CURRICULUM VITAE, ADRIANA GEORGESCU

PERSONAL INFORMATION

Adriana Georgescu, PhD. Habil, Principal Investigator Grade I, Biophysicist, Head of Department of Pathophysiology and Pharmacology, Institute of Cellular Biology and Pathology 'Nicolae Simionescu' (ICBP 'NS'), Bucharest, Romania

Address: Institute of Cellular Biology and Pathology 'Nicolae Simionescu' (ICBP 'NS'), Bucharest, Romania
8, B.P. Hasdeu Street, P.O. Box 35-14, RO-050568, Bucharest, Romania
tel: +40-21-3192737, fax: +40-21-3194519, e-mail: adriana.georgescu@icbp.ro

Date of birth: **22.01.1971**

- **EDUCATION**

1989 - *Baccalaureate* - 'Ion Mihalache' High School, Topoloveni, Arges, Romania
1995 - *Bachelor's Degree in Physics*, Faculty of Physics, University of Bucharest, Romania
1996 - *Master's Degree in Biophysics*, Faculty of Physics, University of Bucharest, Romania
2005 (May) - *Doctoral Degree*, *Summa Cum Laude*, Natural Sciences: Biology Domain, ICBP 'NS', Bucharest, Romania - *PhD supervisor Acad. Maya Simionescu;*
2010 - 2013 - *Postdoctoral Research Fellow*, ICBP 'NS', Bucharest, Romania and 'Petru Poni' Institute of Macromolecular Chemistry, Iasi, Romania, Research Domain: Biomaterials; Subdomain: Materials for tissue engineering and implantology - *Postdoc supervisor Acad. Maya Simionescu*
2014 (January) - *Habilitation Degree*, ICBP 'NS', Bucharest, Romania

- **CURRENT POSITION(S)**

2013 (since November) – present - *Principal Investigator Grade I,* ICBP 'NS', Bucharest, Romania
2016 (since May) - present - *Head of Department of Pathophysiology and Pharmacology,* ICBP 'NS', Bucharest, Romania

- **INSTITUTIONAL RESPONSIBILITIES**

- 2011 - 2012 - Member of the Specialized Commission of Biology, Biochemistry and Pharmacy within CNATDCU (Commission of National Council for the Certify of Titles, Diplomas and University Certifications)- Ministry of National Education and Scientific Research, Bucharest, Romania
- **2014 (since January) – present** - PhD supervisor, ICBP 'NS', Bucharest, Romania
- 2016 (since May) – present - Member of the Scientific Council of ICBP 'NS', Bucharest, Romania
- 2020 (since July) – present - Member of the Ethics Commission of ICBP 'NS', Bucharest, Romania
- **2020 - 2024 -** Member of the Specialized Commission of Biology and Biochemistry within CNATDCU (Commission of National Council for the Certify of Titles, Diplomas and University Certifications) - Ministry of National Education and Scientific Research, Bucharest, Romania
- **2023-2028** - Member of the Doctoral School of Life Sciences (SDSV) within the School of Advanced Studies of the Romanian Academy" (SCOSAAR); Responsible for doctoral studies

- **TEACHING ACTIVITIES** - **2015** - Physiology and Pathophysiology Course, Faculty of Biology: Department of Anatomy, Physiology and Biophysics, University of Bucharest, Romania.
- **COMMISSIONS OF TRUST:**

Supervision of graduate students, doctoral and postdoctoral fellows;
Reviewer at scientific international journals: *European Journal of Pharmacology*; *American Journal of Hypertension; Pharmaceutical Research*; *Scientia Pharmaceutica*; *Free Radical Research; Diabetes/Metabolism Research and Reviews; Cell Biochemistry and Biophysics; Acta Diabetologica; Acta Pharmacologica Sinica; Central European Journal of Biology; Hypertension Research; Cardiovascular Diabetology; BMC Neurology; World Journal of Diabetes; Journal of Diabetes and Its Complications; Journal of Cardiology and Therapy; World Journal of Hematology; World Journal of Cardiology; Journal of Cardiovascular Pharmacology; World Journal of Stem Cells; World Journal of Clinical Pediatrics; Journal of*

Stem Cell Therapy and Transplantation; Journal of Stem Cells Research, Reviews & Reports; F1000 Faculty Reviews; Scientifica; Molecular Life; Endocrine; Experimental Biology and Medicine; PLOS ONE; Diabetes; Diabetes, Obesity and Metabolism; Molecular and Cellular Endocrinology; Journal of Translational Medicine; Annals of Translational Medicine; 3 Biotech; Diabetes and Vascular Disease Research; Journal of Molecular Endocrinology; FASEB Journal; International Journal of Molecular Sciences; Nutrition Research; Frontiers: in Cardiovascular Medicine, -in Pharmacology, -in Immunology, -in Physiology; Journal of Cellular and Molecular Medicine; Scientific Reports – Nature; Acta Physiologica; Cells, Biomedicines; BIOCELL; The Journal of Nutritional Biochemistry; Reviews in Endocrine and Metabolic Disorders; International Journal of Nanomedicine; Journal Of Extracellular Vesicles, Int. Immunopharmacol, eBioMedicine.

Expert evaluator for national and international grants: National: ● Human Resources/projects: PD/TE/PTE (2011/2012/2019/2020/2021); ● 'Joint research projects' – Collaboration Romania-France (2013); ● Exploratory Workshops (WE) (2011); ● Competition Solutiions-2020-1- SARS-CoV-2, UEFISCDI; ● Fulbright senior postdoctoral award competition for 2017-2018; ● FULBRIGHT STUDENT AWARD COMPETITION-ACADEMIC YEAR 2021-2022; International:● ERA-NET NEURON* and French National Research Agency (ANR) (the NEURON Joint Call)-the funding initiative 'Transnational Research Projects on Cerebrovascular Diseases including Small Vessel and Brain Barrier Dysfunction' (2022);● Ministry of Science, Education and Sports (MSES) of the Republic of Croatia and the first Croatian Marie Curie FP7-PEOPLE-2011-COFUND program – NEWFELPRO (2015); ● WHRI-ACADEMY fellowship programme: London, United Kingdom (2015/2016); ● 'SONATA and PRELUDIUM Grants for the Executive Government Agency of the National Science Center, Poland' (2015); ● The 5th Call for Proposals for post-doctoral researchers of the EU-funded William Harvey International Translational Research Academy (WHRI-ACADEMY) London, United Kingdom (2016);

Focus Editor for THE INTERNATIONAL JOURNAL OF BIOCHEMISTRY & CELL BIOLOGY (Elsevier journal IJBCB): Medicine in Focus – Cardiovascular Editor.

Review Editor /Associate Editor Onboarding - Frontiers in Cardiovascular Medicine/Section: Atherosclerosis and Vascular Medicine

Member in editorial board of international scientific journals: ● Biomolecules (ISSN 2218-273X; CODEN: BIOMHC)–ISI-IF=6.064; ● Frontiers in Cardiovascular Medicine-ISI-IF=5.846; ● World Journal of Diabetes–ISI-IF=5.370; ●Journal of Integrative Neuroscience- ISI -IF=1.664; ● Journal of Cardiology and Therapy; ● Journal of Stem Cells Research, Reviews & Reports; ● International Journal of Hematology Research; ● Pharmacologia; ● Journal of Stem Cell Therapy and Transplantation; ● Current Reviews in Clinical and Experimental Pharmacology (Former:Current Clinical Pharmacology);

COST Action Member: AtheroNET COST Action (CA21153); Mye-Info-Bank COST Action **(**CA20117).

Member in Scientific Societies: ● The Romanian Society for Cell Biology; ●Romanian Society for Developmental Biology; ● Romanian Society of Biochemistry; ●The Healthy Nutrition Foundation; ● The National Society for Regenerative Medicine and Surgery; ● Romanian Society of Hypertension; ● European Atherosclerosis Society; ●The Diabetes and Cardiovascular Disease EASD Study Group (D&CVD); ● European Vascular Biology Organisation (EVBO). ● European Society of Cardiology (ESC): Working Group on Atherosclerosis and Vascular Biology.

Organisation of scientific meetings: ●Workshop of CDRTU "Combating Cardiovascular Disease and Diabetes", April 27th-29th 2006, Bucharest, Romania; ●Anniversary Symposium of ICBP "N. Simionescu" untitled "An incredible 40-year journey to understand cell's secrets for the benefit of human health", September 19th-20th, 2019, Bucharest, Romania.

- **HONOURS AND AWARDS: The are 8 International** (*e.g. 4th European Meeting on Vasc Biol and Med, Bristol-UK, Sept. 17-20, 2007; XXII ISTH Congress, Boston-USA, July 11-16, 2009*) **and 37 National Prizes** (*e.g. Award 'Nicolae_Simionescu' offered by Romanian Academy for the original papers in diabetes area; Award 'Constantin Velican' for remarkable contributions in cardiovascular disease field*).
- **SUCCINCT FUNDINGS: (1) Project Director** for **13** national *(e.g. CNCS-UEFISCDI-PN-III-P1-1.2-PCCDI-2017-0527)* and **2** international grants *(e.g. ERC Starting Project/ERC-like-type"Grant Support");* **(2) Mentor for 2 national postdoctoral grants** *(e.g. PN-III-P1-1.1-PD-2019-0283);* **(3)**

Principal Investigator for 2 national grants *(e.g. PNRR /2022/C9/MCID/I8)-Project Code 93).* **(4) Collaborator** at **22** national and **7** international grants.

- **FELLOWSHIPS: ●2001 (1 month)** Frederic Alexander Universitat, Erlangen, Germany-*Detection of DNA-bound advanced Glycation End-products - High performance liquid chromatography (HPLC) technique*- **Dr. Monika Pischetsrieder*;* ●2006 (1 month)** Cardiovascular Research Center, INSERM - UMR970, Paris, France - *Circulating Microparticle Isolation and Analysis - flow cytometry technique*- **Dr. Chantal M. Boulanger*;* ●2007 (2 months)** Institute of Physiology and Biophysics, Aarhus University, Aarhus, Denmark–*Downregulation of L-type calcium channel expression in rat small mesenteric arteries with siRNA transfection in vivo–wire, culture and pressure myograph techniques and in vivo measurements of intracellular calcium- **Dr.*** **Christian Aalkjaer*;* ● 2011 (1 week)**– Centre of Advanced Researchers for Bio-nanoconjugates and Biopolymers - 'Petru Poni' Institute of Macromolecular Chemistry, Iasi, Romania - Scanning electron microscope tecnique – **Dr. Mariana Pinteala*;* ●2012 (2 weeks)-**University Medical Center, Dept. Pathology and Medical Biology, Groningen, Netherlands-*Laser MicroDissection (LMD) System (on glomeruli and arteries), RNA isolation and integrity, cDNA synthesis and RT-qPCR* - **Dr. Grietje Molema*;* ●2012 (1 month) -** Portuguese Institute of Oncology. Department of Angiogenesis, Faculty of Medicine, University of Lisbon, Lisbon, Portugal – *HUVEC and HL60 cultures, microparticles isolation from cell cultures, miRNA isolation from MPs and RT-qPCR, Bioanalysis of miRNAs, fluorescence, in situ hybridization*- **Dr. Sérgio Dias*;* ●2012 (1 month)** -Queen's University Belfast. Centre for Vision & Vascular Science Belfast (Northern Ireland, UK*) - endothelial progenitor cell (EPC) isolation from peripheral blood; early and late EPC cultures; microparticles isolation from EPC cultures; confocal microscopy*- **Dr. Alan Stitt*;* ●2012 (1 month)** - Center for Applied Medical Research (CIMA), University of Navarra, Division of Cardiovascular Sciences; Atherothrombosis, Atherosclerosis and Inflammation Department, Pamplona, Spain – *thromboelastometry (ROTEM), mouse model of thromboembolic stroke, mouse tail bleeding model, flow cytometry, isolation and purification of microparticles from plasma of TAFI knockout mice after ischemic stroke model, fibrinolytic activity of microparticles, enzymatic kinetics, isolation of Human Umbilical Vein Endothelial Cells (HUVEC), immunohistochemistry for brain hemorrhage and infarct size.* - Dr. Jose´ Antonio Páramo

- **PROFESSIONAL PERFORMANCE: Hirsch index/citations = 29/2219** (Google Scholar), i10-index = 55 (Google Scholar);

RESEARCH RECORD:

● Adriana Georgescu published: 66 ISI articles (25 as first and 24 as last author); **18 BDI articles** (6 as first and 7 as last author); **3 books** (2 as first and 1 as last author); **5 book chapters** (1 as first and 3 as last author); **38 ISI abstracts** (11 as first and 16 as last author); **1 science newspaper articles** as last author;

● Adriana Georgescu is the Academic Guest Editor of three Special Issues published in the journal "Biomolecules".

