Curriculum Vitae

Personal information

First name / Surname(s) **MOACĂ, ELENA ALINA (born TĂCULESCU)**

E-mail alina.moaca@umft.ro
alina_taculescu@yahoo.com

Nationality Romanian

Work experience

Dates **30.09.2024 – present**

Occupation or position held **Associate Professor, University Clinic of Toxicology, Drug Industry, Management and Legislation**

Main activities and responsibilities **Higher education** – F – Faculty of Pharmacy in Romanian language; FFR – Faculty of Pharmacy in French language; ASF-L - Pharmaceutical Assistance in Lugoj; M-IF – Master in Pharmaceutical Industry; M-CD – Master in Cosmetology and Dermatopharmacy
Didactic activity – courses – Methodology of scientific research (year IV F); Nutrition and dietetic products (optional, year III F and FFR); Elements of toxicology (year III ASF-L); Methodology of experimental research (year I Master IF); Modern non-invasive techniques in cosmetology (optional, year I Master CD); Modern techniques applied in beauty (optional, year I Master CD); Methodology of dissertation writing (year II Master CD)
Scientific research: synthesis of magnetic iron oxide nanoparticles (FeNPs), and silver nanoparticles (AgNPs), via combustion/co-precipitation or green method; obtaining the biocompatible colloidal suspensions by coating the NPs with various surfactants, polymers; antioxidant activity assessment of aqueous/alcoholic extracts by DPPH method; determination of the total content of polyphenols with Folin-Ciocalteu reagent; determination of tannins and flavonoids content; attachment of drugs to the surface of iron oxide nanoparticles and incorporation of the complex into liposomes as well as in SiO_2 matrix; evaluation of magnetic-core nanoformulations coated with biologically active principles in hyperthermia.

Name and address of employer "Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
https://www.umft.ro/en/pharmacy/departments-of-the-pharmacy-faculty/department-i/toxicololgy-drug-industry-management-and-legislation/

Dates **17.09.2018 – 29.09.2024**

Occupation or position held **Lecturer, Department of Toxicology, Drug Industry, Management and Legislation**

Main activities and responsibilities **Higher education** – F – Faculty of Pharmacy in Romanian language; FFR – Faculty of Pharmacy in French language
Didactic activity – courses – Toxicology (IVth year F); OTC supplements (optional Vth year FFR); Methodology of Scientific Research (IVth year F/FFR; IInd year AsF; IInd year CM); Methods of documentation/information and self-improvement (OTC Master's IInd year); Introduction into research and documentation (optional IIIrd year F); Homeopathic and veterinary drugs (IIIrd year AsF); Nutrition and Dietetic Products (IIIrd year FFR)
Laboratory/seminar didactic activity – Toxicology (IVth and Vth years F/FFR); Methodology of Scientific Research (IVth year F/FFR); Drug Industry and Pharmaceutical Biotechnology (Vth year F)); Methods of documentation and self-improvement/information (OTC Master's IInd year);
Scientific research: synthesis of magnetic iron oxide nanoparticles (FeNPs), and silver/iron oxide nanoparticles (Ag-FeNPs), via combustion/co-precipitation or green method; obtaining the biocompatible colloidal suspensions by coating the NPs with various surfactants, polymers); antioxidant activity assessment of aqueous/alcoholic extracts by DPPH method; determination of the total content of polyphenols with Folin-Ciocalteu reagent; determination of tannins and flavonoids content; attachment of drugs to the surface of iron oxide nanoparticles and incorporation of the complex into liposomes as well as in SiO_2 matrix.

Name and address of employer "Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro

Dates	**18.09.2015 – 16.09.2018**
Occupation or position held	**University Assistant, Department of Toxicology**
Main activities and responsibilities	**Higher education** (**laboratory/seminar didactic activity** – Toxicology (IVrd and V^{ed} years F); Methodology of Scientific Research (IVrd year F/FFR) **Scientific research:** synthesis of magnetic iron oxide nanoparticles (FeNPs), and silver/iron oxide nanoparticles (Ag-FeNPs), made by combustion/co-precipitation method; obtaining the biocompatible colloidal suspensions by coating the NPs with various surfactants, polymers; antioxidant activity assessment of aqueous/alcoholic extracts by DPPH method; determination of the total content of polyphenols with Folin-Ciocalteu reagent; determination of tannins and flavonoids content
Name and address of employer	"Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
Dates	**15.10.2008 – 01.05.2014**
Occupation or position held	**Researcher in Chemistry**
Main activities and responsibilities	• Synthesis of iron/iron-oxides magnetic nanoparticles by co-precipitation method and production of magnetic nanofluids based on polar and non-polar carriers; • Preparation of magnetic fluids with iron oxide nanoparticles obtained by laser pyrolysis; • Synthesis of magnetic composites „core-shell" type, by encapsulation of magnetic nanoparticles in a silica gel matrix, used for magnetic paper making; • Responsible for precursor activities.
Name and address of employer	Romanian Academy – Timisoara Branch, Center for Fundamental and Advanced Technical Research, Mihai Viteazu Bvd., no. 24 Timisoara RO 300223 Romania, http://acad-tim.tm.edu.ro/cctfa/
Dates	**17.07.2007 – 14.10.2008**
Occupation or position held	**Chemist Technician (17.07.2007 – 31.07.2008) / Chemical Engineer (01.08.2008 – 14.10.2008)**
Main activities and responsibilities	Correction of both water-based paints and plasters respectively – the activity was carried out in the Laboratory of Colorimetry – Research and Development Department / Elaboration of the recipes for synthesis of alkyd and polyester resins, daily collaboration with production staff, preparing annual research projects – the activity was carried out in the Resins Laboratory – Research and Development Department
Name and address of employer	SC AZUR SA, Research and Development Department, Constructorilor Bvd. no. 1-3, Timisoara RO 300571 Romania, https://www.azur.ro

