

PERSONAL INFORMATION

MANUELA CĂLIN (before marriage VOINEA)



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Sex Female | Date of birth 26/10/1971 | Nationality Romanian

POSITIONS AND EMPLOYMENT:

- Current position: Principal Investigator (Scientific Researcher grade I-since 2013), Head of "Medical and Pharmaceutical Bionanotechnologies" Department, Institute of Cellular Biology and Pathology „Nicolae Simionescu" (ICBP-NS), Bucharest, Romania.
- Member of the National Council for Scientific Research (CNCS) of the Ministry of Education and Research, President of the Biology Commission, 2025
- Member of the Scientific Council of ICBP-NS (since 2006).
- Member of the Ethics Commission of ICBP-NS (since 2010).
- Member of the Scientific Council of the Life Sciences Doctoral School, Romanian Academy (since 2023).
- PhD Supervisor in Biological Sciences, Life Sciences Doctoral School, Romanian Academy (since 2021)
- Tutor in the Biology domain, responsible for the scientific activity of 5 Ph.D. students and 12 postdoctoral fellows in the doctoral/postdoctoral program POSDRU/159/1.5/S/133391 (2014-2015).
- Expert Evaluator for the Romanian Ministry of Education and Research, UEFISCDI (national RDI plans: PNIII:2017-2022, PNIV:2022-2027).
- Expert Evaluator in the Peer Review Panel of the European ERA4Health Joint Transnational Call- CARDINNOV (2023).
- Scientific Officer, CNCS, Biology domain, supervision of the evaluation process PCE2023 call (2023-2024).

Research in the field of Nanomedicine focuses on developing targeted drug-delivery nanocarriers for cardiovascular disease treatment.

- Habilitation in Biology, Scientific coordinator of PhD theses, ICBP-NS (since 2021).
- Postdoctoral Fellow in Biomaterials for tissue engineering and implantology, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania (2010-2013).
- Invited lectures on the use of nanoparticles as targeted drug delivery systems at 18 international conferences and also in the frame of the "Advanced Study Course in Cellular and Molecular Medicine", organized in the ICBP-NS (2003-2012) and Summer School "Smart nanoparticles for targeted drug delivery" (2019).
- Invited peer reviewer for Nanomedicine: Nanotechnology, Biology, and Medicine, International Journal of Nanomedicine; Journal of Inflammation Research; Diabetes, Metabolic Syndrome and Obesity, Dove Medical Press; PlosOne; Scientific Reports Journal of Cellular and Molecular Medicine, Wiley-Blackwell; Pharmaceuticals, etc.
- Review Editor on the Editorial Board of Atherosclerosis and Vascular Medicine (special section of Frontiers in Cardiovascular Medicine) (since 2023).
- Guest editor for a special issue in "Pharmaceutics" journal: "Emerging Nanocarriers-Based Drug Delivery in Inflammation-Associated Diseases" (2022) https://www.mdpi.com/journal/pharmaceutics/special_issues/nanocarriers_inflammation.

PROFESSIONAL EXPERIENCE:

- PhD in Biological Sciences (Distinction: Summa cum Laude) with the thesis: "Mechanisms involved in liposomes interaction with the vascular endothelium, and their targeting to specific molecular sites of endothelial cell membrane", Scientific Coordinator: Acad. Maya

EDUCATION AND TRAINING:

Simionescu (2005);
 • Master of Science-Biophysics, Faculty of Physics, University of Bucharest (1996);
 • Bachelor's Degree in Physics, Biophysics specialization, Faculty of Physics, University of Bucharest (1995);
 • Baccalaureate, "Tudor Vianu" College of Informatics (former High School of Mathematics-Physics Sciences No. 1), Bucharest (1990).

COURSES, TRAINING AND RESEARCH STAGES:

Department of Pharmacy Martin-Luther University, Halle, Germany (1998, training: liposome preparation methods), "International workshop on modern spectroscopic techniques in biophysics", Romania (1998), NATO Advanced Study Institute Summer School, Crete, Greece (2000), "International workshop on new biophysical methods in biology and medicine", Romania (2000), "Advanced Drug Delivery and Drug Targeting Course", University of Groningen, Netherlands (2005), Electron Tomography Course, FEI Application Laboratory, Eindhoven, Netherlands (2006), "Gene regulation" Course, Bran, Romania (2007), "Second International Workshop on Advanced, Nano- and Biomaterials and Their Applications", Sibiu, Romania (2010), Department of Pharmacy, University of Bonn, Germany (2011, research stage), Institute for Molecular Cardiovascular Research, UniversitatKlinikum RWTH Aachen, Germany (2012, research stage).