● The following could also be mentioned for Adriana Georgescu: ● 2 patents *(e.g. A/00284/2020; A/00017/2021);* ● 4 oral presentations at prestigious Universities/Institutes from abroad (*Aarhus, Lisbon, Belfast, Pamplona*); ● 29 oral presentations at international conferences *(e.g. '78th European Atherosclerosis Society Congress', Hamburg, Germany; 'Frontiers in Cardiovascular Biology 2016 meeting', Florence, Italy)*; ● 21 oral presentations at national conferences; ● 130 poster communications at international conferences and 21 at national conferences; ● 10 international courses; 19 edited articles.

ARTICLES PUBLISHED IN ISI INDEXED JOURNALS WITH IMPACT FACTOR

1. A. Georgescu, D. Popov. AGE-dependent accumulation of advanced glycation endproducts is accelerated in combined hyperlipidemia and hyperglycemia, a process attenuated by L-arginine. *AGE: Journal of the American Aging Association (AGE AGEING)*, vol. 23, 33-40, 2000.- *impact factor 5.83*

2. G. Costache, D. Popov, **A. Georgescu**, M. Cenuse, V.V. Jinga, M. Simionescu. The effects of simultaneous hiperlipemia-hiperglycemia on the mesenteric resistance arteries, myocardium and kydney glomerili. *J. Submicroscop. Cytol. Pathol*,vol 32(1), 47-58, 2000. *–impact factor 0.5*

3. **A. Georgescu**, D. Popov, M. Simionescu. Mechanisms of impeded bradykinin-induced vasodilation in experimental hyperlipemia-hyperglycemia: contribution of nitric oxide and Ca^{2+} activated K^{+} channels. *Fundamental and Clinical Pharmacology,* vol. 15, 335-342, 2001.- *impact factor 2.10*

4. D. Popov, G. Costache, **A. Georgescu,** M. Enache. Beneficial effects of L-arginine supplementation in experimental hyperlipemia – hyperglycemia in the hamster. *Cell and Tissue Research*, 308 (1), 109-120, 2002. - *impatc factor 2.74*

5. A. Georgescu, D. Popov, M. Capraru, M. Simionescu. Enoxaparin – a low molecular weight heparin, restores the altered vascular reactivity of resistance arteries in aged and aged-diabetic hamsters. *Vascular Pharmacology,*40, 167-174, 2003.- *impact factor 2.31*

6. A. Georgescu, D. Popov. The contractile response of the mesenteric resistance arteries to prostaglandin $F_{2\alpha}$; effects of simultaneous hyperlipemia-diabetes. *Fundamental and Clinical Pharmacology, vol 17, 683-689, 2003. –impact factor 2.10*

7. M. Voinea, **A Georgescu**, A. Manea, E. Dragomir, I. Manduteanu, D. Popov, M. Simionescu Superoxide dismutase entrapped–liposomes restore the impaired endothelium-dependent relaxation of resistance arteries in experimental diabetes. *European Journal of Pharmacology,* vol 484(1), 111-118, 2004.- *impact factor 2.78*

8. D.L. Radu, **A. Georgescu**, C. Stavaru, A. Carale, D. Popov. Double transgenic mice with Type 1 diabetes mellitus develop somatic, metabolic and vascular disorders. *J. Cell. Mol. Med.*, 8, 349-358, 2004.- *impact factor 5.11*

9. Adriana Georgescu, Florentina Pluteanu, Maria-Luisa Flonta, Elisabeta Badila, Maria Dorobantu, Doina Popov. The cellular mechanisms involved in the vasodilator effect of nebivolol on the renal artery. *European Journal of Pharmacology,* 508,159-166, 2005.- *impact factor 2.78*

10. Marc Schneider, **Adriana Georgescu**, Rose Kientsch-Engel, Peter Stahl, Doina Popov, Monika Pischetsrieder Detection of DNA-bound advanced Glycation End-products by immunoaffinity chromatography coupled to HPLC-Diode array detection. *Molecular Nutrition & Food Research,* 50, 424-429, 2006.- *impact factor 4.3*

11. Adriana Georgescu, Nicoleta Alexandru, Elena Constantinescu, Doina Popov. Effect of gap junction uncoupler heptanol on resistance arteries reactivity in experimental models of diabetes, hyperlipemia and hyperlipemia-Diabetes. *Vascular Pharmacology* 44, 513-518, 2006.- *impact factor 2.31*

12. Adriana Georgescu, Doina Popov, Emanuel Dragan, Elena Dragomir, Elisabeta Badila. Protective effects of nebivolol and reversal of endothelial dysfunction in diabetes associated with hypertension. "European Journal of Pharmacology", 570,149-158, 2007.- *impact factor 2.78*

13. A. Georgescu, F. Pluteanu, M-L. Flonta, E. Badila, M. Dorobantu, D. Popov. Nebivolol induces the hyperpolarizing effect on smooth muscle cells in the mouse renal artery by activation of the β_2 – adrenoceptor. *Pharmacology,* 81:110-117, 2008.- *impact factor 1.89*

14. Adriana Georgescu, Nicoleta Alexandru, Doina Popov, Manuela Amuzescu, Eugen Andrei, Constantin Zamfir, Horia Maniu, Adrian Badila. Chronic venous insufficiency is associated with elevated level of circulating microparticles. *Journal of Thrombosis and Haemostasis,* 7 (9): 1566-1575, 2009.- *impact factor 6.4*

15. Popov Doina, Nemecz Miruna, Dumitrescu Madalina, **Georgescu Adriana**, Böhmer Frank D. Long-term high glucose concentration influences Akt, ERK1/2, and PTP1B protein expression in human aortic smooth muscle cells. *Biochemical and Biophysical Research Communications,* 388(1):51-55, 2009.- *impact factor 2.64*

16. Sadri Chahed, Aurélie S. Leroyer, Mounir Benzerroug, David Gaucher, **Adriana Georgescu**, Serge Picaud, Jean-Sébastien Silvestre, Alain Gaudric, Alain Tedgui, Pascale Massin, Chantal M. Boulanger. Increased vitreous shedding of microparticles in proliferative diabetic retinopathy stimulates endothelial proliferation. *Diabetes*, 59: 694-701, 2010.- *impact factor 8.889*

17. N. Alexandru, D. Popov, **A. Georgescu.** Intraplatelet oxidative/nitrative stress: inductors, consequences, and control. *Trends Cardiovasc Med*; 20: 232–238, 2010.- *impact factor 3.25.*

18. Adriana Georgescu, Doina Popov, Anamaria Constantin, Miruna Nemecz, Nicoleta Alexandru, Daniel Cochior, Aura Tudor. Dysfunction of human subcutaneous fat arterioles in obesity alone or obesity associated with Type 2 diabetes. *Clinical Science,* 120(10): 463-472; 2011.- *impact factor 4.317*

19. Nicoleta Alexandru, Doina Popov, Emanuel Dragan, Eugen Andrei, **Adriana Georgescu.** Platelet activation in hypertension associated with hypercholesterolemia; effects of irbersartan. *Journal of Thrombosis and Haemostasis,* 9(1):173-84, 2011. - *impact factor 6.4*

20. Adriana Georgescu, Nicoleta Alexandru, Miruna Nemecz, Irina Titorencu, Doina Popov. Enoxaparin reduces adrenergic contraction of resistance arterioles in aging and in aging associated with diabetes via engagement of MAP kinase pathway. *Blood Coagulation and Fibrinolysis,* 22(4):310-316, 2011.- *impact factor 1.4*

21. Nicoleta Alexandru, **Adriana Georgescu,** Manuela Amuzescu, Constantin Zamfir, Adrian Badila, Doina Popov. Platelet reactivity in chronic venous insufficiency. *Clinical Laboratory.* 57(7-8): 527-534, 2011. - *impact factor 1.01*

22. Marilena Lupu, Markus Khalil, Eugen Andrei, Florin Iordache, Kurt Pfannkuche, Klaus Neef, **Adriana Georgescu,** Cosmin Buzila, Konrad Brockmeier, Horia Maniu, Jürgen Hescheler. Integration properties of Wharton's jelly-derived novel mesenchymal stem cells into ventricular slices of murine hearts**.** *Cellular Physiology and Biochemistry*, 28:63-76, 2011.- *impact factor 3.58*

23. Adriana Georgescu, Nicoleta Alexandru, Andrei Constantinescu, Irina Titorencu, Doina Popov. The promise of EPCs-based therapies on vascular dysfunction in diabetes. *European Journal of Pharmacology.* 669: 1-6, 2011 - *impact factor 2.78*

24. Adriana Georgescu. Vascular dysfunction in diabetes: the endothelial progenitor cells as new therapeutic strategy. *World Journal of Diabetes,* June 15; 2(6): 92-97, 2011.**-** *ISI*

25. I Titorencu, M. G. Albu, F. Anton, **A. Georgescu,** V. V. Jinga. Collagen – dexamethasone and collagen-D_3 scaffolds for bone tissue engineering. *Molecular Crystals and Liquid Crystals*, 555: 1-10, 2012. - *impact factor 0.502*

26. Nicoleta Alexandru, Doina Popov, **Adriana Georgescu**. Platelet dysfunction in vascular pathologies and how can it be treated*. Thrombosis Research,* 129:116-126, 2012. – *impact factor* 2.44

27. Adriana Georgescu, Nicoleta Alexandru, Eugen Andrei, Irina Titorencu, Emanuel Dragan, Cristina Tarziu, Silviu Ghiorghe, Elisabeta Badila, Daniela Bartos, Doina Popov. Circulating microparticles and endothelial progenitor cells in atherosclerosis; pharmacological effects of irbesartan. *Journal of Thrombosis and Haemostasis,* 10: 680-691, 2012.- i*mpact factor 6.081*

28. Nicoleta Alexandru, Doina Popov, Emanuel Dragan, Eugen Andrei, **Adriana Georgescu.** Circulating endothelial progenitor cell and platelet microparticle impact on platelet activation in hypertension associated with hypercholesterolemia. *PloS One,* 8(1):e52058-e52068, 2013. - *impact factor 4.092*

29. Adriana Georgescu, Nicoleta Alexandru, Miruna Nemecz, Irina Titorencu, Doina Popov. Irbesartan administration therapeutically influences circulating endothelial progenitor cell and microparticle mobilization by involvement of pro-inflammatory cytokines. *European Journal of Pharmacology*, 711: 27-35, 2013. - *impact factor 2.78*

30. Bich-Hoai Thi Ton, Qingmin Chen, Gisela Gaina, Catalin Tucureanu, **Adriana Georgescu**, Carmen Strungaru, Maria-Luiza Flonta, Dinah Sah, Violeta Ristoiu. Activation profile of dorsal root ganglia Iba-1 (+) macrophages varies with the type of lesion in rats. *Acta Histochemica,* 115(8): 840-850, 2013. - *impact factor 1,608*

31. Nicoleta Alexandru, **Adriana Georgescu.** Circulating microparticles and microRNAs as players in atherosclerosis. *World Journal of Hematology,* 2(2): 16-19, 2013. - *ISI*

32. Elisabeta Bădila, Ana Maria Daraban, Silviu Ghiorghe, **Adriana Georgescu,** Nicoleta Alexandru, Daniela Bartoş, Cristina Tîrziu. Rethinking cardiovascular therapy - the effect of irbesartan on circulating microparticles and endothelial progenitor cells in patients with hypertension and dyslipidemia. *Farmacia,* 62 (1): 93-106, 2014.- *impact factor* 1.25

33. Eugen Andrei, Nicoleta Alexandru, Emanuel Dragan, **Adriana Georgescu.** Flow cytometric analysis of circulating microparticles and endothelial progenitor cells in plasma; a research tool for atherosclerosis and therapy. *Experimental and Clinical Cardiology*, 20 (7): 1554-1563, 2014.- *impact factor 1.10*

