

PERSONAL INFORMATION

Elena Butoi (Dragomir)



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

POSITION AND EMPLOYMENT:

- Head of "INFLAMMATION" Department, Institute of Cellular Biology and Pathology „Nicolae Simionescu” (ICBP-NS), Bucharest, Romania.
- Principal Investigator (Scientific Researcher grade I-since 2013).
- Member of the Scientific Council of IBPC-NS (since 2020).
- PhD Supervisor in Biological Sciences, Life Sciences Doctoral School, Romanian Academy (since 2023).
- Expert Evaluator for the Romanian Ministry of Education and Research, UEFISCDI national RDI plans: PNIV:2022-2027.
- Scientific Officer, CNCS, Biology domain, supervision of the evaluation process TE2023 call (2023-2024).

PROFESIONAL EXPERIENCE:

Research in Inflammation and communication between immune and vascular cells in cardiovascular pathologies.

- Habilitation in Biology, Scientific coordinator of PhD theses, ICBP-NS (since 2023);
- Scientific coordinator of a Master's Thesis. University of Bucharest, Faculty of Biology;
- Invited lectures at 15 International conferences and in the frame of the “Advanced Summer Course in Cellular and Molecular Medicine”, organized by ICBP-NS (2003-2012);
- International seminar (2024) – New insights into the role of Neutrophils in Cardiac Injury and Repair Post-Myocardial Infarction", MultiMedica, Milan, Italy (2024).
- Involvement in organizing 3 international and national manifestations such as workshops, symposiums, or summer schools.
- Coordinator of the Inflammation Department.
- Attending International and National conferences and symposiums.
- Involvement in staff development and training of young scientists;
- Invited peer reviewer for different journals: Atherosclerosis, Life Science, JAHA, Diabetes Care, Mediator of Inflammation, Plos One, Central European Journal of Biology, Journal of Cardiovascular Pharmacology, PlosOne; Scientific Reports, Journal of Cellular and Molecular Medicine, Open Life Science, etc.
- Associate Editor for Frontiers in Cardiovascular Medicine.
- National and international collaboration with researchers and clinicians within the cardiovascular research area

EDUCATION AND TRAINING

- 2023 - Habilitation certificate in science - Biology - Romanian Academy, “N. Simionescu” Institute of Cellular Biology and Pathology, Bucharest
- 2008 - Ph.D. in science - Biology - Romanian Academy, “N. Simionescu” Institute of Cellular Biology and Pathology, Bucharest Distinction: *Summa cum Laude*.
- 2000 - Master of Science – Biophysics - University of Bucharest, Faculty of Physics, Bucharest
- 1998 - Bachelor of Science in Physics - University of Bucharest, Faculty of Physics, Bucharest
- 1994 - Baccalaureate in Mathematics-Physics High School of Mathematics-Physics, Oltenita

RESEARCH STAGES, COURSES

- 1st COST Action AtheroNET MC and WG meeting, Bucharest, March 2023
- Mye + Info + Bank Young Researcher Virtual Workshop (online participation), February 2022

- TEDD Annual Meeting Symposium and Workshop, Wädenswil, Switzerland, November, 2017
- Visiting researcher - Department of Kardiologische Molekularbiologie, Universitätsklinikum Aachen, Germany, January-March 2008, Training in fluorescence microscopy (time-lapse) for living cells - fellowship granted by European Grant – SERA.
- “Gene regulation” course April 2007 and April 2008, Bran, Romania
- Visiting researcher - Department of Kardiologische Molekularbiologie, Universitätsklinikum Aachen, Germany, March-April 2006, Training in flow adhesion techniques - fellowship granted by European Grant – SERA.
- Advanced molecular biology course: „Techniques in Molecular Biology” November – December 2006, Graduate School GUIDE, Groningen, Olanda.
- NATO Advanced Study Institute Summer School, Crete, Greece (2000).

PROJECT MANAGEMENT

- Project Director of 7, Key Expert of 4, and Team Member of 6 International and 10 National Research Grants awarded by competition (since 2001).
- Partner responsible for 1 collaborative project financed under the ELI-RO/ PN-III-P5-Subprogram 5.1 scheme.