PROJECT MANAGEMENT:

• Project Director of 9, Key Expert of 7, and Team Member of 12 National Research Projects awarded by competition (since 2000).
 • Partner responsible for 2 European projects financed under the ERA-NET scheme of the European Commission: EuroNanoMed Joint call (NANODIATER project) and Safe Implementation of Innovative Nanoscience (SIINN) Joint call (NanoSafeLeather project).

HONOURS AND AWARDS:

• 2015: Romanian Academy Award in Biological Sciences for the paper series published on targeted nanotherapies for inflammation treatment.
 • 2015: Herbert Berler-Barbu Prize of Excellence - Nicolae Cajal Foundation & Romanian Academy of Medical Science.
 • 2012: Constantin Velican Award of the Romanian Society for Cell Biology.
 • 2011: First prize- Best Poster Award, Romanian Society of Cell Biology.
 • 2010: Prize of Excellence in Biomedical Research, Romanian Medical Association.
 • 2008: First prize- Best Poster Award, Romanian Academy of Medical Sciences.
 • 2003: Prize of Excellence, The Romanian Society of Cell Biology Annual conference.
 • 2002: "Agora Diabetologica" Prize, XXVII National Congress of Diabetes, Nutrition and Metabolic Diseases, Bucharest.

PUBLICATIONS:

• 69 research papers in ISI-indexed journals (mostly Q1, 48 papers as main author); 3 book chapters in International Publishing Houses (Elsevier, Springer, John Wiley, and Sons); one European Patent granted (EPO, nr. EP2832373); one European Patent application (EPO, 17464014.4-1102) and four Patent applications to OSIM;
 • Hirsch's h-index: 33 (Google Scholar, no. of citations > 2,700); 28 (Scopus, no. of citations > 2,050); 27 (Web of Science, no. of citations >1,600).

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	B2	B2	B1	B1	B1

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

- Organisational/managerial skills**
- Leadership: currently responsible for a team of 9 people.
 - Good experience in project management (Project Director of nine National Research Projects and Partner responsible for two European projects financed under the ERA-NET scheme.
 - organizer of international workshops:
 - "Inflammation-dependent vascular remodeling in atherosclerosis: cell signaling, biomonitoring and experimental therapy", 2-4 March, 2007;
 - Anniversary Workshop of ICBP-NS: Cell and Molecular Biology-a Key to Defeat Global Risk Diseases: Atherosclerosis, Diabetes and Immune Disorder, Bucharest, 9-12 September 2004;
 - "Cardiovascular Dysfunction in Hyperlipidemia and Diabetes, Jointly with Meeting of the COST ACTION B17 Working Group Cardiovascular Dysfunctions", Bucharest, 10-13 October 2002;
 - organization of 4 project meetings for the ERA-NET project NANODIATER, 2011-2014
 - Summer School " Smart nanoparticles for targeted drug delivery; Preparation, characterization and applications", Bucharest, May 2019;
 - organization of Anniversary Symposium ICBP-NS 40 years: "An incredible 40 years journey to understand cell secrets for the benefit of human health", Bucharest, 19-20 September 2019.

- Job-related skills**
- preparation of different types of nanoparticles and their characterization
 - Targeting of nanoparticles towards specific cells by coupling ligands to their surface
 - Cellular biology
 - Biochemistry: electrophoresis and protein transfer, immunological methods (immunoblot, ELISA), enzymatic assays, flow cytometry, cellular sorting (MACS si FACS)
 - fluorimetry
 - molecular biology: transfection, RT-PCR
 - radiochemistry: the use of radioisotopes for liposomes labeling
 - fluorescence and electron microscopy
 - cell culturing: endothelial cells, smooth muscle cells, fibroblasts, monocytes, macrophages
 - biopathology

- Digital competence**
- 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

Profile pages on scientific websites:

- Researcher ID: <http://www.researcherid.com/rid/E-4506-2011>
- ORCID: <https://orcid.org/0000-0002-5245-160X>
- Researchgate: https://www.researchgate.net/profile/Manuela_Calin
- Scopus: <https://www.scopus.com/authid/detail.uri?authorId=25824736700>
- Brain Map: <https://www.brainmap.ro/manuela-calin>
- Google Scholar: <https://scholar.google.com/citations?user=4Vs8Zn0AAAAJ&hl=en&oi=ao>

ANNEXES

- Annex 1: List of published papers in ISI journals, book chapters, patents
- Annex 2: List of funded research projects

ANNEX 1: List of Published Papers, Book chapters, Patents

List of Published Papers (ISI journals with impact factor)