34. Nicoleta Alexandru, Eugen Andrei, Emanuel Dragan, **Adriana Georgescu.** Interaction of platelets with endothelial progenitor cells in the experimental atherosclerosis; the role of transplanted endothelial progenitor cells and platelet microparticles. *Biology of The Cell,* 107(6): 189–204, 2015.– *impact factor 3.87.*

35. Elisabeta Bădilă, Ana Maria Daraban, Emma Ţintea, Daniela Bartoş, Nicoleta Alexandru, **Adriana Georgescu.** Midkine in cardio-vascular disease: Where do we come from and where are we heading to? *European Journal of Pharmacology,* 762:464-471, 2015. - *impact factor 2.68*

36. Josune Orbe, Nicoleta Alexandru, Carmen Roncal, Miriam Belzunce, Paula Bibiot, Jose A Rodriguez, Joost C Meijers, **Adriana Georgescu,** Jose A Paramo. Lack of TAFI increases brain damage and microparticle generation after thrombolytic therapy in ischemic stroke. *Thrombosis Research,* 136: 445–450, 2015. - *impact factor 2.42*

37. Nicoleta Alexandru, Elisabeta Badila, Emma Weiss, Daniel Cochior, Ewa Stępień, **Adriana Georgescu.** Vascular Complications in Diabetes: Microparticles and Microparticle Associated MicroRNAs as Active Players. *Biochemical and Biophysical Research Communications,* 472:1-10, 2016.- *impact factor 2.297*

38. Adriana Georgescu, Nicoleta Alexandru, Eugen Andrei, Emanuel Dragan, Daniel Cochior, Sérgio Dias. Effects of transplanted circulating endothelial progenitor cells and platelet microparticles in atherosclerosis development. *Biology of The Cell.* 108 (8), 219-243, 2016 **-** *impact factor 3.506*

39. Miruna Nemecz, Nicoleta Alexandru, Gabriela Tanko, **Adriana Georgescu.** Role of microRNA in endothelial dysfunction and hypertension, *Current Hypertension Reports,* 18 (12): 1-21, article 87, 2016. – *impact factor 3.112. (AIS: 1.396)*

40. Nicoleta Alexandru, Ana Costa, Alina Constantin, Daniel Cochior, **Adriana Georgescu.** Microparticles: from biogenesis to biomarkers and diagnostic tools in cardiovascular disease. *Current Stem Cell Research and Therapy,* 12(2): 89-102, 2017. - *impact factor 2.645*

41. Nicoleta Alexandru, Eugen Andrei, Loredan Niculescu, Emanuel Dragan, Violeta Ristoiu, **Adriana Georgescu.** Microparticles of healthy origins improve endothelial progenitor cell dysfunction via microRNA transfer in an atherosclerotic hamster model. *Acta Physiologica,* 221: 230-249, 2017, - *impact factor 5.930*

42. Adriana Georgescu. Understanding the functional role of microRNA-214-3p in atherosclerosis for the identification of novel targeted therapies to prevent or reverse endothelial cell dysfunction and stimulate autophagy. *Acta Physiologica,* e12997. Volume 222, Issue 3, 2018.- *impact factor 5.93*

43. Ewa Ł. Stępień1, Martyna Durak-Kozica, Agnieszka Kamińska, Marta Targosz-Korecka, Marcin Libera, Grzegorz Tylko, Agnieszka Opalińska, Maria Kapusta, Bogdan Solnica, **Adriana Georgescu**, Marina C. Costa, Agnieszka Czyżewska-Buczyńska, Wojciech Witkiewicz, Maciej T. Małecki1, Francisco J. Enguita. Circulating ectosomes: Determination of angiogenic microRNAs in type 2 diabetes. *Theranostics*, 8(14): 3874-3890, 2018 – *impact factor 8.71*

44. Miruna Nemecz, Alina Constantin, Madalina Dumitrescu, Nicoleta Alexandru, Alexandru Filippi, Gabriela Tanko, **Adriana Georgescu.** The distinct effects of palmitic and oleic acid on pancreatic beta cell function: the elucidation of associated mechanisms and effector molecules. *Frontiers in Pharmacology/Ethnopharmacology*, 9(article1554):1-16, 2019 *-impact factor 3.83.*

45. Alina Constantin, Mădălina Dumitrescu, Miruna Nemecz, Ariana Picu, Bogdan Smeu, Cristian Guja, Nicoleta Alexandru, **Adriana Georgescu,** Gabriela Tanko. Sera of Obese Type 2 Diabetic Patients Undergoing Metabolic Surgery Instead of Conventional Treatment Exert Beneficial Effects on Beta Cell Survival and Function: Results of a Randomized Clinical Study. *Obesity Surgery,* 2019 – *impact factor 3.89*

46. Nicoleta Alexandru, Florentina Safciuc, Alina Constantin, Miruna Nemecz, Gabriela Tanko, Alexandru Filippi, Emanuel Dragan, Elisabeta Bădilă, **Adriana Georgescu**. Platelets of healthy origins promote functional improvement of atherosclerotic endothelial progenitor cells. *Frontiers in Pharmacology/Inflammation Pharmacology,* 10 (article 424):1-14, 2019 – *impact factor 3.83*

47. Monica Madalina Tucureanu, Alexandru Filippi, Nicoleta Alexandru, Cristina Ana Constantinescu, Letitia Ciortan1, Razvan Macarie, Mihaela Vadana, Geanina Voicu, Sabina Frunza, Dan Nistor, Agneta Simionescu, Dan Teodor Simionescu, **Adriana Georgescu**(corresponding author)**, Ileana Manduteanu. Diabetes-induced early molecular and functional changes in aortic heart valves in a murine model of atherosclerosis, in *Diabetes & Vascular Disease Research,* 16(6):562-576, 2019 - *impact factor 3.34*

48. Nicoleta Alexandru, Alina Constantin, Miruna Nemecz, Ioana K. Comarița, Alexandra Vîlcu, Anastasia Procopciuc, Gabriela Tanko, **Adriana Georgescu.** Hypertension associated with hyperlipidemia induced different microRNA expression profiles in plasma, platelets, and platelet-derived microvesicles; effects of endothelial progenitor cell therapy. *Frontiers in Medicine*, doi: 10.3389/fmed.2019.00280, Volume 6, Article 280, pages 1-10, 3 December 2019 - *impact factor 3.9*

49. Nicoleta Alexandru[†], Eugen Andrei[†], Florentina Safciuc, Emanuel Dragan, Ana Maria Balahura, Elisabeta Badila, **Adriana Georgescu.** Intravenous administration of allogenic cell-derived microvesicles of healthy origins defends against atherosclerotic cardiovascular disease development by a direct action on endothelial progenitor cells. *Cells,* 9(2):423(1-24), 2020. - *impact factor 6.663*

50. Alexandru Filippi, Alina Constantin, Nicoleta Alexandru, Geanina Voicu, Cristina Ana Constantinescu, Daniela Rebleanu, Madalina Fenyo, Dan Simionescu, Agneta Simionescu, Ileana Manduteanu, **Adriana Georgescu.** Integrins α4β1 and αVβ3 are reduced in endothelial progenitor cells from diabetic dyslipidemic mice and may represent new targets for therapy in aortic valve disease. *Cell Transplantation,* 9:1–8, 2020. - *impact factor 3.341*

51. Alina Constantin, Alexandru Filippi, Nicoleta Alexandru, Miruna Nemecz, **Adriana Georgescu**. Extracellular Vesicles from Adipose Tissue Stem Cells in Diabetes and Associated Cardiovascular Disease; Pathobiological Impact and Therapeutic Potential. *Int. J. Mol. Sci.* 21(24): 9598-9623, 2020. - *impact factor 4.556*

52. Adriana Georgescu, Maya Simionescu. Extracellular Vesicles: Versatile nanomediators, potential biomarkers and therapeutic agents in atherosclerosis and COVID-19-related thrombosis. *International Journal of Molecular Sciences* 22(11): 5967-5994, 2021. - *impact factor 5.92*

53. Nicoleta Alexandru, Anastasia Procopciuc, Alexandra Vîlcu, Ioana Karla Comariţa, Elisabeta Bădilă, **Adriana Georgescu.** Extracellular vesicles—incorporated microRNA signature as biomarker and diagnosis of prediabetes state and its complications. *Rev Endocr Metab Disord,* 1-24, 2021 – *impact factor 6.51*

54. Natalia Simionescu, Radu Zonda, Anca-Roxana Petrovici, **Adriana Georgescu.** The multifaceted role of extracellular vesicles in glioblastoma: microRNA nanocarriers for disease progression and gene therapy. *Pharmaceutics*, *13*(7): 988-1015, 2021. - *impact factor 6.32*

55. Ioana Karla Comarița, Alexandra Vîlcu, Alina Constantin, Anastasia Procopciuc, Florentina Safciuc, Nicoleta Alexandru, Emanuel Dragan, Miruna Nemecz, Alexandru Filippi, Leona Chitoiu, Mihaela Gherghiceanu, **Adriana Georgescu.** Therapeutic potential of stem cell-derived extracellular vesicles on atherosclerosis-induced vascular dysfunction and its key molecular players. *Frontiers in Cell and Developmental Biology*, vol. 10 Article 817180:1-30, 2022. - *impact factor 6.684*

56. Alexandru Filippi, Alina Constantin, Nicoleta Alexandru, Cristina Ana Mocanu, Mihaela Loredana Vlad, Madalina Ioana Fenyo, Agneta Simionescu, Dan Simionescu, Ileana Manduteanu, **Adriana Georgescu.** VLA4 enhanced allogeneic endothelial progenitor cell-based therapy preserves aortic valve function in a mouse model of dyslipidemia and diabetes. *In Special Issue "Targeted Therapies in Diabetes and Its Complications". Pharmaceutics*, 14*:* 1077-1094, 2022*.* - *impact factor 6.525*

57. Natalia Simionescu, Miruna Nemecz, Anca-Roxana Petrovici, Ioan Sebastian Nechifor, Razvan-Cristian Buga, Marius Gabriel Dabija, Lucian Eva, Adriana Georgescu. Microvesicles and Microvesicle-Associated microRNAs Reflect Glioblastoma Regression: Microvesicle-Associated miR-625-5p Has Biomarker Potential. *Int. J. Mol. Sci.*, Volume 23, Issue 15, 8398-8413, 2022. - *impact factor 6.208*

58. Alina Constantin, Ioana Karla Comarița, Nicoleta Alexandru, Alexandru Filippi, Florina Bojin, Mihaela Gherghiceanu, Alexandra Vîlcu, Miruna Nemecz, Loredan Niculescu, Virgil Paunescu, **Adriana Georgescu.** Stem cell - derived extracellular vesicles reduce the expression of molecules involved in cardiac hypertrophy - in a model of human-induced pluripotent stem cell-derived cardiomyocytes. *Frontiers in Pharmacology,* 13:1003684, 2022. doi: 10.3389/fphar.2022.1003684. - *impact factor 5.988*

59. Elisabeta Badila, Cristina Japie, Ana-Maria Vrabie, Adrian Badila, **Adriana Georgescu.** Cardiovascular disease as a consequence or a cause of cancer: potential role of extracellular vesicles. *Biomolecules*, 13: 321-349, 2023. https://doi.org/10.3390/ biom13020321. - *impact factor 6.064*

60. Alexandru Scafa Udriște, Adelina-Gabriela Niculescu, Luminița Iliuță, Teodor Bajeu, **Adriana Georgescu,** Alexandru Mihai Grumezescu, Elisabeta Bădilă. Progress in Biomaterials for Cardiac Tissue Engineering and Regeneration. *Polymers*, 15:1177-1200, 2023. - *impact factor 5*

61. Miruna Nemecz, Diana Simona Stefan, Ioana Karla Comarița, Alina Constantin, Gabriela Tanko, Cristian Guja, **Adriana Georgescu.** Microvesicle-associated and circulating microRNAs in diabetic dyslipidemia: miR-218, miR-132, miR-143, and miR-21, miR-122, miR-155 have biomarker potential. *Cardiovascular Diabetology*, 22(1):260-291, 2023. - *impact factor 9.3*

