

INFORMAȚII PERSONALE

MANUELA CĂLIN (nume anterior căsătoriei VOINEA)



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Sex Feminin | Data nașterii 26/10/1971 | Naționalitate Română

DOMENIUL ȘTIINȚIFIC:

Biologie

- Cercetător principal (R4): cercetător științific gradul I – CS I (din 2013), Șef Departament „Bionanotehnologii Medicale și Farmaceutice”, Institutul de Biologie și Patologie Celulară „Nicolae Simionescu” (ICBP-NS), București, România.
- Membru al Consiliului Național pentru Cercetare Științifică (CNCS) din cadrul Ministerului Educației și Cercetării, Președinte al Comisiei de Biologie (din 2025)
- Membru al Consiliului Științific al IBPC-NS (din 2006).
- Membru al Comisiei de etică a IBPC-NS (din 2010).
- Membru al Consiliului Științific al Școlii Doctorale de Științele Vieții, Academia Română (din 2023).
- Conducător de doctorat în Științe Biologice, Școala Doctorală de Științele Vieții, Academia Română (din 2021).
- Tutore în domeniul Biologie, responsabil cu activitatea științifică a 5 studenți doctoranzi și 12 bursieri postdoctorali în programul de doctorat/postdoctorat POSDRU/159/1.5/S/133391 (2014-2015).
- Expert evaluator pentru Ministerul Educației și Cercetării din România, UEFISCDI (planuri naționale de CDI: PNIII:2017-2022, PNIV:2022-2027).
- Expert Evaluator în Panelul de evaluare proiecte europene – European ERA4Health Joint Transnational Call- CARDINNOV (2023).
- Ofițer științific, CNCS, domeniul Biologie, supravegherea procesului de evaluare apel PCE2023 (2023-2024).

FUNCȚII OCUPATE:

Cercetări în domeniul nanomedicinii care se concentrează pe dezvoltarea nanocărăușilor pentru livrarea țintită de medicamente pentru tratamentul bolilor cardiovasculare.

- Abilitare în Biologie, Coordonator științific al tezelor de doctorat, ICBP-NS (din 2021).
- Cercetător postdoctoral în domeniul „Biomateriale”, subdomeniul „Nanocompuși și nanosuporturi cu eliberare controlată de medicamente”, Institutul de Chimie Macromoleculară „Petru Poni”, Iași (2011-2013, POSDRU/89/1.5/S/55216).
- Prelegeri invitate despre utilizarea nanoparticulelor ca sisteme țintite de administrare a medicamentelor la 18 conferințe internaționale și, de asemenea, în cadrul „Cursului de studii avansate în medicină celulară și moleculară”, organizat în ICBP-NS (2003-2012) și Școala de vară „Smart nanoparticule pentru livrarea țintită a medicamentelor” (2019).
- Evaluator pentru Reviste de Specialitate la Edituri Internaționale, de exemplu 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 în Editorial Board al secțiunii “Atherosclerosis and Vascular Medicine”, Revista Frontiers in Cardiovascular Medicine (din 2023).
- Editor invitat pentru un număr special din revista “Pharmaceutics” (2020): “Emerging Nanocarriers-Based Drug Delivery in Inflammation-Associated Disease

EXPERIENȚA PROFESIONALĂ:

https://www.mdpi.com/journal/pharmaceutics/special_issues/nanocarriers_inflammation.

EDUCAȚIE ȘI FORMARE:

- Doctor în Științe Biologice (Distincție: Summa cum Laude) cu teza: „Mecanisme implicate în interacțiunea liposomilor cu endoteliul vascular și țintirea lor către situsuri moleculare specifice ale membranei celulare endoteliale”, Coordonator științific: Acad. Maya Simionescu (2005);
- Master în Științe – Biofizică, Facultatea de Fizică, Universitatea din București (1996);
- Licențiat în Fizică, specializarea Biofizică, Facultatea de Fizică, Universitatea din București (1995);
- Bacalaureat, Colegiul de Informatică „Tudor Vianu” (fostul Liceu de Matematică-Științe Fizice Nr.1), București (1990).