1. Voicu G, Mocanu CA, Safciuc F, Anghelache M, Turtoi M, Deleanu M, Simionescu M, Manduteanu I, **Calin M**. Precision RNA interference of Smad3 and Runx2 via dual targeting nanocarriers mitigates aortic valve disease, *J Transl Med*. 2026 Jan 10. doi: 10.1186/s12967-026-07686-1. **IF: 8.44**
2. Turtoi M, Deleanu M, Anghelache M, Voicu G, Anton R, Safciuc F, **M Calin**, Targeting Insulin Resistance in Hepatocytes: A Novel Insulin-Mimetic Agent Delivered via an Advanced Nanocarrier System, *ACS Pharmacology & Translational Science*, 2025, <https://doi.org/10.1021/acsptsci.5c00483>
3. Anghelache M, Voicu G, Anton R, Safciuc F, Boteanu D, Deleanu M, Turtoi M, Simionescu M, Manduteanu I, **Calin M**, Inflammation resolution-based treatment of atherosclerosis using biomimetic nanocarriers loaded with specialized pro-resolving lipid mediators, *Materials Today Bio*, Volume 32, June 2025, 10.1016/j.mtbio.2025.101733. **IF: 8.7**
4. Motelica L, Voicu G, Chircov C, Surdu VA, Trusca R, Vasile B, Ficai D, Oprea OC, Marta DS, Peteu VE, Anghelache M, Gherghiceanu M, Ficai A, **Calin M**, Aspartic acid-functionalized magnetic nanoparticles for enhanced internalization in tumoral cell. *Journal of the Australian Ceramic Society*, 2025, DOI 10.1007/s41779-024-01102-x. **IF: 1.8**
5. Voicu G., Mocanu C.A., Safciuc F.,..., **Calin M**, VCAM-1 targeted nanocarriers of shRNA-Smad3 mitigate endothelial-to-mesenchymal transition triggered by high glucose concentrations and osteogenic factors in valvular endothelial cells, *International Journal of Biological Macromolecules* (2024), <https://doi.org/10.1016/j.ijbiomac.2024.136355> **IF: 7.7**
6. Anghelache M, Voicu G, Deleanu M, Turtoi M, Safciuc F, Anton R, Boteanu D, Fenyo IM, Manduteanu I, Simionescu M, **Calin M**, Biomimetic Nanocarriers of Pro-Resolving Lipid Mediators for Resolution of Inflammation in Atherosclerosis, *Adv Healthc Mater*, 2024 Jan;13(3):e2302238. doi: 10.1002/adhm.202302238. **IF: 11.092**
7. Varna, M.; **Calin, M.**; Gebeshuber, I.C. *, *Advances in Natural and Bio-Inspired Nanoparticles for the Treatment of Cardiovascular Diseases*. *Nanomaterials* 2023, 13, 3015. <https://doi.org/10.3390/nano13233015> **IF: 5.719**
8. Pelin IM, Popescu I, **Calin M**, Rebleanu D, Voicu G, Ionita D, Zaharia MM, Constantin M, Fundueanu G. Tri-Component Hydrogel as Template for Nanocrystalline Hydroxyapatite Deposition Using Alternate Soaking Method for Bone Tissue Engineering Applications. *Gels*. 2023 Nov 16;9(11):905. doi: 10.3390/gels9110905. **IF: 4.6**
9. Voicu G, Cristina Ana Mocanu, Florentina Safciuc, Maria Anghelache, Mariana Deleanu, Sergiu Cecoltan, Mariana Pinteala, Cristina Mariana Uritu, Ionel Droc, Maya Simionescu, Ileana Manduteanu, **Calin M**, Nanocarriers of shRNA-Runx2 directed to collagen IV as a nanotherapeutic system to target calcific aortic valve disease, *Materials Today Bio*, 100620, 2023, **IF: 10.761**
10. Craciun BF, Clima L, Bostiog DI, Silion M, **Calin M**, Peptanariu D, Pinteala M, Multilayer gold nanoparticles as non-viral vectors for targeting MCF - 7 cancer cells, *Biomaterials Advances*, 2023, 144, 213201, **IF 8.457**
11. Movileanu C, Anghelache M, Turtoi M, Voicu G, Neacsu IA, Ficai D, Trusca R, Oprea O, Ficai A, Andronescu E, **Calin M**. Folic acid-decorated PEGylated magnetite nanoparticles as efficient drug carriers to tumor cells overexpressing folic acid receptor, *Int J Pharm*. 2022 Aug 8;625:122064. doi: 10.1016/j.ijpharm.2022.122064, **IF 6.510**
12. Turtoi, M.; Anghelache, M.; Patrascu, A.A.; Deleanu, M.; Voicu, G.; Raduca, M.; Safciuc, F.; Manduteanu, I.; **Calin, M.**; Popescu, D.-L. Antitumor Properties of a New Macrocyclic Tetranuclear Oxidovanadium(V) Complex with 3-Methoxysalicylidervaline Ligand. *Biomedicines* 2022, 10, 1217. <https://doi.org/10.3390/biomedicines10061217>, **IF 6.081**
13. Fundueanu, G.; Constantin, M.; Turtoi, M.; Bucatariu, S.-M.; Cosman, B.; Anghelache, M.; Voicu, G.; **Calin, M**. Bio-Responsive Carriers for Controlled Delivery of Doxorubicin to Cancer Cells. *Pharmaceutics* 2022, 14, 865. <https://doi.org/10.3390/pharmaceutics14040865>, **IF 6.525**
14. Voicu, G.; Rebleanu, D.; Mocanu, C.A.; Tanko, G.; Droc, I.; Uritu, C.M.; Pinteala, M.; Manduteanu, I.; Simionescu, M.; **Calin, M**. VCAM-1 Targeted Lipopolyplexes as Vehicles for Efficient Delivery of shRNA-Runx2 to Osteoblast-Differentiated Valvular Interstitial Cells; Implications in Calcific Valve Disease Treatment. *Int. J. Mol. Sci.* 2022, 23, 3824. <https://doi.org/10.3390/ijms23073824>. **IF 6.208**
15. Zaltariov M, Turtoi M, Peptanariu D, Macsim AM, Clima L, Cojocariu C, Vornicu N, Ciubotaru BI, Bargan A, **Calin M**, Cazacu M, Chemical Attachment of 5-Nitrosalicylaldimine Motif to Silatrane Resulting in an Organic-Inorganic Structure with High Medicinal Significance, *Pharmaceutics* 2022, 14(12), 2838; <https://doi.org/10.3390/pharmaceutics14122838>, **IF 6.525**
16. Popescu I, Lupei M, Constantin M, Voicu G, **Calin M**, Prisacaru AI, Fundueanu G, Double cross-linked pectin beads stable in physiological environment as potential support for biomedical applications, *Journal of Polymer Research* volume 28, Article number: 424 (2021) **IF 3.097**