62. Ioana Karla Comarița, Gabriela Tanko, Iliuță Laurențiu Anghelache, **Adriana Georgescu.** The siRNA-mediated knockdown of AP-1 restores the function of the pulmonary artery and the right ventricle by reducing perivascular and interstitial fibrosis and key molecular players in cardiopulmonary disease. *Journal of Translational Medicine, 22*:137-170, 2024. - *impact factor 8.440*

63. Adriana Georgescu. Understanding the key determinants of cardiovascular and metabolic disease progression to develop effective therapeutic strategies. *Biomolecules*, 14: 1281-1286, 2024. https://doi.org/10.3390/biom141012812024. - *impact factor 4.8*

64. Dimitris Kardassis, Cécile Vindis, Camelia Sorina Stancu, Laura Toma, Anca Violeta Gafencu, **Adriana Georgescu**, Nicoleta Alexandru-Moise, Filippo Molica, Brenda R Kwak, Alexandrina Burlacu, Ignacio Fernando Hall, Elena Butoi, Paolo Magni, Junxi Wu, Susana Novella, Luke F Gamon, Michael J Davies, Andrea Caporali, Fernando de la Cuesta, Tijana Mitić. Unravelling molecular mechanisms in atherosclerosis using cellular models and omics technologies. *Vascular Pharmacology,* 158, 107452, 2025. - *impact factor 3.5*

65. Tijana Mitić, **Adriana Georgescu**, Nicoleta Alexandru-Moise, Michael J Davies, Cecile Vindis, Susana Novella, Eva Gerdts, Georgios Kararigas, Stephanie Bezzina Wettinger, Melissa M Formosa, Brenda R Kwak, Filippo Molica, Nuria Amigo, Andrea Caporali, Fernando de La Cuesta, Ignacio Fernando Hall, Angeliki Chroni, Fabio Martelli, Johannes A Schmid, Paolo Magni, Dimitris Kardassis. Current status and challenges of multi-omics research using animal models of atherosclerosis. *Journal of Molecular and Cellular Cardiology Plus*, 13, 100476, 2025. *impact factor 2.2*

66. Alexandra Vîlcu, Ioana Karla Comarița, Alina Constantin, Nicoleta Alexandru, Miruna Nemecz, Florentina Safciuc, Florina Maria Bojin, Virgil Păunescu, **Adriana Georgescu**. Innovative therapy with stem cell-derived extracellular vesicles on cardiac hypertrophy in an animal model of atherosclerosis; elucidation of the molecular mechanisms involved in the repair process. *Biomolecules*, accepted on 7 September 2025. - *impact factor 4.8*

<u>Articles published in journals indexed for the international database</u>

1. A. Georgescu, D. Popov, M. Hasu. Quantitative fluorimetric analysis of advanced glycosylation end products in mesenteric arteries and lens crystallin of hyperlipemic and simultaneously hyperlipemic and hyperglycemic hamsters. *Current Problems and Techniques in Cellular and Molecular Biology* edited by A. Ardelean et. Al., vol. 2, 65-68, 1997.

2. G. Costache, M. Hasu, D. Popov, **A. Georgescu.** The use of the myograph technique for the investigation of the vascular reactivity: A review. *Current Problems and Techniques in Cellular and Molecular Biology* edited by A. Ardelean et. Al., vol. 2, 38-43, 1997,

3. A. Georgescu, D. Popov, G. Costache. Vascular reactivity of resistance arteries of hyperlipemic-hyperglycemic hamsters in the presence of vasoconstrictor agents. *Current Problems and Techniques in Cellular and Molecular Biology* edited by A. Ardelean et. al., vol. 3, 124-129, 1998.

4. A. Georgescu, D. Popov. Influence of experimental diabetes on the cells of vascular wall. *Studii si Cercetari de Biochimie*, vol. 41, 107-117, 1998.

5. G. Costahe, D.Popov, **A. Georgescu**, M. Simionescu. Functional-structural alterations of the resistance arteries in experimental hyperlipemia or hypergliycemia. Proceedings of the Romanian Academy. Series.B. vol.1, 33-37, 1999

6. A. Georgescu, D. Popov. Vascular reactivity of the resistance arteries to potassium in combined hyperlipemia-hyperglycemia. *Proceedings of the Romanian Academy nr.3, 111-117, 2001.*

7. **A. Georgescu**, D. Popov, L. Vladimirescu. Effect of blocking the intercellular communication junctions on the contractile response of the resistance arteries. *Current Problems in Cellular and Molecular Biology* edited by A. Ardelean et. al., vol VI, 85-90, 2001.

8. L. Radu, C. Stavaru**, A. Georgescu**, D. Popov, C. Coman. Transgenic mouse model of type 1 Diabetes. *Proceedings of the Japanese Society for Immunology***,** 32, 11, 2002.

9. D. Popov, **A. Georgescu**, G. Ccostache. Perturbarea reactivitatii arterelor de rezistenta, manifestare a disfunctiei vasculare in diabet. *Romanian Heart Journal*, 20 (3), 216-223, 2005.

10. Adriana Georgescu, Florentina Safciuc, Elena Constantinescu. The effect of aging on the vasomotor function of rat basilar artery. *Proc. Rom. Acad.*, Series B, 1, 13-17, 2006.

11. Miruna Nemecz, Doina Popov, **Adriana Georgescu**. Phosphorylation/dephosphorylation signaling events in the aorta of streptozotocin-injected Golden Syrian Hamsters. *Annals of RSCB,* vol XV, issue 1, 28-34, 2010.
12. C.S. Stancu, **A. Georgescu,** L. Toma,G.M. Sanda, A.V. Sima. Glycated low density lipoproteins alter vascular reactivity in hyperlipidemic hyperglycemic hamsters; *Annals of RSCB.* **17(1),** 9-15, 2012.
13. Nicoleta Alexandru, Elisabeta Badila, **Adriana Georgescu.** The role of endothelial progenitor cells in the cardiovascular disease pathogenesis. *J Stem Cells Res, Rev & Rep*.1(2): 1-2, 2014.
14. Nicoleta Alexandru, **Adriana Georgescu.** Microparticles as players in the pathogenesis of cardiovascular disease. *Fisiología,* ISSN:1889-397X, vol. 18(1),9-14, 2015.
15. Eugen Andrei, Nicoleta Alexandru, **Adriana Georgescu.** Circulating microparticles: major mediators of the pathogenesis of cardiovascular complications in diabetes. Annals of the Romanian Society for Cell Biology, Volume XIX, Issue 3, pp. 55-63, 2015.
16. Aleksandra Tokarz, Iwona Szuścik, Beata Kuśnierz-Cabala, Maria Kapusta, Magdalena Konkolewska, Aleksander Żurakowski, **Adriana Georgescu,** Ewa Stępień. Extracellular vesicles participate in the transport of cytokines and angiogenic factors in diabetic patients with ocular complications. *FOLIA MEDICA CRACOVIENSIA*, PL ISSN 0015-5616, Vol LV, 4, 35–48, 2015.
17. Ana Costa, Nicoleta Alexandru, Fernanda Silva, Ana Magalhães, Sérgio Dias, **Adriana Georgescu**. Detection of miRNAs in Extracellular Vesicles by In Situ Hybridization Using Formalin-Frozen Paraffin Embedded Sections. *Annals of R.S.C.B.*, Vol. XXI, Issue 3, 2017, pp. 29 - 35 doi: 10.ANN/RSCB-2017-0019: RSCB Received 13 December 2017; accepted 30 May 2018.

Special Issue Academic Guest Editor for ISI Journals
1. Adriana Georgescu. Special Issue "Recent Advances in Cellular and Molecular Mechanisms of Cardiovascular and Metabolic Diseases". *Biomolecules* (ISSN 2218-273X), *Section "Cellular Biochemistry"*, 2022/2023. **IF=6.064**
2. Adriana Georgescu. Special Issue "Recent Advances in Cellular and Molecular Mechanisms of Cardiovascular and Metabolic Diseases: 2nd Edition". Biomolecules (ISSN 2218-273X), Section "Cellular Biochemistry", 2024. **IF=4.8**
3. Adriana Georgescu. Special Issue "Recent Advances in Cellular and Molecular Mechanisms of Cardiovascular and Metabolic Diseases: 3rd Edition". Biomolecules (ISSN 2218-273X), Section "Molecular Biology", 2025/2026. **IF=4.8**

Books
1. Adriana Georgescu, Felicia Antohe. Editor of the international monograph 'From Vascular Cell Biology to Cardiovascular Medicine' published by *RESEARCH SIGNPOST TRANSWORLD RESEARCH NETWORK,* Trivandrum - 695023, Kerala, India, ISBN - 978-81-7895-503-2, pp. 1-334, 2011.
2. Adriana Georgescu. Cardiovascular Dysfunction: New Biomarkers and Therapies**.** Published by Scholars' Press, OmniScriptum GmbH & Co. KG, Saarbrücken, Germany, ISBN -978-3-639-71643-6, pp. 1-170, 2014.
3. Maya Simionescu, Manuela Calin, **Adriana Georgescu.** An incredible 40-year journey to understand cell's secrets for the benefit of human health. National Foundation for Science and Art 978-606-555-270-8, pp. 1-223, 2019.

Chapters in books
1. Doina Popov, Gabriela Costache, **Adriana Georgescu.** Altered vascular reactivity of the resistance arteries: lessons from the hyperlipemic-hyperglycemic hamster model, *'New insights into experimental diabetes'*, Ed: D.M.Cheta, The Publishing House of The Romanian Academy, ISBN: 973-27-0871-9, 211-222, 2001.
2. Adriana Georgescu, Nicoleta Alexandru, Doina Popov. Ongoing data on vascular endothelial cell dysfunction: an update. *'From Vascular Cell Biology to Cardiovascular Medicine'*, Ed: **Adriana Georgescu,** Felicia Antohe, published by *RESEARCH SIGNPOST TRANSWORLD RESEARCH NETWORK,* ISBN - 978-81-7895-503-2, 125 – 141. 2011.
3. Nicoleta Alexandru, Irina Titorencu, Elisabeta Bădilă, Sabina Frunză, **Adriana Georgescu.** *Chapter's Title:* Endothelial progenitor cell dysfunction in the pathogenesis of vascular complications of diabetes. *Book's Title:*

Mechanisms of Vascular Defects in Diabetes Mellitus, *Editors:* Chandrasekharan Kartha, Surya Ramachandran, M. Radhakrishna Pillai, *in Series Title:* Advances in Biochemistry in Health and Disease, *Springer UK,* ISBN 978-3-319-60324-7, vol. 17, pp.159-208, 2017.

4. Mihaela Gherghiceanu, Nicoleta Alexandru, Stefania Lucia Magda, Alina Constantin, Miruna Nemecz, Alexandru Filippi, Octavian Costin Ioghen, Laura Cristina Ceafalan, Florina Bojin, Gabriela Tanko, Virgil Paunescu, Dragos Vinereanu, Ewa Stepien, **Adriana Georgescu.** *Chapter's Title:* Extracellular Vesicles As Valuable Players In Diabetic Cardiovascular Diseases. *Book's Title: Extracellular Vesicles and Their Importance in Human Health,* Book edited by: Dr. Ana Gil De Bona and Jose Antonio Reales-Calderon, *IntechOpen*, ISBN 978-1-78923-944-7, pp. 1-25, 2020.

5. Laura Cristina Ceafalan, Octavian Costin Ioghen, Daciana Silvia Marta, Alina Constantin, Nicoleta Alexandru, Miruna Nemecz, Gabriela Tanko, Alexandru Filippi, Stefania Lucia Magda, Florina Bojin, Virgil Paunescu, Dragos Vinereanu, **Adriana Georgescu**, Mihaela Gherghiceanu. *Chapter's Title:* Extracellular Vesicles as Risk Factor in Neurodegenerative Diseases. *Book's Title: Extracellular Vesicles and Their Importance in Human Health*, Book edited by: Dr. Ana Gil De Bona and Jose Antonio Reales-Calderon, *IntechOpen*, ISBN 978-1-78923-944-7, pp. 1-21, 2020.

Science newspaper articles

1. Nicoleta Alexandru, **Adriana Georgescu**. Active role of cell-derived microparticles in diabetes associated cardiovascular complications. *Atlas of Science (website: www.atlasofscience.org)*, August 12, 2016.