HONOURS AND AWARDS

- Medal and Diploma of Honor for the study “Cellulose-dextran hydrogels in heart valve tissue engineering”. The XXIII International Scientific Conference “INVENTICA 2019”, June, 2019.
- „Nicolae Simionescu” prize of the Romanian Academy, for a “series of 10 papers published in the period 2010-2013 with the theme: Inflammation in atherosclerosis and diabetes; the use of targeted nano therapies”, December 2015
- The “Constantin Velican” prize for outstanding contributions in the field of the cellular and molecular pathology of cardiovascular disease, SRBC, Satu Mare, June 2012.
- *For Women in Science L'Oréal-UNESCO* award for the project: The role of the fractalkine-CX3CR1 axis on oxidative stress induced by interaction of smooth muscle cells with monocytes/macrophages, July 2011.
- 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.
- 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.
- Diploma offered by Romanian Academy, ICBP “Nicolae Simionescu”, for successful scientific activities in the sixth framework 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.
- 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.

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
C1	C1	B2	C1	C1

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

Job-related skills

-Laboratory models: **different cell co-culture models** (2D, 3D); **animal models** (atherosclerosis, diabetes, myocardial infarction); **human biological samples**: blood, plasma/serum, biopsies.
Cellular biology: cell adhesion in laminar flow, chemotaxis, efferocytosis, etc • **Biochemistry**: electrophoresis and protein transfer, immunological methods (immunoblot, ELISA, flow cytometry), enzymatic assays, cellular sorting (MACS) • fluorimetry • zymography;
Molecular biology: nucleic acid isolation, PCR, RT-PCR, transient transfection, cloning, microRNA, RNA seq
Imaging: optic microscopy, fluorescence microscopy, immunofluorescence, in vivo imaging.

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

- good command of Office suite (word processor, spreadsheet, presentation software)
- good command of photo editing software, Adobe Photoshop, image analysis (Image Master, Scion Image, Lucia), flow cytometry analysis software (Summit 4.3), and statistics (GraphPad, SPSS).

Driving licence Category B

ADDITIONAL INFORMATION

Publications 47 articles in ISI journals and 3 articles in BDI indexed journals (see annexes)

Presentations 20 oral presentations (12 at international scientific conferences and 8 at national conferences)

Projects 22 national research grants (project manager/key expert in 12 of them) - *see annex*
6 international research grants

Conferences Attended at 47 conferences: 23 national and 24 international

Member of Scientific Societies Romanian Society of Cellular Biology
Romanian Society of Biochemistry and Molecular Biology

Member of Research Networks COST Action CA21153 - Network for implementing multiomics approaches in atherosclerotic cardiovascular disease prevention & research (AtheroNET)
COST Action CA20117 - Converting Molecular Profiles of Myeloid Cells into Biomarkers for Inflammation and Cancer (MInfoBank)

Citations 1311 citations, Hirsh index: 23 - web of science – Web of science/Publons
2051 citations, Hirsh index: 29 - Google Scholar
1489 citations, Hirsh index: 25 – Scopus

Profile pages on scientific websites:

- ID BrainMap: U-1700-039P-0252 <https://www.brainmap.ro/elena-butoi>
- ORCID: <https://orcid.org/0000-0001-5748-5641>
- Scopus: <https://www.scopus.com/authid/detail.uri?authorId=6508253931>
- Web of Science ResearcherID: D-5011-2011, URL: <http://www.researcherid.com/rid/D-5011-2011>
- Google Scholar <https://scholar.google.com/citations?user=5UzhAN0AAAAJ&hl=en>

ANEXE

1. List of articles in ISI-indexed publications

1. Mavileti SK, Bila G, Utku V, Bilyy R Jr, Bila E, **Butoi E**, Gupta S, Balyan P, Kato T, Bilyy R, Pandey SS. Squaraine-Peptide Conjugates as Efficient Reporters of Neutrophil Extracellular Traps-Mediated Chronic Inflammation. ACS Appl Mater Interfaces. 2025 Feb 12;17(6):9140-9154. **Impact factor: 8.5**
2. Kardassis D, Vindis C, Stancu CS, Toma L, Gafencu AV, Georgescu A, Alexandru-Moise N, Molica F, Kwak BR, Burlacu A, Hall IF, Butoi E, Magni P, Wu J, Novella S, Gamon LF, Davies MJ, Caporali A, de la Cuesta F, Mitić