17. Mocanu CA, Fuior EV, Voicu G, Rebleanu D, Safciuc F, Deleanu M, Fenyó IM, Virginie Escriou V, Manduteanu I, Simionescu M, **Calin M**, P-selectin targeted RAGE-shRNA lipoplexes alleviate atherosclerosis-associated inflammation, *J Control Rel*, 2021, 338: pp. 754–772. <https://doi.org/10.1016/j.jconrel.2021.09.012>, **IF 11.467**
18. Anghelache M, Turtoi M, Petrovici AR, Fifere A, Pinteala M, **Calin M**, Development of Dextran-Coated Magnetic Nanoparticles Loaded with Protocatechuic Acid for Vascular Inflammation Therapy, *Pharmaceutics* 2021, 13, 1414. <https://doi.org/10.3390/pharmaceutics13091414>, **IF 6,525**
19. Popescu I, Lupei M, Constantin M, Voicu G, **Calin M**, Prisacaru AI, Fundueanu G, Double cross-linked pectin beads stable in physiological environment as potential support for biomedical applications, *J Polymer Res*. 2021, **IF 3,097**
20. Turtoi M, Anghelache M, Bucatariu SM, Deleanu M, Voicu G, Safciuc F, Manduteanu I, Fundueanu G, Simionescu M, **Calin M***, A novel platform for drug testing: Biomimetic three-dimensional hyaluronic acid-based scaffold seeded with human hepatocarcinoma cells. *Int J Biol Macromol*. 2021; 185:604-619. doi: 10.1016/j.ijbiomac.2021.06.174. **IF 6,953**
21. Turtoi M, Anghelache M, Patrascu AA, Maxim C, Manduteanu I, **Calin M**, Popescu DL, Synthesis, Characterization, and In Vitro Insulin-Mimetic Activity Evaluation of Valine Schiff Base Coordination Compounds of Oxidovanadium(V). *Biomedicines*. 2021 May 17;9(5):562. doi: 10.3390/biomedicines9050562. **IF 6,081**
22. Manea SA, Vlad ML, Rebleanu D, Lazar AG, Fenyó IM, **Calin M**, Simionescu M, Manea A, Detection of Vascular Reactive Oxygen Species in Experimental Atherosclerosis by High-Resolution Near-Infrared Fluorescence Imaging Using VCAM-1-Targeted Liposomes Entrapping a Fluorogenic Redox-Sensitive Probe., *Oxid Med Cell Longev*. 2021 Mar 9;2021: 6685612. doi: 10.1155/2021/6685612. eCollection 2021. **IF 7.310**
23. Popescu I, Turtoi M, Suflet DM, Dinu MV, Darie-Nita RN, Anghelache M, **Calin M**, Constantin M, Alginate/poloxamer hydrogel obtained by thiol-acrylate photopolymerization for the alleviation of the inflammatory response of human keratinocytes, *Int J Biol Macromol*. 2021 Mar 16;180: 418-431. doi: 10.1016/j.ijbiomac.2021.03.082 **IF 8.025**
24. Bucatariu S., Constantin M., Varganici C.D., Rusu D., Nicolescu A., Prisacaru I., **Carnuta M., Anghelache M., Calin M.**, Ascenzi P., Fundueanu G. A new sponge-type hydrogel based on hyaluronic acid and poly(methylvinylether-alt-maleic acid) as a 3D platform for tumor cell growth, *Int J Biol Macromol*. 2020, 165: 2528–2540. **IF 6.78**
25. Fuior E.V.; Mocanu C.A.; Deleanu M.; Voicu G.; Anghelache M.; Rebleanu D.; Simionescu M.; **Calin M***. Evaluation of VCAM-1 Targeted Naringenin/Indocyanine Green-Loaded Lipid Nanoemulsions as Theranostic Nanoplatfoms in Inflammation. *Pharmaceutics* 2020, 12, 1066. <https://doi.org/10.3390/pharmaceutics12111066>. **IF 6.321**
