

PERSONAL INFORMATION


Elena Butoi (Dragomir)



 Institute of Cellular Biology and Pathology "Nicolae Simionescu", 050568 Bucharest (Romania)

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Sex Female | Date of birth 27/11/1975 | Nationality Romanian

POSITION WITHIN THE PROJECT

Project Responsible

WORK EXPERIENCE

2013–Present

Scientific Researcher I

Institute of Cellular Biology and Pathology "Nicolae Simionescu"
B.P. Has deu nr.8, 050568 Bucharest (Romania)
<http://www.icbp.ro/>

- Cellular Adhesion laboratory group leader
- writing and development of new research projects
- collaboration in different other research grants
- laboratory operations in cell biology and molecular biology
- responsible for elaboration of methodological and activity reports
- responsible for staff development and training of young scientists
- attending conferences and symposiums
- *ad hoc* reviewer for: Mediator of Inflammation, Plos One, Central European Journal of Biology, JCMM, etc

Business or sector Research

2009–2013

Scientific Researcher II

Institute of Cellular Biology and Pathology "Nicolae Simionescu"
B.P. Has deu nr.8, 050568 Bucharest (Romania)

- conducted research studies on the effect of intercellular interaction upon oxidative stress and inflammatory processes
- writing and development of new research projects
- collaboration in different other research grants
- laboratory operations in cell biology and molecular biology
- responsible for elaboration of methodological and activity reports
- responsible for staff development and training of young scientists
- attending conferences and symposiums
- *ad hoc* reviewer since 2009 for: Journal of Cardiovascular Pharmacology

Business or sector Research

2005–2009

Scientific Researcher III

Institute of Cellular Biology and Pathology "Nicolae Simionescu"

B.P. Hasdeu nr.8, 050568 Bucharest (Romania)

- conducted research studies to observe the effect of high glucose on vascular inflammation
- responsible with writing scientific reports for the ongoing grants
- collaboration in different other research grants
- laboratory operations in cell biology and molecular biology
- responsible for elaboration of methodological, activity reports and scientific seminars
- responsible for staff development and training of young scientists
- attending various post-doctoral program courses
- attending conferences and symposiums
- scientific coordinator of a Master's Thesis. University of Bucharest, Faculty of Biology
- *ad hoc* reviewer since 2008 for: Journal of Cellular and Molecular Medicine

Business or sector Research

1999–2015 **Scientific Researcher (2001-2005) / Research Assistant (1999-2001)**

Institute of Cellular Biology and Pathology "Nicolae Simionescu"

- study the antioxidant effect of acetylsalicylic acid on human endothelial cells
- responsible with writing scientific progress reports for the ongoing grants
- collaboration in different other research grants
- laboratory operations in cell biology and molecular biology
- responsible for elaboration of methodological, activity reports and scientific seminars
- attending conferences and symposiums

Business or sector Research

EDUCATION AND TRAINING

1990–1994 **Baccalaureate in Mathematics-Physics**

High School of Mathematics-Physics, Oltenita (Romania)

1994–1998 **Bachelor of Science in Physics**

University of Bucharest, Faculty of Physics, Bucharest (Romania)

1998–2000 **Master of Science – Biophysics**

University of Bucharest, Faculty of Physics, Bucharest (Romania)

2001–2007 **Ph.D. in science - Biology**

Romanian Academy, "N. Simionescu" Institute of Cellular Biology and Pathology, Bucharest

Research advisor Dr. Maya Simionescu

Distinction: *Summa cum Laude*.

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B1	C1	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

- Communication skills**
- Presentations at national and international conferences
 - Presentations at scientific seminars
 - Involvement in external and internal collaborations
 - Involvement in training young researchers in the laboratory

- Organisational/ managerial skills**
- Coordinator of the Cellular Adhesion Laboratory within the Department of Biopathology and Therapy of Inflammation
 - Project Director in 5 national projects, drafting of activities and assigning responsibilities to project staff
 - Member of the doctoral and post-doctoral selection committee in POSDRU/159/1.5/S/133391;
 - Involvement in external and internal collaborations
 - Involvement in organizing various conferences and workshops held at the Institute of Cellular Biology and Pathology „Nicolae Simionescu"