- T. Unravelling molecular mechanisms in atherosclerosis using cellular models and omics technologies. *Vascul Pharmacol.* 2025 Mar;158:107452. **Impact factor: 3.5**
3. Iacobescu L, Ciobanu AO, Macarie R, Vadana M, Ciortan L, Tucureanu MM, Butoi E, Simionescu M, Vinereanu D. Diagnostic and Prognostic Role of Circulating microRNAs in Patients with Coronary Artery Disease-Impact on Left Ventricle and Arterial Function. *Curr Issues Mol Biol.* 2024 Aug 3;46(8):8499-8511. **Impact factor: 3.1**
 4. Barbu E, Mihaila AC, Gan AM, Ciortan L, Macarie RD, Tucureanu MM, Filippi A, Stoenescu AI, Petrea SV, Simionescu M, Balanescu SM, **Butoi E**. The Elevated Inflammatory Status of Neutrophils Is Related to In-Hospital Complications in Patients with Acute Coronary Syndrome and Has Important Prognosis Value for Diabetic Patients. *Int J Mol Sci.* 2024 May 8;25(10):5107. **Impact factor: 5.6**
 5. Mihaila AC, Ciortan L, Tucureanu MM, Simionescu M, **Butoi E**. Anti-Inflammatory Neutrophils Reprogram Macrophages toward a Pro-Healing Phenotype with Increased Efferocytosis Capacity. *Cells.* 2024 Jan 23;13(3):208. **Impact factor: 6**
 6. Tucureanu MM, Ciortan L, Macarie RD, Mihaila AC, Droc I, Butoi E, Manduteanu I. The Specific Molecular Changes Induced by Diabetic Conditions in Valvular Endothelial Cells and upon Their Interactions with Monocytes Contribute to Endothelial Dysfunction. *Int J Mol Sci.* 2024 Mar 6;25(5):3048. **Impact factor: 5.6**
 7. Macarie RD, Tucureanu MM, Ciortan L, Gan AM, **Butoi E***, **Mănduțeanu I***. Ficolin-2 amplifies inflammation in macrophage-smooth muscle cell cross-talk and increases monocyte transmigration by mechanisms involving IL-1 β and IL-6. *Sci Rep.* 2023 Nov 8;13(1):19431. **Impact factor: 4.6**
 8. Nicu R, Ciolacu DE, Petrovici AR, Rusu D, Avadanei M, Mihaila AC, Butoi E, Ciolacu F. 3D Matrices for Enhanced Encapsulation and Controlled Release of Anti-Inflammatory Bioactive Compounds in Wound Healing. *Int J Mol Sci.* 2023 Feb 20;24(4):4213. doi: 10.3390/ijms24044213. **Impact factor: 6.208**
 9. Vadana M, Cecoltan S, Ciortan L, Macarie RD, Mihaila AC, Tucureanu MM, Gan AM, Simionescu M, Manduteanu I, Droc I, Butoi E. Parathyroid Hormone Induces Human Valvular Endothelial Cells Dysfunction That Impacts the Osteogenic Phenotype of Valvular Interstitial Cells. *Int J Mol Sci.* 2022 Mar 29;23(7):3776. doi: 10.3390/ijms23073776. **Impact factor: 6.208**
 10. Sanz CG, Mihaila AC, Evangelidis A, Diclescu VC, Butoi E, Barsan MM. Quantification of cell oxygenation in 2D constructs of metallized electrospun polycaprolactone fibers encapsulating human valvular interstitial cells. *Journal of Electroanalytical Chemistry.* Volume 905, 15 January 2022, 116005 **Impact factor: 4.46**
 11. Mihaila AC, Ciortan L, Macarie RD, Vadana M, Cecoltan S, Preda MB, Hudita A, Gan AM, Tucureanu MM, Simionescu M, Schiopu A and Butoi E. Transcriptional profiling and functional analysis of N1/N2 neutrophils reveal an immunomodulatory effect of S100A9-blockade on the pro-inflammatory N1. *Front. Immunol.*, 2021, doi: 10.3389/fimmu.2021.708770. **Impact factor: 8.78**
 12. Cecoltan S, Ciortan L, Macarie RD, Vadana M, Mihaila AC, Tucureanu MM, Vlad ML, Droc I, Gherghiceanu M, Simionescu A, Simionescu DT, Butoi E and Manduteanu I. High glucose induced changes in human VEC phenotype in a 3D hydrogel derived from cell-free native aortic root. *Front. Cardiovasc. Med.*, 2021 Aug 12;8:714573. **Impact factor: 6.05**
 13. Ciortan L, Macarie RD, Cecoltan S, Vadana M, Tucureanu MM, Mihaila AC, Droc I, Butoi E, Manduteanu I. Chronic High Glucose Concentration Induces Inflammatory and Remodeling Changes in Valvular Endothelial Cells and Valvular Interstitial Cells in a Gelatin Methacrylate 3D Model of the Human Aortic Valve. *Polymers (Basel).* 2020 Nov 25;12(12):2786. doi: 10.3390/polym12122786. **Impact factor: 4.32**
 14. Wu X, Niculite CM, Preda MB, Rossi A, Tebaldi T, Butoi E, White MK, Tudoran OM, Petrusca DN, Jannasch AS, Bone WP, Zong X, Fang F, Burlacu A, Paulsen MT, Hancock BA, Sandusky GE, Mitra S, Fishel ML, Buechlein A, Ivan C, Oikonomopoulos S, Gorospe M, Mosley A, Radovich M, Davé UP, Ragoussis J, Nephew KP, Mari B, McIntyre A, König H, Ljungman M, Cousminer DL, Macchi P, Ivan M. Regulation of cellular sterol homeostasis by the oxygen responsive noncoding RNA lincNORS. *Nat Commun.* 2020 Sep 21;11(1):4755. doi: 10.1038/s41467-020-18411-x. **Impact factor: 14.92**
 15. 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 Jun;24(11):6350-6361. **Impact factor: 5.31**