26. Voicu G, Rebleanu D, Constantinescu CA, Fuior EV, Ciortan L, Droc I, Uritu CM, Pinteala M, Manduteanu I, Simionescu M, **Calin M***, Nano-Polyplexes Mediated Transfection of Runx2-shRNA Mitigates the Osteodifferentiation of Human Valvular Interstitial Cells. *Pharmaceutics*. 2020 Jun 2;12(6):E507. doi: 10.3390/pharmaceutics12060507 **IF 6.321**
27. Fuior EV, Deleanu M, Constantinescu CA, Rebleanu D, Voicu G, Simionescu M, **Calin M***, Functional Role of VCAM-1 Targeted Flavonoid-Loaded Lipid Nanoemulsions in Reducing Endothelium Inflammation, *Pharmaceutics*. 2019 Aug 3;11(8). pii: E391. doi: 10.3390/pharmaceutics11080391. **IF 6.321**
28. Rebleanu D, Gaidau C, Voicu G, Constantinescu CA, Mansilla Sánchez C, Rojas TC, Carvalho S, **Calin M***. The impact of photocatalytic Ag/TiO₂ and Ag/N-TiO₂ nanoparticles on human keratinocytes and epithelial lung cells. *Toxicology*. 2019 Jan 31. pii: S0300-483X(18)30225-7. doi: 10.1016/j.tox.2019.01.013. **IF 4.571**
29. Constantinescu CA, Fuior EV, Rebleanu D, Deleanu M, Simion V, Voicu G, Escriou V, Manduteanu I, Simionescu M, **Calin M***. Targeted Transfection Using PEGylated Cationic Liposomes Directed Towards P-Selectin Increases siRNA Delivery into Activated Endothelial Cells. *Pharmaceutics*. 2019 Jan 21;11(1). pii: E47. doi:10.3390/pharmaceutics11010047. **IF 4.473**
30. David G, Clima L, **Calin M**, Constantinescu CA, Balan-Porcarasu M, Uritu CM, Simionescu BC, Squalene/polyethylenimine based non-viral vectors: Synthesis and use in systems for sustained gene release, *Polymer Chemistry*, 9 1072-1081, 2018 **IF 4.790**
31. Tucureanu MM, Rebleanu D, Constantinescu CA, Deleanu M, Voicu G, Butoi E, **Calin M**, Ileana Manduteanu, Lipopolysaccharide-induced inflammation in monocytes/macrophages is blocked by liposomal delivery of Gi-protein inhibitor, *Int J Nanomedicine*. 2017 Dec 20;13:63-76. **IF 4.60**
32. A. I. Dascalu, R. Ardeleanu, A. Neamtu, S. S. Maier, C. M. Uritu, A. Nicolescu, M. Silion, D. Peptanariu, **M. Calin, M. Pinteala**, Transfection-capable polycationic nanovectors which include PEGylated-cyclodextrin structural units: a new synthesis pathway, *J. Mater. Chem. B*, 2017, 5, 7164-7174; DOI:10.1039/C7TB01722G
33. Simionescu BC, Drobotă M, Timpu D, Vasiliu T, Constantinescu CA, Rebleanu D, **Calin M**, David G*, Biopolymers/poly(ϵ -caprolactone)/polyethylenimine functionalized nano-hydroxyapatite hybrid cryogel: Synthesis, characterization and application in gene delivery, *Materials Science and Engineering: C* (2017), 81: 167-176.
34. **Calin M**, Manduteanu I, Emerging Nanocarriers-Based Approaches To Diagnose And Reduce Vascular Inflammation In Atherosclerosis, *Current Medicinal Chemistry* 2017;24(6):550-567.
35. 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. Epub 2016 Sep 14.