Education and Training

Training

Dates	**26.01.2024 – present**
Title of qualification	**Postdoctoral Researcher – Pharmacy Domain (Project acronym: ONCO-MNPs)**
Name and type of organization providing education and training	"Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
Dates	**2016 – 2017**
Title of qualification	**Certificate: Teacher Training Department (2nd Module); Ac series No. 0026224**
Name and type of organization providing education and training	West University of Timisoara, Vasile Parvan street no. 4, Timisoara RO-300223 Romania, www.uvt.ro
Dates	**01.06.2014 – 15.12.2015**
Title of qualification	**Postdoctoral Researcher**
Name and type of organization providing education and training	„Victor Babes" National Institute of Research and Development in the Pathology Domain and Biomedical Science, Splaiul Independentei street no. 99-101, sector 5, Bucharest RO 050096 Romania, www.ivb.ro
Dates	**2003 – 2008**
Title of qualification	**Certificate: Teacher Training Department (1st Module); G series No. 0036666**
Name and type of organization providing education and training	Politehnica University of Timisoara, Victoriei Square no. 2, Timisoara RO 300006 Romania, www.upt.ro
Dates	**1999 – 2003**

Title of qualification	**Professional Competence Certificate**, specialization – **Technician in Chemical Industry, A series No. 0235782**
Name and type of organization providing education and training	„Decebal" Scholar Group, Antoninii street no. 2, Drobeta Turnu Severin RO 220125 Romania

Education

Dates	**2024**
Title of qualification	**Habilitation in Pharmacy – as to Order no. 7810 of 17.12.2024 issued by the Minister of National Education** *Thesis title: Synthesis methods for pharmaco-toxicological evaluation of metal nanoparticles with or without natural biologically active compounds attached*
Name and type of organization providing education and training	"Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
Dates	**01.10.2024 – present**
Title of qualification	**Postgraduate Master – Toxicology and addiction medication** **Faculty of Medicine**
Name and type of organization providing education and training	"Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
Dates	**01.10.2024 – present**
Title of qualification	**Postgraduate Master – Pharmacovigilance and Clinical Trial Monitoring** **Faculty of Pharmacy**
Name and type of organization providing education and training	"Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
Dates	**01.10.2018 – 20.01.2023**
Title of qualification	**Ph.D. in Pharmacy - as to Order no. 3900 of 28.03.2023 issued by the Minister of National Education** *Thesis title: Contributions regarding the experimental assessment of different magnetic materials based on iron oxide nanoparticles, from a physicochemical and biological point of view*
Name and type of organization providing education and training	"Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
Dates	**21.09.2015 – 17.07.2017**
Title of qualification	**Master's Degree in Pharmacy – OTC drugs, dietary supplements, cosmetics, series MA No. 0108177** *Project title: Complexation of some β-cyclodextrins with iron oxides magnetic nanoparticles. Synthesis, characterization, and applications*
Name and type of organization providing education and training	"Victor Babes" University of Medicine and Pharmacy Timisoara, Faculty of Pharmacy, Eftimie Murgu Square no. 2, Timisoara RO-300041 Romania, www.umft.ro
Dates	**01.10. 2010 – 07.02.2014**
Title of qualification	**Ph.D. in Chemical Engineering – as to Order no. 165 of 07.04.2014 issued by the Minister of National Education** *Thesis title: New approaches regarding the synthesis and the use of some nanomaterials with magnetic properties*
Name and type of organization providing education and training	Politehnica University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering, Vasile Parvan Bvd. no. 6, Timisoara RO 300226 Romania, www.upt.ro
Dates	**01.10.2008 – 24.06.2010**
Title of qualification	**Master's Degree in Chemical Engineering - Non-Polluting Process Technologies, I series No. 0034631** *Project title: Direct dyes removal from wastewater of laboratory using synthetic adsorbents*
Name and type of organization providing education and training	Politehnica University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering, Vasile Parvan Bvd. no. 6, Timisoara RO 300226 Romania, www.upt.ro
Dates	**01.10.2003 – 03.07.2008**