- Job-related skills**
- expertise in cell cultures and tissue from animal models
 - Biochemistry techniques, zymography,
 - flow cytometry,
 - molecular biology techniques (nucleic acid isolation, PCR, RT-PCR, transient transfection, cloning , microRNA)
 - fluorescence microscopy,
 - chemotaxis and adhesion assays, in laminar flow
 - computer operating knowledge

Digital competence	SELF-ASSESSMENT				
	Information processing	Communication	Content creation	Safety	Problem solving
	Independent user	Independent user	Independent user	Basic user	Basic user

Driving licence B

ADDITIONAL INFORMATION

Publications 33 articles in ISI journals (*see annex*)

Presentations 13 oral presentations (9 at international scientific conferences and 4 at national conferences)

Projects 18 national research grants (coordinator/keyperson in 8 of them) - *see annex*
5 international research grants

Conferences Attended at 45 conferences: 22 national and 23 international

Honours and awards 7 awards - see annex

Citations Hirsch index: 18, **number of citations 723** (Web of Science)
 Hirsch index: 22, **number of citations 1170** (Google Scholar)
 Hirsch index: 19, **number of citations 823** (Scopus)

Brainmap id www.brainmap.ro. UEFISCDI ID (UEF-iD): U-1700-039P-0252

Affiliation Institute of Cellular Biology and Pathology "Nicolae Simionescu"

ANEXE

1. List of articles in ISI-indexed publications

1. Vadana M, Cecoltan S, Ciortan L, Macarie RD, Tucureanu MM, Mihaila AC, Droc I, Butoi E, Manduteanu I. Molecular mechanisms involved in high glucose-induced valve calcification in a 3D valve model with human valvular cells. *J Cell Mol Med*. 2020 Apr 19. doi: 10.1111/jcmm.15277.
2. Macarie RD, Vadana M, Ciortan L, Tucureanu MM, Ciobanu A, Vinereanu D, Manduteanu I, Simionescu M, Butoi E. The expression of MMP-1 and MMP-9 is up-regulated by smooth muscle cells after their cross-talk with macrophages in high glucose conditions. *J Cell Mol Med*. 2018 Sep;22(9):4366-4376. doi: 10.1111/jcmm.13728.
3. Tucureanu MM, Rebleanu D, Constantinescu CA, Deleanu M, Voicu G, Butoi E, Calin M, Manduteanu I. Lipopolysaccharide-induced inflammation in monocytes/macrophages is blocked by liposomal delivery of Gi-protein inhibitor. *Int J Nanomedicine*. 2017 Dec 20;13:63-76. doi: 10.2147/IJN.S150918.
4. Simion V, Constantinescu CA, Stan D, Deleanu M, Tucureanu MM, Butoi E, Manduteanu I, Simionescu M, Calin M. P-Selectin Targeted Dexamethasone-Loaded Lipid Nanoemulsions: A Novel Therapy to Reduce Vascular Inflammation. *Mediators Inflamm*. 2016;2016:1625149. doi: 10.1155/2016/1625149.
5. **Butoi E**, Gan AM, Tucureanu MM, Stan D, Macarie RD, Constantinescu C, Calin M, Simionescu M, Manduteanu I. Cross-talk between macrophages and smooth muscle cells impairs collagen and metalloprotease synthesis and promotes angiogenesis. *Biochim Biophys Acta*. 2016 Jul;1863(7 Pt A):1568-78. **Impact factor: 4.52**
6. Tucureanu MM, **Butoi E**, Gan AM, Stan D, Constantinescu CA, Calin M, Simionescu M, Manduteanu I. Amendment of the cytokine profile in macrophages subsequent to their interaction with smooth muscle cells: Differential modulation by fractalkine and resistin. *Cytokine*. 2016 Jul;83:250-61. **Impact factor: 3.48**
7. Simion V, Stan D, Constantinescu CA, Deleanu M, Dragan E, Tucureanu MM, Gan AM, **Butoi E**, Constantin A, Manduteanu I, Simionescu M, Calin M. Conjugation of curcumin-loaded lipid nanoemulsions with cell-penetrating peptides increases their cellular uptake and enhances the anti-inflammatory effects in endothelial cells. *J Pharm Pharmacol*. 2016 Jan 8. doi: 10.1111/jphp.12513. Impact factor: 2.26. **Impact factor: 2.40**
8. Calin M, Stan D, Schlesinger M, Simion V, Deleanu M, Constantinescu CA, Gan AM, Pirvulescu MM, **Butoi E**, Manduteanu I, Bota M, Enachescu M, Borsig L, Bendas G, Simionescu M. VCAM-1 directed target-sensitive liposomes carrying CCR2 antagonists bind to activated endothelium and reduce adhesion and transmigration of monocytes. *Eur J Pharm Biopharm*. 2015 Jan;89:18-29. **Impact factor: 3.38**
9. **Butoi E**, Gan AM, Manduteanu I. Molecular and functional interactions among Monocytes/Macrophages and Smooth Muscle Cells and Their Relevance for Atherosclerosis. *Critical Reviews™ in Eukaryotic Gene Expression*, 2014, 24(4):341-355. **Impact factor: 2.358**