36. Tucureanu MM, Butoi E, Gan AM, Daniela Stan, Constantinescu CA, **Calin M**, Simionescu M, Manduteanu I, Amendment of the cytokine profile in macrophages after their interaction with smooth muscle cells: Differential modulation by fractalkine and resistin, *Cytokine*, 2016, 83: 250–261,
37. 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 Apr 7; 1863(7 Pt A):1568-1578. doi: 10.1016/j.bbamcr.2016.04.001
38. Simion V, Stan D, Constantinescu C A, 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 Feb;68(2):195-207
39. Roblek M, **Calin M**, Schlesinger M, Stan D, Zeisig R, Simionescu M, Bendas G, Borsig L, Targeted delivery of CCR2 antagonist to activated pulmonary endothelium prevents metastasis, *J Control Release*. 2015 Oct 30;220(Pt A):341-347. doi: 10.1016/j.jconrel.2015.10.055.
40. Marin L, Ailincai D, Calin M, Stan D, Constantinescu CA, Ursu L, Doroftei F, Pinteala M, Simionescu BC, Barboiu M, Dynameric Frameworks for DNA transfection, *ACS Biomater. Sci. Eng.*, 2016, 2 (1), pp 104–111, DOI: 10.1021/acsbiomaterials.5b00423
41. Uritu CM, **Calin M**, Maier SS, Cojocaru C, Nicolescu A, Peptanariu D, Constantinescu CA, Stan D, Barboiu M, Pinteala M, Flexible cyclic siloxane core enhances the transfection efficiency of polyethylenimine-based non-viral gene vectors, *J. Mater. Chem. B*, *J. Mater. Chem. B*, 2015, 3: 8250-8267, DOI:10.1039/c5tb01342a.
42. Schlesinger M, Zeisig R, Ortmann K, **Calin M**, Gerber U, Roblek M, Borsig L, Bendas G, Inhibition of chemokine receptor CCR2 reduces sarcoma cell transendothelial migration and metastasis to the lungs, *Int J Clin Pharmacol Ther*. 2015 Dec;53(12):1046-1048. DOI: 0.5414/CPXCES14EA04
43. Uritu CM, Varganici C., Ursu L, Coroaba A, Nicolescu A, Dascalu AI, Peptanariu D, Stan D., Constantinescu CA, Simion V, **Calin M**, Maier SS, Pinteala M, Barboiu M, Hybrid Fullerene Conjugates as Vectors for DNA Cell-Delivery, *J. Mater. Chem. B*. 3 (2015) 2433-2446
44. **Calin M***, Stan D, Schlesinger M, Simion V, Deleanu M, Ana Constantinescu C, 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*. 89 (2015) 18-29. doi: 10.1016/j.ejpb.2014.11.016
45. 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
46. 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. doi: 10.1016/j.biocel.2014.01.022.
47. Simion V, Daniela Stan D, Gan AM, Pirvulescu MM, Butoi E, Manduteanu I, Deleanu M, Andrei E, Durdureanu-Angheluta AM, 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*, 15 (12), 1-15 (2013), DOI: 10.1007/s11051-013-2108-1
48. Durdureanu-Angheluta A, Uritu CM, Coroaba A, Minea B, Doroftei F, **Calin M**, Maier SS, Pinteala M, Simionescu M, Simionescu BC, Heparin-Anthranoid Conjugates Associated with Nanomagnetite Particles and Their Cytotoxic Effect on Cancer Cells, *J. Biomed. Nanotechnol*. 10, 131-142 (2014), doi:10.1166/jbn.2013.1690
49. **Calin M**, Stan D, Simion V, Stem Cell Regenerative Potential Combined With Nanotechnology And Tissue Engineering For Myocardial Regeneration, *Curr Stem Cell Res Ther*. 2013 Jul 1;8(4):292-303.
50. Gan AM, Pirvulescu MM, Stan D, Simion V, **Calin M**, Manduteanu I, Butoi E, Cross-talk between activated monocytes and smooth muscle cells activates the STAT3 pathway and induces resistin and reactive oxygen species production, *J Cell Biochem*. 2013 Apr 19. doi: 10.1002/jcb.24571.
51. A.M. Gan, E. Butoi, A. Manea, V. Simion, D. Stan, M.M. Parvulescu, **M. Calin**, I. Manduteanu, M. Simionescu, Inflammatory effects of resistin on human smooth muscle cells: up-regulation of fractalkine/CX3CR1 expression by TLR4 and Gi-protein pathways, *Cell and Tissue Research* (2013), 351(1):161-174.
52. 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), 422: 321-326.