16. 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. **Impact factor: 4.71**
17. 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. **Impact factor: 4.47**
18. **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**
19. 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. **Impact factor: 3.23**
20. 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**
21. 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**
22. 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**
23. **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**
24. 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**
25. 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**
26. 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**
27. 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**
28. 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**
29. 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**
30. 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**

31. **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**
32. Pirvulescu MM, Gan AM, Stan D, Simion V, Calin M, **Butoi ED**, Tirgoviste 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**
33. 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-kB dependent mechanisms; the modulating effect of insulin, *Cell Tissue Res*. 2011 Feb;343(2):379-87. **Impact factor: 3.68**
34. 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**
35. 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**
36. 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**
37. **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**
38. 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**
39. 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**
40. **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**
41. **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**
42. 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**
43. **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**
44. 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**
45. 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**
46. 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**
47. 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. List of articles in non-ISI publications

1. D. Stan, V. Simion, A-M Gan, M. Pirvulescu, **E. Butoi**, I. Manduteanu, M. Calin Monocyte infiltration through endothelial cell monolayer studied by a real-time electrical impedance assay. *Anale SRBC*, 2012.
2. Simion V, Gan A-M, Stan D, Pirvulescu M, Calin M, Butoi E, Manduteanu I. Resistin and high glucose concentrations-activation of human smooth muscle cells induces enhanced monocyte chemotaxis. *Romanian Journal of Diabetes, Nutrition and Metabolic Diseases* 19(1), pp. 17-24, 2012
3. M. Voinea, **E. Dragomir**, I. Manduteanu, M. Simionescu, Gene transfer into endothelial cells using transferrin bound cationic liposomes. *Proceedings of the Romanian Academy*, vol 6:203-206, 2004.

3. Book Chapters:

1. **Elena Butoi (Dragomir)**, Ileana Manduteanu. Fractalkine and its receptor in vascular dysfunction. **Book chapter** in “From Vascular Cell Biology to Cardiovascular Medicine”, Research Signpost, ISBN 978-81-7895-503-2, 2011.
2. Calin, M., **Butoi, E.**, Manea, SA., Simionescu, M., Manea, A. (2016). Lessons from Experimental-Induced Atherosclerosis: Valuable for the Precision Medicine of Tomorrow. In: Muresian, H. (eds) *Arterial Revascularization of the Head and Neck*. Springer, Cham. Print ISBN978-3-319-34191-0

4. Coordinator/key expert of the following grants

1. **2023-2026: PNRR-III-C9-2022- I8, CF 186/24.11.2022**, “Targeting Cardiac Fibrosis in Heart Failure; Challenges and Potential Solutions Based on ncRNA Therapeutics” - **key person**
2. **2018-2022: PNRR-III-C9-2022- I8, CF 93/24.11.2022**, “New nanotherapeutic strategies for cardiac fibrosis targeting the mechanisms underlying the fibroblast to myofibroblast transition” - **key person**
3. **2020-2022: PN-III-P2-2.1-PED-2019-4906**: “Development and validation of a native cardiac hydrogel for myocardial repair post infarction” – **project coordinator**
4. **2018-2022: PN-III-P4-ID-PCCF-2016-0172**, “Targeting innate immune mechanisms to improve risk stratification and to identify future therapeutic options in myocardial infarction” - **key person**
5. **2018-2021: 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”.
6. **2017-2019: ELI-RO/ PN-III-P5-Subprogramul 5.1**, On-line measurement of laser-driven proton beams effect on human cells. (**Coordinator partner**).
7. **2016-2020 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)
8. **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**
9. **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**
10. **2003-2004** Protective effects of aspirin in diabetes mellitus model, in vitro Grant awarded by: Romanian Ministry of Research –**project coordinator**
11. **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**
12. **2000** “Liposome characterization for drugs delivery. Grant supported by Romanian Academy –**project coordinator**