10. Gan AM, **Butoi E**, Manea A, Pirvulescu MM, Stan D, Simion V, Calin M, Simionescu M, Manduteanu I. Functional analysis of the fractalkine gene promoter in human aortic smooth muscle cells exposed to proinflammatory conditions. FEBS J. 2014, 281(17):3869-81. **Impact factor: 3.986**
11. Pirvulescu MM, Gan AM, Stan D, Simion V, Calin M, **Butoi E**, Manduteanu I. Subendothelial resistin enhances monocyte transmigration in a co-culture of human endothelial and smooth muscle cells by mechanisms involving fractalkine, MCP-1 and activation of TLR4 and Gi/o proteins signaling. Int J Biochem Cell Biol. 2014, 50:29-37. **Impact factor: 4.24**
12. Gan AM, Pirvulescu MM, Stan D, Simion V, Calin M, Manduteanu I, **Butoi E**. Monocytes and smooth muscle cells cross-talk activates STAT3 and induces resistin and reactive oxygen species production. J Cell Biochem. 2013, 114(10):2273-83. **Impact factor: 3.368**
13. Gan AM, **Butoi ED**, Manea A, Simion V, Stan D, Parvulescu MM, Calin M, Manduteanu I, Simionescu M. Inflammatory effects of resistin on human smooth muscle cells: up-regulation of fractalkine and its receptor, CX3CR1 expression by TLR4 and Gi-protein pathways. Cell Tissue Res. 2013, 351(1):161-74. **Impact factor: 3.68**
14. Simion V, Stan D, Gan AM, Pirvulescu MM, Butoi E, Manduteanu I, Deleanu M, Andrei E, Durdureanu-Angheluta A, Bota M, Enachescu M, Calin M, Simionescu M. Development of curcumin-loaded poly(hydroxybutyrate-co-hydroxyvalerate) nanoparticles as anti-inflammatory carriers to human-activated endothelial cells. Journal of Nanoparticle Research, 2013, 15:2108. **Impact factor: 2.278**
15. Pirvulescu M, Manduteanu I, Gan AM, Stan D, Simion V, **Butoi E**, Calin M, Simionescu M. A novel pro-inflammatory mechanism of action of resistin in human endothelial cells: up-regulation of SOCS3 expression through STAT3 activation. Biochem Biophys Res Commun. 2012, 1;422(2):321-6. **Impact factor: 2.284**
16. Postea O, Vasina EM, Cauwenberghs S, Projahn D, Liehn EA, Lievens D, Theelen W, Kramp BK, **Butoi ED**, Soehnlein O, Heemskerk JW, Ludwig A, Weber C, Koenen RR. Contribution of Platelet CX3CR1 to Platelet-Monocyte Complex Formation and Vascular Recruitment During Hyperlipidemia. Arterioscler Thromb Vasc Biol. May;32(5):1186-93, 2012. **Impact factor: 6.34**