CURSURI ȘI STAGII DE CERCETARE:

Departamentul de Farmacie, Universitatea Martin-Luther, Halle, Germania (1998, instruire în tehnici de obținere a liposomilor), „Atelier internațional de tehnici spectroscopice moderne în biofizică”, România (1998), Școala de vară a Institutului de Studii Avansate – NATO, Creta, Grecia (2000), „Atelier internațional de noi metode biofizice în biologie și medicină”, România (2000), „Cursul de transport direcționat de medicamente, Universitatea din Groningen, Olanda (2005), Curs de tomografie electronică, FEI Application Laboratory, Eindhoven, Olanda (2006), Curs „Reglarea genelor”, Bran, România (2007), „Second International Workshop on Advanced, Nano- and Biomaterials and Their Applications”, Sibiu, România (2010), Departamentul de Farmacie, Universitatea din Bonn, Germania (2011, stagiul de cercetare), Institute for Molecular Cardiovascular Research, UniversitatKlinikum RWTH Aachen, Germania (2012, stagiul de cercetare).

MANAGEMENT DE PROIECT:

- Director de proiect (9), expert cheie (7) și membru al echipei (12) în proiecte naționale de cercetare câștigate prin competiție (din 2000).
- responsabil Partener pentru 2 proiecte europene finanțate în cadrul schemei ERA-NET a Comisiei Europene: Apel comun EuroNanoMed (proiect NANODIATER) și Apel comun Implementarea în siguranță a Nanoștiinței inovatoare (SIINN) Apel comun (proiect NanoSafeLeather).

PREMIIL:

- 2015: Premiul Academiei Române în Științe Biologice “N. Simionescu” pentru seria de lucrări publicate despre nanoterapii țintite pentru tratamentul inflamației..
- 2015: Premiul de Excelență Herbert Berler-Barbu - Fundația Nicolae Cajal și Academia Română de Științe Medicale.
- 2012: Premiul Constantin Velican al Societății Române de Biologie Celulară.
- 2011: Premiul I- Premiul pentru cel mai bun poster, Societatea Romana de Biologie Celulara.
- 2010: Premiul de Excelență în Cercetare Biomedicală, Asociația Medicală Română.
- 2008: Premiul I- Premiul pentru cel mai bun poster, Academia Română de Științe Medicale.
- 2003: Premiul de Excelență, Conferința anuală a Societății Române de Biologie Celulară.
- 2002: Premiul “Agora Diabetologica”, XXVII Congres Național de Diabet, Nutriție și Boli Metabolice, București.

PUBLICAȚIIL:

- 69 de lucrări științifice în reviste indexate ISI (majoritatea Q1, 48 de lucrări ca autor principal); 3 capitole de carte apărute în Edituri Internaționale (Elsevier, Springer, John Wiley și Sons); un brevet european acordat (EPO, nr. EP2832373); o cerere de brevet european (EPO, 17464014.4-1102) și patru cereri de brevet către OSIM;
- Indicele Hirsch:
33 (Google Scholar, no. citări > 2,700);
28 (Scopus, no. citări > 2,050);
27 (Web of Science, no. citări >1,500).

Limba maternă

Română

Alte limbi

ÎNȚELEGERE		VORBIRE		SCRIERE
Ascultare	Citare	Participare la conversație	Discurs oral	Exprimare scrisă

Engleză	C1	C1	C1	C1	C1
Franceză	B2	B2	B1	B1	B1

Niveluri: A1/2: Utilizator elementar - B1/2: Utilizator independent - C1/2: Utilizator experimentat
 Cadrul european comun de referință pentru limbi străine

**Abilități organizatorice/
 manageriale**

- Leadership: responsabil pentru o echipă de 9 persoane.
- Experiență în managementul proiectelor (Director de proiect a nouă proiecte naționale de cercetare și partener responsabil pentru două proiecte europene).
- Organizator de workshop-uri internaționale:
 - "Inflammation-dependent vascular remodeling in atherosclerosis: cell signaling, biomonitoring, and experimental therapy", București, 2-4 Martie, 2007;
 - Anniversary Workshop of ICBP-NS: Cell and Molecular Biology-a Key to Defeat Global Risk Diseases: Atherosclerosis, Diabetes and Immune Disorder, București, 9-12 Septembrie 2004;
 - "Cardiovascular Dysfunction in Hyperlipidemia and Diabetes, Jointly with Meeting of the COST ACTION B17 Working Group Cardiovascular Dysfunctions", București, 10-13 Octombrie 2002;
 - organizarea a patru întâlniri de proiect în proiectul ERA-NET NANODIATER, 2011-2014
 - Școala de Vară "Nanoparticule inteligente pentru livrarea direcționată de compuși bioactivi; Preparare, caracterizare și aplicații", București, 23-24 Mai 2019;
 - organizarea Simpozionului Aniversar ICBP-NS 40 de ani: „O călătorie fascinantă de 40 de ani pentru descoperirea secretelor celulei în beneficiul sănătății omului”, București, 19-20 septembrie 2019.