Patents:

Patent applications to State Office for Inventions and Trademarks (OSIM) (Romania):

1. Process for obtaining genetically modified endothelial progenitor cells. Patent Application, OSIM No. A/00284 of 25.05.2020. Authors: Alexandru Filippi, Loredana Antonescu, Alina Constantin, Cristina Constantinescu, Nicoleta Alexandru, **Adriana Georgescu**

2. Process for obtaining modified extracellular vesicles. Patent Application, OSIM No. A/00017 of 20.01.2021. Authors: Alexandru Filippi, Nicoleta Alexandru-Moise, Alina Constantin, Karla Comarită, Alexandra Vîlcu, Anastasia Procopciuc, **Adriana Georgescu**

Project manager for international projects

1. 2001-2002 - Grant from the Deutsche Forschungsgemeinschaft (DFG). Grant in collaboration with Institute of Pharmacy and Food Chemistry, Friedrich-Alexander-University Erlangen-Nuremberg, Erlangen, Germany.

Project: Detection of non-enzymatic glycation products of cellular ADN using experimental models of diabetic animals

2. 2012-2014 – Capacity project: ERC-like – type 'Grant Support' **- project ID PNII-CT-ERC-2012 - 1" - grant of the Romanian National Authority for Scientific Research, CNCS – UEFISCDI (***Grant no.6/18.07.2012)*

Project: Circulating platelet microparticles and endothelial progenitor cells in vascular atherosclerosis: new pathophysiological and therapeutic implications– *project was funded with 1 500 000 RON*

Project manager of following national projects

1. 1999- 2000 - Grant from Romanian Academy, – *Grant no. 31/ 1999*

Project: The role of aging and of association for a long time of the hyperglycemia-hyperlipemia in the formation of the glycated irreversible proteins.The effect of the in vivo administration by L-arginine – **Project manager** - *the project was funded with 40.000.000 ROL*

2. 1999- Grant Awarded By Romanian Research and Technology Ministry, – *Grant no. 881/ 10.09.1999*

Project: The effect of the simultaneously hyperglycemia –hyperlipemia on the vascular reactivity of the resistance arteries in the presence of PGF2alpha vasoconstrictor. The involved cellular mechanism - **Project manager** - *the project was funded with 100.000.000 ROL*

3. 2000- Grant from Romanian Academy, – *Grant no. 138/ 1.10.2000*
Project: The study of the mechanisms involved in the vascular response of the resistance arteries in the presence of bradykinine. The effect of hyperglycemia-hyperlipemia on the endothelium dependent relaxation. - **Project manager** - *the project was funded with 100.000.000 ROL.*
4. 2000-Grant Awarded By Romanian Research and Technology Ministry, – *Grant no. 55/ 1.12.2000*
Project: The effect of the combined hyperglycemia –hyperlipemia on the vascular reactivity of the resistance arteries in the presence of potassium vasoconstrictor. The involved cellular mechanism - **Project manager** - *the project was funded with 100.000.000 ROL*
5. 2001 – 2002 - Grant Awarded By: Romanian Ministry Of Research- National Research Program For Fundamental Research VIASAN, – *Grant no. 110/ 29.10.2001*
Project: The effect of of enoxaparin sodium on the vascular reactivity of the resistance arteries in aging and in diabetes; the role of nitric oxide - **Project manager** - *the project was funded with 700.000.000 ROL.*
6. 2001 – 2002 - Grant Awarded By Romanian Research and Technology Ministry, – *Grant no. 7051/2001*
Project: The gap junctions and the vascular reactivity of the mesenteric resistance arteries; the effect of the heptanol - **Project manager** - *the project was funded with 200.000.000 ROL*
7. 2002 – 2005 - Grant Awarded By: Romanian Ministry Of Research- National Research Program For Fundamental Research VIASAN, – *Grant no. 171/ 7.10.2002*
The pharmacological properties and the cellular mechanisms involved in the effect of nebivolol in the renal artery in diabet; the experimental data - **Project manager** - *the project was funded with 500.000.000 ROL.*
8. 2004 – 2006 - Grant Awarded By: Romanian Ministry Of Research- National Research Program For Fundamental Research VIASAN, – *Grant no. 347/ 1.10.2004*
Project: The effect of the enoxaparin (a low molecular weight heparin) in the restablishment of the endothelial vascular dysfunctions in aging and in diabetes; the involvement of the mitogen-activated protein kinase evidentiated by changes in the expression of c-fos gene and transcription factor AP-1 - **Project manager** - *the project was funded with 800.000.000 ROL.*
9. 2006-2008 - Excellence Research Projects for young researchers (CEEX) from the Romanian Ministry of Education and Research, - *Grant no. 15121/2006*
Project: THE EFFECT OF ELEVATED LEVELS OF SHED MEMBRANE MICROPARTICLES ON THE FUNCTION OF THE PHERIPHERAL VEINS AT PATIENTS WITH CHRONIC VENOUS INSUFFICIENCY - *the project was funded with 40.000 euro*
10. 2008-2011- National Program for Research-Development and Innovation 2 (PNCDI-2), National Centre for Programs' Management (CNMP), Partnerships Program 4, Direction 4 – Health – *Grant no. 42138/ 1.10.2008*
Project: Ratio of circulating microparticles to endothelial progenitor cells, a new cellular marker of endothelial dysfunction induced by combined hypertension and hypercholesterolemia; anti-atherosclerotic effect of irbersartan – *project was funded with 2 000 000 RON*
11. 2008-2011- National Program for Research-Development and Innovation 2 (PNCDI-2), Ministry of Education, Research and Youth, The National Authority for Scientific Research, Idei Program 1 – Funding Application for Exploratory Research Projects – *Grant no. 1159/19.01.2009*
Project: Vascular complications of small arteries in patients with obesity associated or not with type 2 diabetes; the endothelial dysfunction and insulin resistance – *project was funded with 1 000 000 RON.*
12. 2015-2017- Grant of the Romanian National Authority for Scientific Research and Innovation, CNCS –UEFISCDI, Program Human Resources/Project number PN-II-RU-TE-2014-4-0525: *Grant no 79/01.10.2015*
Project: Microparticles as intracellular delivery strategies for microRNAs and potential therapies for atherosclerotic vascular disease **-** *the project was* funded *with 550 000 RON.*

13. 2018-2021 - Grants of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI - Complex Projects Completed in Consortia CDI (PCCDI), under Program 1. Developing national CD, Subprogram 1.2. Institutional performance - "Institutional Development Project"
Project no. PN-III-P1-1.2-PCCDI-2017-0527/Contract no. 83 PCCDI/2018 - Project title: Development of BIOnanotechnologies based on extracellular Vesicles for early diagnosis, prognosis and therapy of Atherosclerotic disease; **- Project acronym:** BIOVEA - *the project was funded with 1125000 Euro*

Mentor for the projects

1. 2018-2020 - Grants of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI - Postdoctoral research projects (PD), under Program 1. Developing national CD, Subprogram 1.1. Human Resources
Project no. PN-III P1-1.1-PD-2016-1660/ Contract no. 19/2018 - Project title: Tissue engineering of blood vessels using three-dimensional bioprinting of endothelial and smooth muscle progenitor cells; **- Project acronym:** BIOPRINT - *the project was funded with 53192 Euro*
2. 2020-2022 - Grants of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI - Postdoctoral research projects (PD), under Program 1. Developing national CD, Subprogram 1.1. Human Resources
Project no. PN-III-P1-1.1-PD-2019-0283/Contract no. 155/2020 - Project title: Microvesicle - associated microRNAs as new potential biomarkers for risk prediction and early diagnosis of glioblastoma recurrence; - **Project acronym:** MICROGLIO - *the project was funded with 53192 Euro*

Principal Investigator for the projects

1. 2016-2020 - Grant of the Ministry of National Education and Scientific Research, Romania, MNE – NASRI (INTERMEDIATE BODY FOR RESEARCH): Competitiveness Operational Programme 2014-2020 Priority Axis 1 – Research, Technological Development And Innovation (Rd&I) To Support Economic Competitiveness And Business Development. Action 1.1.4 Attracting high-level personnel from abroad in order to enhance the RD capacity**.**
Project Title: Targeted therapies for diabetes - related aortic valve disease. **Grant no.** 115/13.09.2016/ **Project Code:** 104362. **Specialist in Implementation Project Team: and Mandated as Project Manager with the right signature. Dr. Adriana Georgescu; Executive Manager: Dr. Ileana Manduteanu; Project Manager: Dr. Agneta Simionescu,** - *the project was* funded *with 8 657 500 RON.*
2. 2023-2026- Grant of the Ministry of Research, Innovation and Digitization of Romania - Romania's National Recovery and Resilience Plan. Component C9. SUPPORT FOR THE PRIVATE SECTOR, RESEARCH, DEVELOPMENT AND INNOVATION - "I8. Development of a program to attract highly specialised human resources from abroad in research, development and innovation activities" (PNRR /2022/C9/MCID/I8)-Project Code 93/Contract no. 760063/23.05.2023 **Project title:** New nanotherapeutic strategies for cardiac fibrosis targeting the mechanisms underlying the fibroblast to myofibroblast transition; **Project Acronym**: HeartCure; **Project Manager:** Dr. ROSTYSLAV BILYY**,** - *the project was funded with 1.418.670 EUR (7.000.000 RON)*

Collaborator of following national projects

1. 1997- 1998 - Grant Awarded By Romanian Research and Technology Ministry
The influence of hyperlycemia and hyperlipemia induced in the experimental conditions on the vascular reactivity and the structure of the resistance vessels
2. 1998-1999 - Grant Awarded By Romanian Research and Technology Ministry
The detection of the irreversible glycation of the proteins and the interaction with the endothelium in the experimental diabetes induced for o long time. The effect of the diabetes induced experimental on the structure of the endothelium and of smooth muscle cells in veins and in arteries.
3. 1998 - Grant from Romanian Academy
The effect of induced simultaneously hyperglycemia- hyperlipemia on the reactivity of the resistance arteries.
4. 1999- Grant Awarded By Romanian Research and Technology Ministry

The effect of simultaneously hyperglycemia-hyperlipemia on the morphological and functional changes of the organs affected in hypertension

5. 2001-2003- Grant Awarded By: Romanian Ministry of Research- National Research Program For Fundamental Research VIASAN

The cardiovascular changes associated with type 1 diabetes at transgenic mouse model

6. 2001-2003 - Grant Awarded By: Romanian Ministry of Research- National Research Program For Fundamental Research VIASAN

The use of the drugs as target towards the vascular endothelium using liposomes; a strategy for the therapy of the cardiovascular diseases

7. 2003-2004 - Grant from Romanian Academy

Superoxide dismutase entrapped–liposomes restore the impaired endothelium-dependent relaxation of resistance arteries in experimental diabetes

8. 2003 - 2005 - Grant Awarded By: Romanian Ministry Of Research- National Research Program For Fundamental Research VIASAN

The modulation mechanisms of the ionic channels activated by tisullar acidose in the peripheral nervous fibers and blood vessels

9. 2003 – 2005 - Grant Awarded By: Romanian Ministry Of Research - National Research Program For Fundamental Research CERES

The studies on the cerebral vasculature in aging

10. 2004 – 2006 - Grant Awarded By: Romanian Ministry Of Research- National Research Program For Fundamental Research VIASAN

Adiponectin – the mediator in the intercellular signaling activated by insulin; the clinical involvements in the obesity associated with type 2 diabetes

11. 2005 – 2007 - Grant Awarded By: Romanian Ministry of Research - National Research Program for Fundamental Research "Excellence Research Project"

The alteration of the cellular and molecular mechanisms and of gene expression in the cardiovascular disease and diabetes/ obesity, the major alteration of the metabolic syndrome – the fundamental and clinical researches

12. 2005 – 2007 - Grant Awarded By: Romanian Ministry of Research - National Research Program for Fundamental Research "Excellence Research Project"

The therapy with the stem cells for the vascular regeneration and construction

13. 2006-2008. Excellence Research Projects for young researchers

Project: Signaling pathways involved in Fractalkine expression induced by hyperglycemia as targets for developing new therapeutic approach of cardiovascular pathologies associated with diabetes

14. 2006-2008. Excellence Research Projects for Postdoc No. 1530, 205066 RON

Project: The study of the molecular mechanisms of the diabetic neuropathy on neuronal cultures from spinal ganglions in diabetic conditions

15. 2007-2010 - National Program for Research-Development and Innovation 2 (PNCDI-2), National Centre for Programs' Management (CNMP), Partnerships Program 4, Direction 4 - Health

Project: Bank of stem cells cryo-preserved for research and autologus transplant

16. 2008-2011- National Program for Research-Development and Innovation 2 (PNCDI-2), Ministry of Education, Research and Youth, The National Authority for Scientific Research, Idei Program 1 – Funding Application for Exploratory Research Projects

Project Title: The study of the molecular mechanisms through hyperlipideemia and hyperglicemia induce the alteration of the vascular reactivity.