17. **Butoi ED**, Gan AM, Manduteanu I, Stan D, Calin M, Pirvulescu M, Koenen RR, Weber C, Simionescu M. Cross talk between smooth muscle cells and monocytes/ activated monocytes via CX3CL1/CX3CR1 axis augments expression of pro-atherogenic molecules. Biochim Biophys Acta. 2011 Aug 22;1813(12):2026-2035. **Impact factor: 5.297**
18. Pirvulescu MM, Gan AM, Stan D, Simion V, Calin M, **Butoi ED**, Tiroviste CI, Manduteanu I. Curcumin and a Morus alba Extract Reduce Pro-Inflammatory Effects of Resistin in Human Endothelial Cells. Phytother Res. Dec;25(12):1737-42, 2011. **Impact factor: 2.397**
19. D. Stan, M. Calin, I. Manduteanu, M. Pirvulescu, A-M Gan, **E. Dragomir Butoi**, V. Simion, M. Simionescu, High glucose induces enhanced expression of resistin in human U937 monocyte-like cell line by MAPKs and NF- κ B dependent mechanisms; the modulating effect of insulin, Cell Tissue Res. 2011 Feb;343(2):379-87. **Impact factor: 3.68**
20. Manduteanu, I., Pirvulescu, M., Gan, A.M., Stan, D., Simion, V., **Dragomir, E.**, Calin, M., Simionescu, M. Similar effects of resistin and high glucose on P-selectin and fractalkine expression and monocyte adhesion in human endothelial cells. Biochemical and Biophysical Research Communications, Vol.391, No.3, pp.1443-1448, 2010; **Impact factor: 2.284**
21. Calin, M.V., Manduteanu, I., **Dragomir, E.**, Dragan, E., Nicolae, M., Gan, A.M., Simionescu, M. Effect of depletion of monocytes/macrophages on early aortic valve lesion in experimental hyperlipidemia, Cell and Tissue Research, Vol. 336, No.2, pp.237-248, 2009; **Impact factor: 3.68**
22. Manduteanu, I., **Dragomir, E.**, Calin, M., Pirvulescu, M., Gan, A.M., Stan, D., Simionescu, M. Resistin up-regulates fractalkine expression in human endothelial cells: Lack of additive effect with TNF- α , Biochemical and Biophysical Research Communications, Vol.381, No.1, pp.96-101, 2009; **Impact factor: 2.284**
23. **Dragomir, E.**, Manduteanu, I., Calin, M., Gan, A.M., Stan, D., Koenen, R.R., Weber, C., Simionescu, M. High glucose conditions induce upregulation of fractalkine and monocyte chemotactic protein-1 in human smooth muscle cells, Thrombosis and Haemostasis, Vol.100, No.6, 1155-1165, 2008; **Impact factor: 5.76**
24. Georgescu, A., Popov, D., Dragan, E., **Dragomir, E.**, Badila, E. Protective effects of nebivolol and reversal of endothelial dysfunction in diabetes associated with hypertension, European Journal of Pharmacology, Vol.570,