**Aptitudini și competențe
 profesionale**

- Prepararea diferitelor tipuri de nanoparticule și caracterizarea acestora
- Direcționarea nanoparticulelor către celule specifice prin cuplarea liganzilor la suprafața acestora
- Biologie celulară
- Biochimie: electroforeză și transfer de proteine, metode imunologice (immunoblot, ELISA), teste enzimatic, citometrie în flux, sortare celulară (MACS și FACS)
- fluorimetrie
- biologie moleculară: transfecție, RT-PCR
- radiochimie: utilizarea radioizotopilor pentru marcarea lipozomilor
- fluorescență și microscopie electronică
- cultivare celulară: celule endoteliale, celule musculare netede, fibroblaste, monocite, macrofage
- biopatologie

Competențe digitale

- O bună cunoaștere a suitei Office (World, Excel, Power Point)
- O bună cunoaștere a software-ului de editare foto, Adobe Photoshop, analiza imaginii (Image Master, Scion Image, Lucia), software-ul de analiză pentru citometrie în flux (Summit 4.3) și statistici (GraphPad, SPSS).

Permis de conducere

Categoria B

INFORMAȚII SUPPLEMENTARE

**Pagini de profil pe site-uri web
 științifice:**

- 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>
- Google Scholar: <https://scholar.google.com/citations?user=4Vs8Zn0AAAAJ&hl=en&oi=ao>
- Brain Map: <https://www.brainmap.ro/manuela-calin>

ANEXE

- Anexa 1: Lista lucrărilor științifice publicate în reviste ISI, capitole de carte, brevete
- Anexa 2: Lista proiectelor de cercetare finanțate

ANEXA 1: Lista lucrărilor publicate, capitole de carte, brevete

Lista lucrărilor publicate (reviste ISI cu factor de impact)

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/acspsci.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, Fikai D, Oprea OC, Marta DS, Peteu VE, Anghelache M, Gherghiceanu M, Fikai 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, Fikai D, Trusca R, Oprea O, Fikai 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, Măcsim 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, Fenyo IM, Virginie Escriu V, Manduteanu I, Simionescu M, **Calin M**, P-selectin targeted RAGE-shRNA lipopolyplexes 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, Fenyo 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, Drobota 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.
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Lista capitolelor de carte

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 brevetelor de invenție:

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”.

ANEXA 2: Lista proiectelor de cercetare castigate prin competiție

Coordonator de proiect și lider de echipă partener

1. 2025-2027: MSCA4Ukraine Fellowship Programme: 2024 Call Marie Skłodowska-Curie Actions under Horizon Europe, application „Preventing Cardiac Fibrosis via Neutrophil Elastase Inhibition”, bursier Rostyslav Bilyy, (mentor and project manager).
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*” (coordonator)
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. Nenițescu”, Bucharest (responsabil partener).
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 coordonator), (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 (responsabil partener).
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*”(coordonator)
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 (responsabil partener).
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*” (coordonator)

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" (coordonator)
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" (coordonator)
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" (coordonator)
12. 1999-2001: National Agency for Science, Technology and Innovation (ANSTI) Grant nr. 5243/1999: "Specific drug delivery to vascular endothelium with liposomes" (coordonator)
13. 1999: Romanian Academy Grant, 376/1999: "Interaction of liposomes with vascular endothelium" (coordonator)

Expert cheie

1. 2025-2027: COFUND-ERA4HEALTH-NANOTECEMEC-SAIL, Ctr. 92/2025, "Nanovehicule pentru transportul Ago/antagoMIR utilizate pentru imunoreglare: o posibilă abordare în tratamentul cancerului și transplantul pulmonar", 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
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