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List of Book Chapters

1. Fuior EV, **Calin M** (2020), Nanoparticle-based delivery of polyphenols for treating inflammation-associated diseases. In Book: *Advances and Avenues in development of novel carriers for Bioactives and biological agents*, Editors: Manju Rawat Singh, Deependra Singh, Jagat Kanwar, Nagendra Singh Chauhan, 343-382, Academic Press, ELSEVIER, ISBN: 978-0-12-819666-3. Total Number of Matches displayed (Single Matches excluded): 90
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 book: *Arterial Revascularization of the Head and Neck: Text Atlas for Prevention and Management of Stroke*, pp.341-365, Editor Horia Muresian,

SPRINGER, New York, DOI: 10.1007/978-3-319-34193-4_17, ISBN-10: 331934191X, ISBN-13: 978-3319341910 (Total Number 10 according Karlsruhe Virtual Catalogue). Total Number of Matches displayed (Single Matches excluded): 71

3. **Calin, M.** (2012) Immunoliposomes for Specific Drug Delivery, in Antibody-Mediated Drug Delivery Systems: Concepts, Technology, and Applications (editors Y. Pathak and S. Benita), 229-266, JOHN WILEY & SONS, Inc., Hoboken, NJ, USA. doi: 10.1002/9781118229019.ch12 (Total Number 53/2020 according to Karlsruhe Virtual Catalogue).

List of Patents:

1. European Patent no. EP2832373, inventors Bendas G, Borsig L, **Calin M**, Cevher E, Enachescu M, Gok MK, Hoffmann A, Mihaly M, Pabuccuoglu SK, Simionescu M, Schlesinger M, Zeisig R: "Liposome for blocking site-specifically chemokine-related inflammatory processes in vascular diseases and metastasis"
2. European Patent: application no: 17464014.4-1102, inventors: Gaidau C, **Calin M**, Constantinescu CA, Rebleanu D, Stoica T: "Leather with anti-microbial and self-cleaning properties and process for obtaining thereof"
3. OSIM, application no. A/00966, inventors: Gaidau C, **Calin M**, Constantinescu CA, Rebleanu D, Stoica: "Leather with anti-microbial and self-cleaning properties and process for obtaining thereof"
4. OSIM application no A/00811, inventors **Calin M**, Rebleanu D, Constantinescu CA, Voicu G, Deleanu M, Manduteanu I: "Process for obtaining the nanocarriers for targeted delivery of interference ribonucleic acid (RNA) to aortic valve cells"
5. OSIM application no A/01055, inventors: Ficai D, Ardelelean I, Ilie C, **Calin M**, Fuior EV, Fifere A, Pinteala M, Fundueanu-Constantin G, Ficai A, Simionescu M, Andronescu E: "Vertical magnetic (electro) separator of isomagnetic nanoparticles"
6. OSIM application no. A/00388/ 20.07.2023, inventors: Movileanu C, Ficai D, Ficai A, **Calin M**, Anghelache M, Gafencu A, Fundueanu-Constantin G, Pinteala M, Simionescu M, Andronescu E, „Intelligent nanosystems for cellular vectorization of bioactive compounds”.