No.1-3, pp.149-158, 2007; **Impact factor: 2.684**

25. Manduteanu, I., **Dragomir, E.**, Voinea, M., Capraru, M., Simionescu, M. Enoxaparin reduces H₂O₂-induced activation of human endothelial cells by a mechanism involving cell adhesion molecules and nuclear transcription factors, *Pharmacology*, Vol.79, No.3, pp.154-162, 2007; **Impact factor: 1.6**
26. **Dragomir, E.**, Tircol, M., Manduteanu, I., Voinea, M., Simionescu, M. Aspirin and PPAR- α activators inhibit monocyte chemoattractant protein-1 expression induced by high glucose concentration in human endothelial cells, *Vascular Pharmacology*, Vol.44, No.6, pp.440-449, 2006; **Impact factor: 4.62**
27. **Dragomir, E.**, Simionescu, M. Monocyte chemoattractant protein-1 - A major contributor to the inflammatory process associated with diabetes, *Archives of Physiology and Biochemistry*, Vol.112, No.4-5, pp.239-244, 2006; **Impact factor: 2.44**
28. Voinea, M., Manduteanu, I., **Dragomir, E.**, Capraru, M., Simionescu, M. Immunoliposomes directed toward VCAM-1 interact specifically with activated endothelial cells - A potential tool for specific drug delivery. *Pharmaceutical Research*, Vol.22, No.11, pp.1906-1917, 2005; **Impact factor: 3.952**
29. **Dragomir, E.**, Manduteanu, I., Voinea, M., Costache, G., Manea, A., Simionescu, M. Aspirin rectifies calcium homeostasis, decreases reactive oxygen species, and increases NO production in high glucose-exposed human endothelial cells, *Journal of Diabetes and its Complications*, Vol.18, No.5, pp.289-299, 2004; **Impact factor: 1.925**
30. Voinea, M., Georgescu, A., Manea, A., **Dragomir, E.**, Manduteanu, I., Popov, D., Simionescu, M. Superoxide dismutase entrapped-liposomes restore the impaired endothelium-dependent relaxation of resistance arteries in experimental diabetes, *European Journal of Pharmacology*, Vol.484, No.1, pp.111-118, 2004; **Impact factor: 2.684**
31. Manduteanu, I., Voinea, M., Antohe, F., **Dragomir, E.**, Capraru, M., Radulescu, L., Simionescu, M. Effect of enoxaparin on high glucose-induced activation of endothelial cells, *European Journal of Pharmacology*, Vol.477, No.3, pp.269-276, 2003; **Impact factor: 2.684**
32. Voinea, M., **Dragomir, E.**, Manduteanu, I., Simionescu, M. Binding and uptake of transferrin-bound liposomes targeted to transferrin receptors of endothelial cells, *Vascular Pharmacology* Vol.39, No.1-2, pp. 13-20, 2002; **Impact factor: 4.62**
33. Manduteanu I., M.Voinea, M.Capraru, **E. Dragomir**, M. Simionescu. A novel attribute of enoxaparin: Inhibition of monocyte adhesion to endothelial cells by a mechanism involving cell adhesion molecules , *Pharmacology*. Vol.65, No.1, pp.32-37, 2002; **Impact factor: 1.6**

2. Coordinator of the following grants

1. **2018-2020: PCCDI Complex Project nr. 13 PCCDI/2018 (INTERA)** "Intelligent therapies for non-communicable diseases based on controlled release of pharmacological compounds from encapsulated engineered cells and targeted bionanoparticles" Elena Butoi - coordinator of project 2 "Development of a 3D platform designed for pre-clinical drug testing composed of cells incorporated into 3D bio-matrices".
2. **2017-2019: ELI-RO/ PN-III-P5-Subprogramul 5.1**, On-line measurement of laser-driven proton beams effect on human cells. (partner coordinator).
3. **Competitiveness Operational Programme, Priority Axis 1/Action 1.1.4** "Targeted therapies for diabetes - related aortic valve disease" (THERAVALDIS), MySMIS:104362 (key person - project implementation specialist)
4. **2015-2017** Grant PN-II-RU-TE-2014-4-0965, Vascular cell cross-talk, induces specific microRNAs that can be relevant for atherosclerotic plaque rupture, in type 2 diabetes patients – **project coordinator**
5. **2003-2005** "The chemokine modulation in different vascular pathologies; their functional role" Grant supported by the Romanian Ministry of Education and Research, National Program VIASAN – **project coordinator**
6. **2003-2004** Protetive effects of aspirin in diabetes mellitus model, in vitro Grant awarded by: Romanian Ministry of Research– **project coordinator**

7. **2001-2002** The effect of the anti-inflammatory drugs on the activated vascular endothelium” Grant supported by the Romanian Ministry of Education and Research – **project coordinator**
8. **2000** “Liposome characterization for drugs delivery. Grant supported by Romanian Academy– **project coordinator**