17. 2014-2017 - Grant of the Romanian National Authority for Scientific Research and Innovation, CNCS–UEFISCDI, Program PNII-Partnerships in Priority Areas/Project no. PN-II-PT-PCCA-2013-4-0816 - Project title: Rational design and synthesis of smart bioactive scaffolds for personalized treatment of acute and chronic cutaneous wounds (ZETTAskin)

18. 2015-2017 - Grant of the Romanian National Authority for Scientific Research and Innovation, CNCS –UEFISCDI, Program Human Resources/Project number PN-II-RU-TE-2014-4-0523: *Grant no 80/01.10.2015*

Project: New insights in platelet-endothelial progenitor cell interplay in atherosclerotic disease **-** *the project was* funded with 550 000 lei RON

19. Grant of the Romanian National Authority for Scientific Research and Innovation, CNCS–UEFISCDI, Program PNII-Partnerships in Priority Areas/Project no. PN-II-PT-PCCA-2013-4-2267: *Grant no. 271/2014*

Project Title: Obtaining biodegradable implants of magnesium composites, usable in ankle and foot surgery.

20. 2018-2020 - Grants of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI - Complex Projects Completed in Consortia CDI (PCCDI), under Program 1. Developing national CD, Subprogram 1.2. Institutional performance - "Institutional Development Project"

Project no. PN-III-P1-1.2-PCCDI-2017-0749 **- Project title: Bioactive nanostructures for innovative therapeutic strategies.**

21. 2018-2020 – Grants of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI - Complex Projects Completed in Consortia CDI (PCCDI), under Program 1. Developing national CD, Subprogram 1.2. Institutional performance - "Institutional Development Project"

Project no. PN-III-P1-1.2-PCCDI-2017-0797/ Contract no.66PCCDI/2018

Project Title: Pathogenic mechanisms and personalized treatment in pancreatic cancer using multi-omic technologies. **Project acronym**: PANCNGS **-** *the project was funded with 1125000 Euro.*

22. 2020-2022- Grants of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI - Program Human Resources/Project number PN-III-P1-1.1-TE-2019-0811: Grant no. 97/14.09.2020

Project title: Immune modulation of T-cells by platelets and platelet-derived microvesicles in experimental induced atherosclerosis; the role of microRNA-142-3p- the project; **Project acronym**: IMPLEXIA – *the project was funded with 86380Euro*

<u>Collaborator in following international Grants</u>

1. Grant in FP5, Nr. ICA1-CT-2000-70020: 2001-2005

Function and dysfunction of blood vessels: transcytosis in normal/pathological states, alterations in atherosclerosis and diabetes; their therapeutic control - **Collaborator in the project.**

2. International Project: SERA 2005-2009

"Specific Support Action, PC6, 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" **Collaborator in the project.**

3. COST PROGRAMME, EU COST Action BM 0602: 2008-2011

The project: Adipose tissue cells dialogue in obesity, diabetes and inflammation; search for molecules of pharmacological potential in reducing adipose tissue inflammatory proteins.

4. 2010- 2012. European Social Fund –„Cristofor I. Simionescu" Postdoctoral Fellowship Programme (ID POSDRU/89/1.5/S/55216), Sectoral Operational Programme Human Resources Development 2007 – 2013**.- Collaborator in the project**

- The research field, Biomaterials, **title project**: The identification of new biomarkers of the endothelial dysfunction; the strategies for restoring of the vascular wall function.

5. COST PROGRAMME, 25/05/2021-05/10/2025 - Working Group(s) of COST Action CA20117 - Converting molecular profiles of myeloid cells into biomarkers for inflammation and cancer (Mye-InfoBank) - Working Group Member – Adriana Georgescu

6. COST PROGRAMME, 25/05/2021-03/10/2025 - Working Group(s) of COST Action CA20110 - RNA communication across kingdoms: new mechanisms and strategies in pathogen control (exRNA-PATH) - Working Group Member – Adriana Georgescu

7. COST PROGRAMME, 27/05/2022-18/10/2026 - Working Group(s) of COST Action CA21153 - Network for implementing multiomics approaches in atherosclerotic cardiovascular disease prevention and research (AtheroNET) - Working Group Member – Adriana Georgescu

Awards

International Prizes

1. Award (Travel grant) offered for presentation: The abnormal responses to $PGF_{2\alpha}$ and potassium of the mesenteric resistance arteries in hyperlipemic- hyperglycemic hamsters. A. Georgescu, G. Costache, D.Popov, M. Simionescu, at *Third European Research Conference on Blood Pressure and Cardiovascular Disease, Noordwijkerhout- Netherlands*, *October 16-18, 1998.*

2. Award (Travel grant) offered for presentation: The effect of combined hyperlipemia-hyperglycemia on the reactivity of resistance arteries to noradrenaline and bradykinine; the modulation of dysfunctions by oral administration of L-arginine. A Georgescu, D Popov, G. Costache, M. Simionescu, at *XI International Vascular Biology Meeting, Geneva-Switzerland, September 5-9, 2000.*

3. The second prize with the paper: The effect of Enoxaparin on the vascular reactivity of the resistance arteries; Role of endothelial nitric oxide. A.Georgescu, D.Popov, M.Capraru*, at *The European Life Scientist Organisation (ELSO), Nice- France, June 29 –July 3, 2002.*

4. Travel Grant Winner and Diploma with paper untitled "Obesity and insulin resistance induce structural-functional changes in small arteries of human adipose tissue. Adriana Georgescu, Nicoleta Alexandru, Aura Tudor, Doina Popov, Maya Simionescu", *offered at 4th European Meeting on Vascular Biology and Medicine, Bristol-UK, September 17-20, 2007.*

5. Award offered by the Award Committee for the ISTH 2009 Developing World Scientist Grants for presentation: Elevation of endothelial and platelet microparticles in patients with chronic venous insufficiency. A. Georgescu, N. Alexandru, D. Popov, M. Amuzescu, E. Andrei, M. Nemecz, C. Zamfir, A. Badila, M. Simionescu, at *XXII Congress of International Society on Thrombosis and Haemostasis, Boston – USA, July 11-16, 2009.*

6. *The first prize* offered Romania with presentation: Circulating endothelial progenitor cells, microparticles and atherosclerosis *at 3rd International Congress of the Romanian Society for Cell Biology', Szeged, Hungary, June 8-12, 2011.*

7. The prize for poster presentation to **'***22nd World Congress of International Federation for the Surgery of Obesity and Metabolic Disorders'*, 29 August - 2 September, 2017, London, UK, with the paper: Endoplasmic reticulum stress markers and autophagy in human β-cells exposed to sera from obese type 2 diabetic patients. (Constantin A, Dumitrescu M, Nemecz M, Alexandru N, Georgescu A, Guja C, Smeu B, Tanko G, Maya Simionescu).

8. *The first prize* for poster presentation to **'***International Conference, the 44th Annual Scientific Symposium Of The Institute Of Cellular Biology And Pathology "Nicolae Simionescu" (ICBP-NS) held jointly with the 40th Annual Scientific Session Of The Romanian Society For Cell Biology (RSCB), under the auspices of the Romanian Academy*. Bucharest, 16-17 November 2023', with the paper: Tracking the effect of siRNA ap-1 as a potential therapeutic strategy in reversing the pulmonary arterial and right ventricular dysfunction associated with cardiac and pulmonary fibrosis in a model of cardiopulmonary disease (Ioana Karla Comarița, Gabriela Tanko, Laurențiu Anghelache, Alina Constantin, Miruna Nemecz, Nicoleta Alexandru-Moise, Adriana Georgescu).

National Prizes

1. The first prize offered by "Healthy Nutrition Foundation" with the paper: AGE dependent accumulation of advanced glycation endproducts is accelerated in combined hyperlipidemia and hyperglycemia, a process attenuated by L-arginine", A. Georgescu, D. Popov, in *Journal of the American Aging Association, vol. 23, 33-40, 2000.*

2. Excellence Diploma of the Ministry of Education and Research, bestowed to the Institute of Cellular Biology and Pathology "N. Simionescu" at the exhibition "Conceived in Romania" for the paper "Efectul inducerii simultane a hiperlipemiei si diabetului asupra modificarilor morfopatologice si functionale ale organelor tinta afectate in hipertensiune", 2002. (Popov Doina, Costache Gabriela, Georgescu Adriana, Simionescu Maya)

3. The Diploma offered by Romanian Academy, Institute of Cellular Biology and Pathology 'Nicolae Simionescu', Bucharest, 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', 2005-2008, SERA – September 2007.

4. Award offered by Education and Research Ministry for published article in 2007: Protective effects of nebivolol and reversal of endothelial dysfunction in diabetes associated with hypertension. Adriana Georgescu, Doina Popov, Emanuel Dragan, Elena Dragomir, Elisabeta Badila, *in European Journal of Pharmacology, 570, 149-158, 2007.*

5. Award offered by Education and Research Ministry for published article in 2008:
Nebivolol induces the hyperpolarizing effect on smooth muscle cells in the mouse renal artery by activation of the β_2 – adrenoceptor, A. Georgescu, F. Pluteanu, M-L. Flonta, E. Badila, M. Dorobantu, D. Popov, *in Pharmacology, 81:110-117, 2008.*

6. The Diploma offered by Romanian Academy, Institute of Cellular Biology and Pathology "Nicolae Simionescu", Bucharest, to Adriana Georgescu for successful scientific activities and published papers 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', 2005-2008, SERA, March 2008.*

7. Award offered by Education and Research Ministry for published article in 2010: Adriana Georgescu, Nicoleta Alexandru, Doina Popov, Manuela Amuzescu, Eugen Andrei, Constantin Zamfir, Horia Maniu, Adrian Badila .Chronic venous insufficiency is associated with elevated level of circulating microparticles. *in Journal of Thrombosis and Haemostasis, 7 (9): 1566-1575, 2009.*

8. Award "Constantin Velican" for remarkable contributions in the field of the molecular and cellular pathology of the cardiovascular diseases, offered at *XXVIII Annual Congress of Romanian Society of Cellular Biology ,* Constanta, Romania, *June 9- 12, 2010.*

9. Award offered by Education and Research Ministry for published article in 2010: Sadri Chahed, Aurélie S. Leroyer, Mounir Benzerroug, David Gaucher, Adriana Georgescu, Serge Picaud, Jean-Sébastien Silvestre, Alain Gaudric, Alain Tedgui, Pascale Massin, Chantal M. Boulange. Increased vitreous shedding of microparticles in proliferative diabetic retinopathy stimulates endothelial proliferation. *in Diabetes, 59, 694-701, 2010.*

10. Award *'Nicolae Simionescu'* offered by Romanian Academy for the original papers in the area: The alteration of vascular reactivity in diabetes and its improvement using some specific drugs, *December 2010.*

11. Award offered by Education and Research Ministry (UEFISCDI) for published article in 2011: Adriana Georgescu, Doina Popov, Anamaria Constantin, Miruna Nemecz, Nicoleta Alexandru, Daniel Cochior, Aura Tudor. Dysfunction of human subcutaneous fat arterioles in obesity alone or obesity associated with Type 2 diabetes. *Clinical Science, 120(10): 463-472; 2011.*

12. Award offered by Education and Research Ministry (UEFISCDI) for published article in 2011: Nicoleta Alexandru, Doina Popov, Emanuel Dragan, Eugen Andrei, Adriana Georgescu. Platelet activation in hypertension associated with hypercholesterolemia; effects of irbersartan. *Journal of Thrombosis and Haemostasis, 9(1):173-84. 2011.*

13. Award offered by Education and Research Ministry (UEFISCDI) for published article in 2011: Adriana Georgescu, Nicoleta Alexandru, Andrei Constantinescu, Irina Titorencu, Doina Popov. The promise of EPCs-based therapies on vascular dysfunction in diabetes. *European Journal of Pharmacology. 669: 1-6, 2011.*

14. Award offered by Education and Research Ministry (UEFISCDI) for published article in 2012: Nicoleta Alexandru, Doina Popov, Adriana Georgescu. Platelet dysfunction in vascular pathologies and how can it be treated. *Thrombosis Research,* 129:116-126, 2012

15. Award offered by Education and Research Ministry (UEFISCDI) for published article in 2012: Adriana Georgescu, Nicoleta Alexandru, Eugen Andrei, Irina Titorencu, Emanuel Dragan, Cristina Tarziu, Silviu Ghiorghe, Elisabeta Badila, Daniela Bartos, Doina Popov. Circulating microparticles and endothelial progenitor cells in atherosclerosis; pharmacological effects of irbesartan. *Journal of Thrombosis and Haemostasis,* 10: 680-691, 2012.