5. Collaborator in the following grants

1. **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;
2. **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 (P4 Program);
3. **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;
4. **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;
5. **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 CEEX;
6. **2004-2006:** „A new strategy for atherosclerotic plaque stabilization in coronary syndromes: removal of activated macrophages using clodronate coupled liposomes”. Grant VIASAN;
7. **2003-2004:** The effect of superoxide dismutase incorporated in liposomes on reactivity of mesenteric arteries isolated from diabetic hamsters"-Romanian Academy grant;
8. **2001-2003:** Drugs targeting towards activated vascular endothelium using “intelligence” liposomes: a strategy for cardiovascular diseases therapy. Grant VIASAN;
9. **1999-2001,** Specific drug delivery to vascular endothelium using liposomes. Grant ANSTI;
10. **1999 -2001** Cell adhesion molecules expression in valvular endothelium; future therapeutic implications for valvular diseases. Grant ANSTI.

6. Collaborator in the following international grants

1. Neutrocare
2. Synthetic Ago/antagomir nanovehicles for immunoregulation: a possible approach in cancer and lung transplantation. ERA4Health Joint Translational Call
3. Stroke risk prediction in atherosclerosis measuring circulating complement system proteins, **ERA-NET NEURON: 2020-2023. STATEMENT**, Call for Joint Transnational Research Projects.
4. “Nanoparticles designed to target chemokine-related inflammatory processes in vascular diseases and cancer metastasis and implementation of a biosensor to diagnose these disorders” **European Innovative RTD Projects Proposals in Nanomedicine: 2011-2014**, NANODIATER, EuroNanoMed JTC 2010, FP7.
5. *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.**
6. *Function and dysfunction of blood vessels: transcytosis in normal/pathological states, alterations in atherosclerosis and diabetes; their therapeutic control*, Coordonator Acad, Maya Simionescu, ICA1-CT-2000-70020/2000, **2000-2005**, proiect castigat in cadrul competitiei: **Centre of Excellence of European Community, FP5.**

7. List of awards

1. **Medal and Diploma of Honor for the study** Cellulose-dextran hydrogels in heart valve tissue engineering. The XXIIIrd International Scientific Conference "INVENTICA 2019", Iasi, June 27, 2019.

2. „**Nicolae Simionescu**” prize of the **Romanian Academy**, for a “series of 10 papers published in the period 2010-2013 with the theme: Inflammation in atherosclerosis and diabetes; the use of targeted nanotherapies”, *December 2015*
3. The “**Constantin Velican**” prize for outstanding contributions in the field of the cellular and molecular pathology of cardiovascular disease, SRBC, Satu Mare, June 2012.
4. **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.
5. **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.
6. **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.
7. **Diploma** offered by Romanian Academy, Institute of Cellular Biology and Pathology “Nicolae Simionescu”, for successful scientific activities in the sixth framework 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.
8. **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.

8. Patents

1. Cecoltan Sergiu, Mihaela Vadana, Letitia Ciortan, Gan Ana-Maria, Tucureanu Monica Madalina, Mihaila Cristina Andreea, **Elena Butoi**. Procedeu de obținere a unui hidrogel din țesut cardiac funcționalizat cu un agent antiinflamator. Cerere de brevet de invenție, nr. A 100515 din 25.08.2022
2. Cecoltan Sergiu, **Elena Butoi**, Razvan Macarie, Letitia Ciortan, Mihaela Vadana, Ileana Manduteanu. Procedeu de obținere a unui model 3D de foiță valvulară bioprintabilă, buletinul oficial de proprietate industrială, brevete de invenție, Nr. 5/2021.
3. Diana Elena Ciolacu, Anca Roxana Petrovici, Andreea Cristina Mihaila, **Elena Butoi**. Procedeu si compozitie pentru obtinerea unor materiale pe baza de exopolizaharide cu potentiale aplicatii in ingineria tisulara a valvelor aortice, Nr. cerere: A 2019 00866, din 05.12.2019.

Elena Butoi