3. Collaborator in the following grants

1. **1999 -2001** Cell adhesion molecules expression in valvular endothelium; future therapeutic implications for valvular diseases. Grant ANSTI
2. **1999-2001**, Specific drug delivery to vascular endothelium using liposomes. Grant ANSTI
3. **2001-2003**: Drugs targeting towards activated vascular endothelium using “intelligence” liposomes: a strategy for cardiovascular diseases therapy. Grant VIASAN
4. **2003-2004**: The effect of superoxid dismutaza incorporated in liposomes on reactivity of mesenteric arteries isolated from diabetic hamsters" - Romanian Academy grant
5. **2004-2006**: „A new strategy for atherosclerotic plaque stabilisation in coronary syndromes: removal of activated macrophages using clodronat coupled liposomes”. Grant VIASAN
6. **2006-2008** “Signaling pathways involved in fractalkine expression induced by hyperglycemia as targets for developing new therapeutic approach of cardiovascular pathologies associated with diabetes” Grant supported by the Romanian Ministry of Education and Research, National Program CEEEX
7. **2006-2008**: Inflammation in atherosclerosis: modulation of the gene expression of fractalkine, apoE, NADPH oxidase and VEGF by inflammatory mediators; the capacity of drugs to prevent/revert the process. Grant: Programme Research of Excellency
8. **2005-2007**: Alteration of cellular and molecular mechanisms and of gene expression in cardiovascular diseases and diabetes/obesity – major disorders for metabolic syndrome. Grant: Programme Research of Excellency;
9. **2007-2010**: Molecular inter-connection between chronic inflammation and atherosclerosis: the role of new discovered molecules, resistin, fractalkine and CXCL16; opportunities for new targeted therapies. P4-partnerships PC; - Colaborator
10. **2011-2016**: Molecules and mechanisms involved in cytokine and chemokine-dependent vascular inflammation as targets for novel nanotherapeutic strategies, Exploratory Research Projects - PN-II-ID-PCE-2011-3.

4. Collaborator in the following international grants

1. Stroke risk prediction in atherosclerosis measuring circulating complement system proteins, **ERA-NET NEURON: 2020-2023. STATEMENT**, Call for Joint Transnational Research Projects.

2. “Nanoparticles designed to target chemokine-related inflammatory processes in vascular diseases and cancer metastasis and implementation of a biosensor to diagnose these disorders” castigat in cadrul competitiei **European Innovative RTD Projects Proposals in Nanomedicine: 2011-2014**, NANODIATER, EuroNanoMed JTC 2010, FP7.

3. *Strengthening the European Research Area by Reinforcement of Romanian Research Competency in Genomics and Proteomics of Major Global Risk Diseases: Atherosclerosis, Diabetes and its Complications* (SERA), Coordonator: Acad Maya Simionescu, Contract Numar: 016873/2005, **2005-2007**, proiect castigat in cadrul competitiei: **Specific support action proposal Integrating and Strengthening the European Research Area, FP6-2004-ACC-SSA-2**.

4. *Function and dysfunction of blood vessels: transcytosis in normal/pathological states, alterations in atherosclerosis and diabetes; their therapeutic control*, Coordonator Acad, Maya Simionescu, Contract Numar: ICA1-CT-2000-70020/2000, **2000-2005**, proiect castigat in cadrul competitiei: **Centre of Excellence of European Community, FP5**.

5. List of awards

- 1. Romanian Academy Prize in Biology “Nicolae Simionescu”**, for the series of papers published in the period 2010- 2013 within the topic: Inflammation in atherosclerosis; the use of targeted nanotherapies, **2015**.
- 2. The “Constantin Velican” prize** for outstanding contributions in the field of cellular and molecular pathology of cardiovascular disease, SRBC, Satu Mare, June 2012
- 3. For Women in Science L'Oréal-UNESCO award** for the project: The role of fractalkin-CX3CR1 axis on oxidative stress induced by interaction of smooth muscle cells with monocytes/macrophages, July, 2011.
- 4. First prize** at the **National Symposia VIASAN-CEEX**, for the study “The expression and function of MCP-1 and fractalkine in smooth muscle cells exposed to high glucose concentrations”, Sinaia, September, 2008.
- 5. Special award** offered by Institute of Cellular Biology and Pathology “Nicolae Simionescu”, and European Community FP6 - Specific Support Actions, for contribution to integration in European Research Area, 2008.
- 6. The Diploma** offered by Romanian Academy, Institute of Cellular Biology and Pathology “Nicolae Simionescu”, for successful scientific activities in the sixth frame work program of the European Community. Specific Support Action, INCO project. “Strengthening the European Research Area by Reinforcement of Romanian Research Competency in Genomics and Proteomics of Major Global Risk Diseases”, 2006.
- 7. Agora Diabetologica Prize** at the National Congress for Diabetes, Nutrition and Metabolic diseases, for the study Aspirin reduces the expression of cell adhesion molecules on the surface of endothelial cells exposed to high glucose concentration, May, 2002

Dr. Elena Butoi