16. Award offered by Education and Research Ministry (UEFISCDI) for published article in 2013: Nicoleta Alexandru, Doina Popov, Emanuel Dragan, Eugen Andrei, Adriana Georgescu. Circulating endothelial progenitor cell and platelet microparticle impact on platelet activation in hypertension associated with hypercholesterolemia. *PloS One,* 8(1):e52058-e52068, 2013.

17. Award offered by Education and Research Ministry (UEFISCDI) for published article in 2013: Adriana Georgescu, Nicoleta Alexandru, Miruna Nemecz, Irina Titorencu, Doina Popov. Irbesartan administration therapeutically influences circulating endothelial progenitor cell and microparticle mobilization by involvement of pro-inflammatory cytokines. *European Journal of Pharmacology*, 711: 27-35, 2013.

18. Award offered by Education and Research Ministry (UEFISCDI) for habilitation thesis with title: Vascular endothelial dysfunction: cardiovascular risk factors, new biomarkers and therapies - Adriana Georgescu, December 2014.

19. Award offered by Ministry of Education and Scientific Research – November 2015 for the paper 'Interaction of platelets with endothelial progenitor cells in the experimental atherosclerosis: Role of transplanted endothelial progenitor cells and platelet microparticles' in *Biology of the Cell,* Vol. 107(6): 189–204, 2015. (Nicoleta Alexandru, Eugen Andrei, Emanuel Dragan, and Adriana Georgescu).

20. Award offered by Ministry of Education and Scientific Research – November 2015 for the paper 'Midkine in cardio-vascular disease: Where do we come from and where are we heading to?' in *European Journal of Pharmacology*, 762:464-471, 2015. (Elisabeta Bădilă, Ana Maria Daraban, Emma Ţintea, Daniela Bartoş, Nicoleta Alexandru, Adriana Georgescu).

21. Award offered by Ministry of Education and Scientific Research – November 2016 for the paper 'Effects of transplanted circulating endothelial progenitor cells and platelet microparticles in atherosclerosis development' in *Biology of The Cell.* 108 (8), 219-243, 2016. (Adriana Georgescu, Nicoleta Alexandru, Eugen Andrei, Emanuel Dragan, Daniel Cochior, Sérgio Dias)

22. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research – October 2017 for the paper 'Role of microRNA in endothelial dysfunction and hypertension' in *Current Hypertension Reports,* 18(12):87, 2016. (M. Nemecz*, N. Alexandru*, G. Tanko, A. Georgescu).

23. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research – June 2018 for the paper 'Microparticles of healthy origins improve endothelial progenitor cell dysfunction via microRNA transfer in an atherosclerotic hamster model' in *Acta Physiologica,* 221, 230-249, 2017. **(**Nicoleta Alexandru, Eugen Andrei, Loredan Niculescu, Emanuel Dragan, Violeta Ristoiu, Adriana Georgescu).

24. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research – December 2018 for the paper 'Circulating ectosomes: Determination of angiogenic microRNAs in type 2 diabetes' in *Theranostics*, 8(14): 3874-3890, 2018. (Ewa Ł. Stępień1, Martyna Durak-Kozica, Agnieszka Kamińska, Marta Targosz-Korecka, Marcin Libera, Grzegorz Tylko, Agnieszka Opalińska, Maria Kapusta, Bogdan Solnica, Adriana Georgescu, Marina C. Costa, Agnieszka Czyżewska-Buczyńska, Wojciech Witkiewicz, Maciej T. Małecki1, Francisco J. Enguita).

25. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research – October 2019 for the paper: The distinct effects of palmitic and oleic acid on pancreatic beta cell function: the elucidation of associated mechanisms and effector molecules. *Frontiers in Pharmacology/Ethnopharmacology*, 9 (article1554):1-16, 2019. – FI= 3,84. (Miruna Nemecz, Alina Constantin, Madalina Dumitrescu, Nicoleta Alexandru, Alexandru Filippi, Gabriela Tanko, Adriana Georgescu**).**

26. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research – October 2019 for the paper: Sera of Obese Type 2 Diabetic Patients Undergoing Metabolic Surgery Instead of Conventional Treatment Exert Beneficial Effects on Beta Cell Survival and Function: Results of a Randomized Clinical Study. *Obesity Surgery,*1-13, 2019. – FI=3,60 (Alina Constantin, Mădălina Dumitrescu, Miruna Nemecz, Ariana Picu, Bogdan Smeu, Cristian Guja, Nicoleta Alexandru, Adriana Georgescu, Gabriela Tanko)

27. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research – October 2019 for the paper: : Platelets of healthy origins promote functional improvement of atherosclerotic endothelial progenitor cells. *Frontiers in Pharmacology/Inflammation Pharmacology,* 10 (article 424):1-14, 2019 – FI=3,84 (Nicoleta Alexandru, Florentina Safciuc, Alina Constantin, Miruna Nemecz, Gabriela Tanko, Alexandru Filippi, Emanuel Dragan, Elisabeta Bădilă, Adriana Georgescu)

28. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research and Uefiscdi, Subprogram 1.1 - Human Resources - Awarding research results - Articles, Competition 2020, Evaluation results List 1_partial 2- Award applications submitted for articles published in 2019_09.11.2020, – November 2020, for the paper 'Hypertension associated with hyperlipidemia induced different microRNA

expression profiles in plasma, platelets, and platelet-derived microvesicles; effects of endothelial progenitor cell therapy' in '*Frontiers in Medicine'*, 6 (Article 280):1-10, 2019. (N. Alexandru**,** A. Constantin, M. Nemecz, I.K. Comariţa, A. Vîlcu, A. Procopciuc, G. Tanko and A. Georgescu).

29. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research and Uefiscdi, Subprogram 1.1 - Human Resources - Awarding research results - Articles, Competition 2020, Evaluation results List 1_partial 3- Award applications submitted for articles published in 2020_19.11.2020, – November 2020, for the paper 'Intravenous administration of allogenic cell-derived microvesicles of healthy origins defends against atherosclerotic cardiovascular disease development by a direct action on endothelial progenitor cells' in '*Cells',* 9 (2),423:1-24, 2020. (N. Alexandru[†]**,** E. Andrei[†], F. Safciuc, E. Dragan, A.M. Balahura, E. Badila, **A. Georgescu**).

30.'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research and Uefiscdi, Subprogram 1.1 - Human Resources - Awarding research results - Articles, Competition 2020, Evaluation results List 3- Award applications submitted for articles published in 2020_27.11.2020, – November 2020 for the paper 'Integrins α4β1 and αVβ3 are reduced in endothelial progenitor cells from diabetic dyslipidemic mice and may represent new targets for therapy in aortic valve disease' in *Cell Transplantation*, Volume 29:1–8, 2020. (Filippi A., Constantin A., Alexandru N**.**, Voicu G., Constantinescu C.A., Rebleanu D., Fenyo M., Simionescu D., Simionescu A., Manduteanu I., Georgescu A).

31. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research and Uefiscdi, Subprogram 1.1 - Human Resources - Awarding research results - Articles, Competition 2021, Evaluation results List 2-Award applications submitted for articles published in 2020/18.11.2021 – for the paper 'Extracellular Vesicles from Adipose Tissue Stem Cells in Diabetes and Associated Cardiovascular Disease; Pathobiological Impact and Therapeutic Potential. *Int. J. Mol. Sci.* 21(24): 9598-9623, 2020'. (Alina Constantin, Alexandru Filippi, Nicoleta Alexandru, Miruna Nemecz, Adriana Georgescu).

32. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research and Uefiscdi, Subprogram 1.1 - Human Resources - Awarding research results - Articles, Competition 2020, Evaluation results List 2 - Award applications submitted for articles published in 2021/18.11.2021 – for the paper 'Extracellular Vesicles: Versatile nanomediators, potential biomarkers and therapeutic agents in atherosclerosis and COVID-19-related thrombosis. *International Journal of Molecular Sciences* 22(11): 5967-5994, 2021'. (**Adriana Georgescu,** Maya Simionescu).

33. **'Scientific Achievements – Original Article' Award** offered by Ministry for Education and Research and Uefiscdi, Subprogram 1.1 - Human Resources - Awarding research results - Articles, Competition 2020, Evaluation results List 2 - Award applications submitted for articles published in 2021/18.11.2021 – for the paper „Extracellular vesicles—incorporated microRNA signature as biomarker and diagnosis of prediabetes state and its complications. *Rev Endocr Metab Disord,* 1-24, 2021 Jun 18. doi: 10.1007/s11154-021-09664-y". (Nicoleta Alexandru, Anastasia Procopciuc, Alexandra Vîlcu, Ioana Karla Comariţa, Elisabeta Bădilă, **Adriana Georgescu).**

34. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Research and Uefiscdi, Subprogram 1.1 - Human Resources - Awarding research results - Articles, Competition 2020, Evaluation results List 3 - Award applications submitted for articles published in 2021/24.11.2021 – for the paper **'**The multifaceted role of extracellular vesicles in glioblastoma: microRNA nanocarriers for disease progression and gene therapy. *Pharmaceutics*, *13*(7): 988-1015, 2021'. (Natalia Simionescu, Radu Zonda, Anca-Roxana Petrovici, **Adriana Georgescu).**

35. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Uefiscdi, PNCDI IV - Program 5.2 Human Resources- Subprogram 5.2.3-Awarding research results – Articles Web of Science (PRECISI) Competition 2023, PRECISI 2023 List 1- Award applications submitted for articles published in 2022– December 2023 for the paper ' Stem cell - derived extracellular vesicles reduce the expression of molecules involved in cardiac hypertrophy - in a model of human-induced pluripotent stem cell-derived cardiomyocytes' in *Frontiers in Pharmacology,* 2022, 13:1003684. (Alina Constantin, Ioana Karla Comariţa, Nicoleta Alexandru, Alexandru Filippi, Florina Bojin, Mihaela Gherghiceanu, Alexandra Vîlcu, Miruna Nemecz, Loredan Stefan Niculescu, Virgil Păunescu, Adriana Georgescu).

36. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Uefiscdi, PNCDI IV - Program 5.2 Human Resources- Subprogram 5.2.3- Awarding research results – Articles Web of Science (PRECISI) Competition 2023, PRECISI 2023 List 1- Award applications submitted for articles published in 2022– December 2023 for the paper 'VLA4 enhanced allogeneic endothelial progenitor cell-based therapy preserves aortic valve function in a mouse model of dyslipidemia and diabetes' in Special Issue "Targeted Therapies in Diabetes and Its Complications", Pharmaceutics, 14, 1077-1094, 2022, https://doi.org/10.3390/pharmaceutics14051077. (Alexandru Filippi, Alina Constantin, Nicoleta Alexandru, Cristina Ana Mocanu, Mihaela Loredana Vlad, Ioana Madalina Fenyo, Agneta Simionescu, Dan Teodor Simionescu, Ileana Manduteanu, Adriana Georgescu)

37. 'Scientific Achievements – Original Article' Award offered by Ministry for Education and Uefiscdi, PNCDI IV - Program 5.2 Human Resources- Subprogram 5.2.3- Awarding research results – Articles Web of Science (PRECISI) Competition 2023, PRECISI 2023 List 1- Award applications submitted for articles published in 2022– December 2023 for the paper 'Therapeutic potential of stem cell-derived extracellular vesicles on atherosclerosis-induced vascular dysfunction and its key molecular players' in *Frontiers in Cell and Developmental Biology*, 10:817180: 1-30, 2022, doi: 10.3389/fcell.2022.817180. eCollection 2022. (Ioana Karla Comarița, Alexandra Vîlcu, Alina Constantin, Anastasia Procopciuc, Florentina Safciuc, Nicoleta Alexandru, Emanuel Dragan, Miruna Nemecz, Alexandru Filippi, Leona Chitoiu, Mihaela Gherghiceanu, Adriana Georgescu)

Courses

1. "International workshop on modern spectroscopic techniques in biophysics", June 1st-5th **1998**, Neptun, Romania.

