial function, *Echocardiography* 27(6): 659-667.

31) B.M. Radu, M. Bacalum, A. Marin, M.C. Chifiriuc, V. Lazar, **M. Radu** (2011) Mechanisms of ceftazidime and ciprofloxacin transport through porins in multidrug-resistance developed by extended-spectrum beta-lactamase E.coli strains, *J. Fluoresc*., 21(4):1421-9

32) M. Temelie, M. Bacalum, C.C. Mustaciosu, **M. Radu** (2012) Morphological differentiation induced by growing substrate and serum deprivation on OLN 93 cells, *Rom. J. Biophys*, 22(1):1-12

33) B.M. Radu, D.I. Dumitrescu, C.C. Mustaciosu, **M. Radu** (2012) Dual effect of methylglyoxal on the intracellular Ca2+ signaling and neurite outgrowth in mouse sensory neurons, *Cell. Mol. Neurobiol*., 32(6):1047-1057

34) A. Matei, M. Zamfirescu, C. Radu, E.C. Buruiana, T. Buruiana, C. Mustaciosu, I. Petcu, **M. Radu**, M. Dinescu (2012) Producing ORMOSIL scaffolds by femtosecond laser polymerization,. *Appl. Phys. A: Mat. Sci. Process*. 108(1):91-97

35) F. Grigore, M. Lungu, D. Savu, **M. Radu**, G. Velciu (2012) Preparation, characterization and biological evaluation of tricalcium phosphate granules, *Rom. J. Mat*., 42(2):187-192

36) M.G. Moisescu, **M. Radu**, E. Kovacs, L.M. Mir, T. Savopol (2013) Changes of cell electrical parameters induced by electroporation. A dielectrophoresis study, *BBA Biomemb*., 1828(2):365-372.

37) B.M. Radu, A.D. Iancu, D.I. Dumitrescu, M.L. Flonta, **M. Radu** (2013) TRPV1 Properties in Thoracic Dorsal Root Ganglia Neurons are Modulated by Intraperitoneal Capsaicin Administration in the Late Phase of Type-1 Autoimmune Diabetes, *Cell. Mol. Neurobiol*., 33(2):187-96.

38) B.M. Radu, P. Bramanti, F. Osculati, M.L. Flonta, **M. Radu**, G. Bertini, P.F. Fabene (2013) Neurovascular unit in chronic pain, *Mediat. Inflamm*., 2013: 648268.

39) M. Bacalum, B. Zorila, **M. Radu** (2013) Fluorescence spectra decomposition by asymmetric functions - Laurdan spectrum revisited, *Analyt. Biochem*., 440 (2): 123–129.

40) M. Bacalum, B. Zorila, **M. Radu**, A. Popescu, (2013) Laurdan solvatochromism: influence of solvent polarity and hydrogen bonds, *Optoelectron. Adv. Mat*., 7(5-6): 456 - 460.

41) G. Bertini, P. Bramanti, G. Constantin, M. Pellitteri, B.M. Radu, **M. Radu**, P.F. Fabene, (2013) New players in the neurovascular unit: Insights from experimental and clinical epilepsy, *Neurochem. Int*., 63(7): 652-659.

42) B.M. Radu, D.I. Dumitrescu, A. Marin, D.D. Banciu, A.D. Iancu, T. Selescu, **M. Radu** (2014) Advanced Stage of Type 1 Diabetes is Associated with ASIC Alterations in Mouse Thoracic Dorsal Root Ganglia Neurons, *Cell Biochem. Biophys*., 68: 9–23

43) B.M. Radu, D.D. Banciu, A. Banciu, M. Radu, (2014) Diabetic Neuropathy: Promises and Disappointments from Benchside to Bedside, *J Neurol Stroke*, 1(3):00015.

44) B. Zorila, M. Bacalum, A. I. Popescu, **M. Radu**. (2014) Log-normal deconvolution of Laurdan fluorescence spectra - a tool to assess lipid membrane fluidity, *Rom Rep Phys* (*In Press*).

45) B.M. Radu, **M. Radu**, C. Tognoli, D. Benati, F. Merigo, M. Assfalg, E. Solani, C. Stranieri, A. Ceccon, A.M. Fratta Pasini, L. Cominacini, P. Bramanti, F. Osculati, G. Bertini, P.F. Fabene (2015) Are they in or out? The elusive interaction between Qtracker®800 vascular labels and brain endothelial cells. *Nanomedicine (Lond)*. Jul 15:1-14.

46) M. Bacalum, **M. Radu**, (2015) Cationic antimicrobial peptides cytotoxicity on mammalian cells – an analysis using therapeutic index integrative concept, *Int J Pep Res Ther*, 21: 47-55

47) B.M. Radu, **M Radu** (2015) Unleashing the Potential of Brain Endothelial Cells in Epilepsy, *J Neurol Stroke*, 3(2):00084.

48) B.M. Radu, **M. Radu** (2015) Recent Preclinical and Clinical Technological Advances Suitable to Unravel the Physiological and Pathological Status of the Blood Brain Barrier in Neurology, *EC Neurology*, 1(2): 22-28.

49) M. Bacalum, B. Zorila, **M. Radu** (2015) Investigating the anticancer activity of some cationic antimicrobial peptides in epithelial tumor cells, *Rom Rep Phys* (In Press).

50) B.M. Radu, A. Banciu, D.D. Banciu, **M. Radu** (2016) Acid-Sensing Ion Channels as Potential Pharmacological Targets in Peripheral and Central Nervous System Diseases, *Adv. Protein Chem. Structural Biol.* 103: 137–167

Chapters in books

1) E. Kovacs, T.Savopol, O. Doaga, R. Pologea, **M. Radu**, C. Deleanu (2002) *Biophysics and cellular biotechnology. Methods of research*. Carol Davila Universitary Editure , Bucharest, 120 pg; ISBN 973-8047-67-6 (In Romanian)

2) V. Lungu, D. Niculae, D. Chiper, **M. Radu**, L. Danaila, S. Baiculescu, Labelling of dotatate with 177Lu and 131I for diagnosis and targeted therapy: in vitro and in vivo comparative evaluation, in: *Comparative evaluation of therapeutic radiopharmaceuticals*, IAEA Technical Reports Series no 458, Chapter 14, pp. 223-256

3) B.M. Radu, A. Banciu, D.D. Banciu, **M. Radu** (2015) Acid sensing ion channels as potential pharmacological targets in peripheral and central nervous system diseases, in: Ion channels as therapeutic targets, *Advances in Protein Chemistry and Structural Biology*, Vol. 103, Chapter 04, pp: 137–167

Invited lectures

November 2009: M. Moisescu, **M. Radu**, Cell membrane electrical parameters evaluation by dielectrophoresis – influence of electropermealising pulses, at Institute of Pharmacology and Structural Biology, Toulouse, France (invited seminar)

Patents

A/01319/12-10-2010, Banciu D.D., Marin A., **Radu M**., Radu B., Savopol T., Method for guiding the neurite outgrowth and the synapse formation. (registered application under evaluation)

November 09, 2015
Mihai Radu