ANNEX 2: List of awarded research projects

Project Coordinator and Partner Team Leader

1. 2025-2027: MSCA4Ukraine Fellowship Programme: 2024 Call Marie Skłodowska-Curie Actions under Horizon Europe, application „Preventing Cardiac Fibrosis via Neutrophil Elastase Inhibition”, Fellow: Dr. Rostyslav Bilyy, Mentor and project manager: Manuela Calin
2. 2021-2023: PNCDI IV Grant nr. PN-III-P4-ID-PCE-2020-2465: "*Targeted therapy based on biomimetic nanocarriers for resolution of inflammation in atherosclerosis*" (coordinator)
3. 2018-2022: PCCF project, cod PN-III-P4-ID-PCCF-2016-0050 (5D-nanoP), "Mimicking living matter mechanisms by five-dimensional chemistry approaches" partners: Institute of Macromolecular Chemistry "Petru Poni, Iasi; IBPC "N. Simionescu", Bucharest; Center for Organic Chemistry "Costin D. Nenitescu", Bucharest (partner responsible).
4. 2018-2020: PCCDI Complex Project nr. 13 PCCDI/2018 (INTERA) "Intelligent therapies for non-communicable diseases based on controlled release of pharmacological compounds from encapsulated engineered cells and targeted bio-nanoparticles"; INTERA3 component project: "Intelligent nano-bioparticles designed to function as vectors for targeted delivery of bioactive compounds in vascular inflammation therapy" (project INTERA3 coordinator), (complex project coordinator: Maya Simionescu).
5. 2015-2018: SIINN ERA-NET project FP7 scheme (NANO_SAFE_LEATHER): "The effect on human health of Ag/TiO₂ NM-treated leathers for footwear industry", partners: The Institute for Research and Development of Textiles and Leather, Romania; ICBP "Nicolae Simionescu", Romania; University of Minho, Portugal; Montana University of Leoben, Austria; SC TARO COMMIMPEX LTD, Romania (partner responsible).
6. 2015-2017: PNCDI II Grant nr. PN-II-RU-TE-2014-4-1837: "*Endothelium-targeted Nanotherapies designed to silence receptor for advanced glycation products (RAGE) in atherosclerosis*"(coordinator)
7. 2011-2014: EuroNanoMed ERA-NET project FP7 scheme (NANODIATER), ctr. 4_001/2011 "*Nanoparticles designed to target chemokine-related inflammatory processes in vascular diseases and cancer metastasis and implementation of a biosensor to diagnose these disorders*", partners: ICBP "Nicolae Simionescu", Romania; Center of Surface Science and Nanotechnology, University Polytechnic of Bucharest; University of Bonn,

- Germany; Istanbul University, Turkey; University of Zürich, Switzerland; EPO Berlin GmbH, Germany; SC Optoelectronica 2000 SRL (*partner responsible*)
8. 2006-2008: National Authority for Scientific Research and Innovation (ANCS) Grant nr.1423/2006: "*Study of signaling pathways involved in hyperglycemia-induced fractalkine expression and their targeting, a new approach to the therapy of cardiovascular pathologies associated with diabetes*" (*coordinator*)
 9. 2004-2006: VIASAN PNCDI Grant, nr. 330/2004: "*A new strategy to stabilize the atherosclerotic lesions in acute coronary syndromes: suppression of activated macrophages using clodronate-loaded liposomes*" (*coordinator*)
 10. 2001-2003: VIASAN PNCDI Grant, nr. 031/2001: "*Targeted delivery of drugs to activated endothelium using "smart" liposomes: a strategy for cardiovascular diseases therapy*" (*coordinator*)
 11. 2003-2004: Romanian Academy Grant: "*Study of the effect of superoxide dismutase administered in liposomes on the reactivity of mesenteric arteries isolated from diabetic hamsters*" (*coordinator*)
 12. 1999-2001: National Agency for Science, Technology and Innovation (ANSTI) Grant nr. 5243/1999: "*Specific drug delivery to vascular endothelium with liposomes*" (*coordinator*)
 13. 1999: Romanian Academy Grant, 376/1999: "*Interaction of liposomes with vascular endothelium*" (*coordinator*)

Key Expert

1. 2025-2027: COFUND-ERA4HEALTH-NANOTECEMEC-SAIL, Ctr. 92/2025 "*Synthetic Ago/antagoMIR nanovehicles for Immunoregulation: a possible approach in cancer and Lung transplantation, partner responsible Rostyslav Bilyy*"
2. 2023-2026: PNRR-III-C9-2022-I8, CF93/2022 ctr. 760063/2023 "*New nanotherapeutic strategies for cardiac fibrosis targeting the mechanisms underlying the fibroblast to myofibroblast transition*", *project director Rostyslav Bilyy, project responsible Manuela Calin*
3. 2016-2020, POC-E, A1.1.4 Attracting personnel with advanced skills from abroad for capacity building "*Targeted therapies for aortic valve disease in diabetes*", *project director: Agneta Simionescu*
4. 2011-2016, PCCE project PNII-ID-PCCE-2011-2-0028, "*Biologically inspired systems for engineered structural and functional entities*", *project director: Mariana Pinteala*
5. 2011-2016, PN-II-ID-PCE-2011-3-0928, "*Molecular mechanisms involved in cytokine- and chemokine-dependent vascular inflammation usable as targets for nanotherapeutic strategies*", *project director: Ileana Manduteanu*

15.01.2026