2. "International workshop on new biophysical methods in biology and medicine", 26-30th September **2000**, Neptun, Romania

3. Courses for Postdoctoral position: *'Petru Poni' Institute of Macromolecular Chemistry, Iasi, Romani**a,*** November 1-5, **2010**.

- Macromolecular Chemistry at frontier between classic and modern. Polymeric biomaterial
- Rheology of polymeric materials
- Project management.

4. Spring Training Course: '*BIOACTIVE/BIOCOMPATIBLE POLYMERIC MATERIALS', at* Centre of Polymer and Carbon Materials, Polish Academy of Sciences, March 6-13, **2011**, Zabrze, Poland.

5. Summer School *'Inflammation and Cardiovascular Disease'*, Obergurgl, Austria, September 29 - October 2, **2011**.

Presentations:

Relationship of circulating microparticles to endothelial progenitor cells as a new marker of vascular atherosclerosis; the effect of irbesartan **Adriana Georgescu**, Nicoleta Alexandru, Doina Popov, Eugen Andrei, Irina Titorencu, Emanuel Dragan, Cristina Tarziu, Silviu Ghiorghe, Elisabeta Badila, Daniela Bartos, Maya Simionescu

The Effect of Antioxidants on High Glucose and Platelet Derived Growth Factor Stimulated Human Vascular Smooth Muscle Cells. Miruna Nemecz, **Adriana Georgescu**, Doina Popov

6. Summer School *on Biomaterials and Regenerative Medicine*: *from molecular and cell biology to tissues and organs repair,* Riva del Garda, Italia, September 19-23, **2011**.

Presentation:

Titorencu I**.,** Albu M. G., Anton F.**, Georgescu A.,** Jinga V. V. and Simionescu M., "Collagen – dexamethasone and collagen-D_3 scaffolds for bone tissue engineering"

7. *Autumn School*: "Biomaterials**.** Current Trends and Prospects**"** Busteni, Romania, November 9-13, **2011**

8. *Workshop*: "Open Problems in Systems Chemistry", Institut Européen des Membranes (CNRS/École Nationale Supérieure de Chimie Montpellier/Université Montpellier II), Montpellier, France, Ianuary 22-27, **2012.**

9. COST Action: CA21153 - Network for implementing multiomics approaches in atherosclerotic cardiovascular disease prevention and research**.** Event title: 1st Meeting of the AtheroNET COST Action (with MC meeting)**.** Location: Institute of Cellular Biology and Pathology "Nicolae Simionescu", 8, B.P. Hasdeu

Street, Bucharest, Romania**.** Event Type: Meeting (Management Committee, Workshop/Conference. *"Workshops/Conferences":* from 22/03/2023 at 10:30 to 24/03/2023 at 13:00
10. RoBioinfo Conference 2023 of Romanian Society of Bioinformatics, Bucharest 11-13 May 2023.

Edited Articles

1. Xiaojie Liu, Tiajun Li, Hui Xu, Chuanhua Wang, Xiaojun Ma, Hui Huang, Yanling Hu and Haichen Chu. Hyperglycemia may increase deep vein thrombosis in trauma patients with lower limb fracture. *Front. Cardiovasc. Med., 08 September 2022, Sec. Atherosclerosis and Vascular Medicine,* Volume 9 - 2022 | https://doi.org/10.3389/fcvm.2022.944506

2. Haowen Ye, Ruxin Wang,Ying Wang, Xiaofang Zhang and Lihong Wang. HADH May be The Target Molecule of Early Vascular Endothelial Impairment in T2DM. *Front. Cardiovasc. Med., 10 August 2022, Sec. Atherosclerosis and Vascular Medicine,* Volume 9 - 2022 | https://doi.org/10.3389/fcvm.2022.963916

3. Min Zhan, Shengnan Shi, Xiaoyu Zheng, Wenjie Chen, Linjuan Sun,Yehao Zhang and Jianxun Liu. The Research Landscape of Exosomes in Platelets from 2000 to 2022: A Bibliometric Analysis *Front. Cardiovasc. Med., 20 December 2022, Sec. Atherosclerosis and Vascular Medicine,* Volume 9 - 2022 | https://doi.org/10.3389/fcvm.2022.1054816

4. Jiaying Luo, Zhiwei He, Qingwen Li, Mengna Lv, Yuli Cai, Wei Ke, Xuan Niu and Zhaohui Zhang. Adipokines in Atherosclerosis: Unraveling Complex Roles. *Front. Cardiovasc. Med., 14 August 2023. Sec. Atherosclerosis and Vascular Medicine.* Volume 10 - 2023 | https://doi.org/10.3389/fcvm.2023.1235953

5. Diego Fernando Gualtero, Diana Marcela Buitrago, Yormaris Castillo, Paula Katherine Vargas, Diana Marcela Castillo and Gloria Ines Lafaurie. Oral microbiome mediated inflammation, a potential inductor of vascular diseases: a comprehensive review. *Front. Cardiovasc. Med., 30 August 2023, Sec. Atherosclerosis and Vascular Medicine,* Volume 10 - 2023 | https://doi.org/10.3389/fcvm.2023.1250263

6. Grażyna Nowicka. Extracellular Vesicles as Diagnostic and Therapeutic Tools in Cardiovascular Disease. What's behind? What do we need to implement them into clinical practice? *International Journal of Biochemistry and Cell Biology*, 2024 Jul:172:106600. doi: 10.1016/j.biocel.2024.106600.

7. Diptimayee Das, Ganesan Jothimani, Antara Banerjee, Amit Dey, Asim K. Duttaroy, Surajit Pathak. A Brief Review on Recent Advances in Diagnostic and Therapeutic Applications of Extracellular Vesicles in Cardiovascular Disease. *International Journal of Biochemistry and Cell Biology, 2024 Aug:173:106616. doi: 10.1016/j.biocel.2024.106616.*

8. Huan Yan, Huang Ding, Xi Ruo Xie, Qing Zhi Liu, Qian Xiao Yang, Li Ling Xie, Xia Cai Liu, Dan Xiao Liu, Yuan Li Chen, Ping Xiao Huang. Research Progress on Effects and Mechanisms of Exosomes from Different Sources on Myocardial Ischemia and Drug Intervention. Frontiers in Cardiovascular Medicine, Volume 11-2024.
https://doi.org/10.3389/fcvm.2024.1436764.

9. Hesham M. Hassan, Mahmoud El Safadi, Muhammad Faisal Hayat, Ahmed Al-Emam. Prevention of fenitrothion induced hepatic toxicity by saponarin via modulating TLR4/MYD88, JAK1/STAT3 and NF-κB signaling pathways. *International Journal of Biochemistry and Cell Biology*, Volume 179, February 2025, 106716/ https://doi.org/10.1016/j.biocel.2024.106716.

10. Yong-Zhen Li, Yuan Tian, Chen Yang, Yifan Liu, Shun-Lin Qu, Liang Huang, Chi Zhang. Adipose Tissue Macrophages-derived Exosomal MiR-500a-5p under High Glucose Promotes Adipocytes Inflammation by Suppressing Nrf2 Expression. *International Journal of Biochemistry and Cell Biology*. 2025 Jan:178:106713/ doi: 10.1016/j.biocel.2024.106713.

11. Hedie Poorkazema, Maryam Sabera, Azadeh Moradmanda, Saeed Yakhkeshia, Homeyra Seydia, Ensiyeh Hajizadeh-Saffara, Faezeh Shekaria, and Seyedeh-Nafiseh Hassani.
Comparative effects of various extracellular vesicle subpopulations derived from clonal mesenchymal stromal cells on cultured fibroblasts in wound healing-related process. *International Journal of Biochemistry and Cell Biology*, 2025 Mar:180:106737. doi: 10.1016/j.biocel.2025.106737. Epub 2025 Jan 17.

12. Ehsan Ahmadpoura, Kimia Moradib, Reyhaneh Moghaddamib, Rafieh Bagherifarc, Arshad Ghaffari-Nasabd Mahdi Mahdipoure, Azadeh Mizanif, Mahdi Ahmadig, Monir Khordadmehrh, Mohammad Hasan Kohansali, Protective Effects of Hydatid Cyst Fluid on Inflammation and Tissue Damage in Rat Model of Type

1 Diabetes. *International Journal of Biochemistry and Cell Biology*, 2025 Mar:180:106736. doi: 10.1016/j.biocel.2025.106736.

13. Yongpan Wang, Zijing Zhang, Yuqiao Zhang, Jiamei Wang, Shijie Lyu, Xian Liu, Xingshan Qi, Weidong Ma, Chuzhao Lei, Eryao Wang, Yongzhen Huang. Regulatory Role of TEX10 Gene in Proliferation Differentiation and Apoptosis of Bovine Myoblasts. *International Journal of Biochemistry and Cell Biology*, 2025 May:182-183:106771. doi: 10.1016/j.biocel.2025.106771.

14. Yang Yuan, Yang Yuan, Li Fu, Wenjie Liu, Rui Dong, Fei Shi, Jinhao Liu, Hong Li, Gaofeng Zhang. Selective cerebral hypothermia alleviates focal cerebral ischemia/reperfusion injury via enhancing SUMO2/3 modification of Drp1 in rats. *International Journal of Biochemistry and Cell Biology*, Volumes 182–183, May 2025, 106772. https://doi.org/10.1016/j.biocel.2025.106772

15. Fengteng Shen, Yansong Chen, Zhikun Xu, Wei Wang, Guofang Chen, Fusheng Ye. Inhibition of M2 Macrophage-Mediated Mesenchymal Stem Cell Migration: Boldine Attenuates Elbow Heterotopic Ossification. *International Journal of Biochemistry and Cell Biology, 2025 Aug:185:106787.doi: 10.1016/j.biocel.2025.106787.*

16. Zhile Li, Hong Ling, Qiuyu Wei, Xiukai Tang, Danyi Zhang and Zhaohe Huang**.** An oxidative stress-related molecular signature in atherosclerosis: identification of risk genes, construction of a diagnostic model, and characterization of immunocyte landscape. Journal: *Frontiers in Cardiovascular Medicine, section Atherosclerosis and Vascular Medicine*, 2025, Volume 12 - 2025 | https://doi.org/10.3389/fcvm.2025.1600321

17. Haoxuan Deng, Wei Qiu, Yunyan Zhang and Junyi Hua. Extracellular Vesicles in Atherosclerosis Cardiovascular Disease: Emerging Roles and Mechanisms. Journal: *Frontiers in Cardiovascular Medicine, section Atherosclerosis and Vascular Medicine*, 2025. Volume 12 - 2025 | https://doi.org/10.3389/fcvm.2025.1611557

19. Bowen Li, Yue Xu, Qingwei He, Qiaoxiang Yin, Mengdi Wu, Huijing Zhu and Yanjie Cao. Association Between Serum Uric Acid to High-Density Lipoprotein Cholesterol Ratio (UHR) and Abdominal Aortic Calcification: A Cross-Sectional Study Based on NHANES 2013-2014 Journal: *Frontiers in Cardiovascular Medicine, section Atherosclerosis and Vascular Medicine*, 2025. Volume 12 - 2025 | https://doi.org/10.3389/fcvm.2025.1560022

19. Xiaojie Ruan and Wei Zhao. Brown adipocyte-derived exosomes in type 2 diabetes mellitus impair endothelial function via regulating intracellular calcium cycle. *Frontiers in Cardiovascular Medicine, section Cardiovascular Pharmacology and Drug Discovery,* 2025. Volume 12 - 2025 | https://doi.org/10.3389/fcvm.2025.1546325

10.09.2025