Title of qualification

Bachelor's Degree in Chemical Engineering (Diplomat Engineer) - Engineering and Chemistry of Inorganic Substances, G series No. 0051615

Project title: Synthesis, characterization, and use of some organic-inorganic hybrids in the extraction of Cu^{2+} and Cd^{2+} ions from aqueous solutions

Name and type of organization providing education and training

Politehnica University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering, Vasile Parvan Bvd. no. 6, Timisoara RO 300226 Romania, www.upt.ro

Personal skills and competencies

Native language(s)

Romanian

Other language(s)

Self-assessment

European level (*)

	Understanding			Speaking				Writing	
	Listening		Reading		Spoken interaction		Spoken production		Writing	
English	C1	Independent user	C1	Independent user	C1	Independent user	C1	Independent user	C1	Independent user
French	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

*(*) **Common European Framework of Reference for Languages***

Technical skills and competencies

Synthesis of magnetic iron-oxide nanoparticles by co-precipitation method; Production of magnetic nanofluids based on polar and non-polar carriers; Synthesis of magnetic iron-oxide nanoparticles by combustion method; Production of biocompatible colloidal suspensions based on water for biomedical applications; Familiar with the interpretation of the results of various characterization methods: XRD, BET, DLS, TG/DTA, magnetic measurements, optical microscopy (TEM, SEM); Chemical synthesis, Physico-chemical characterization of synthesized compounds; Obtaining and characterization of aqueous, alcoholic and/or hydro alcoholic vegetal extracts; Fabrication of iron oxides magnetic nanoparticles by green synthesis; Fabrication of silver nanoparticles by green synthesis.

Research skills and competencies

The research activity I have carried out as a member of the research team conferred me the ability to work in a multidisciplinary team and good communication skills.

My research activity can be quantified in:

- 84 – *in extenso* articles published in indexed ISI journals;
- 5 – ISI proceedings articles;
- 9 – ISI abstracts;
- 25 – abstracts published in the volume of abstracts with ISBN
- 2 – articles published in CNCSIS-B/B+ indexed journals (BDI);
- 3 – published books chapter in international publishing houses;
- 2 – published books in national publishing houses
- 1 – patent
- 69 – communications at international/national conference/workshop;
- 20 – research projects: (as manager – 3 national projects; and as a member – 15 national projects and 2 international projects)
- Hirsch Factor h = 21 (according to ISI Web of Knowledge)

Project management (project manager)

1. **PN-IV-P2-2.1-TE-2023-1941 - Research Projects for Young Independent Teams, SMART-MNP@MHT, ctr. no. 103TE/08.01.2025**

Smart targeted nanostructures loaded with triterpenic-like-antitumor active principles, for magnetic hyperthermia therapy (Period: 08.01.2025 – 31.12.2026)
Project Coordinator: VBUMFT; Project Manager: Associate Professor Ph.D. Elena-Alina Moacă

2. **Advanced Research Grant – Young Researchers, ONCO-MNPs ctr. no. 1682/26.01.2024 (10.000 euro)** (Period: 26.01.2024 – 26.07.2025)

New advances in the development of smart magnetic nanoparticles used in cancer pathology
Project Coordinator: VBUMFT; Project Manager: Lecturer Ph.D. Alina Moacă

3. **Internal Competition Doctoral Grant, TRITERPENS@MNP, ctr. no. 4DOC/1276/30.01.2020 (20.000 euro)** (Period: 02.02.2020 – 02.02.2022)

Magnetic nanoparticles as a support for triterpenic antitumor active principles
Project Coordinator: VBUMFT; Project Manager: Lecturer Ph.D. Alina Moacă

Professional skills and competencies

- Member of the Council of Department I of the Faculty of Pharmacy, UMFVBT, from 2024
- Member of the Commission for establishing the minimum standards of teaching and research activities within the UMFVBT, from 2023
- Member of the Working Group "Academic Performance of the University of Medicine and Pharmacy "Victor Babeş" from Timişoara", 2023-2025
- Member of the Ethics Committee of the Faculty of Pharmacy, 2020-2023
- Member of the Professional Deontology Consultative Committee of the Faculty of Pharmacy, since 2023
- Member of the Drug Precursors and Toxic Substances Committee of the Faculty of Pharmacy, since 2020
- Member of the Preparation of the Periodic Evaluation File of the Pharmacy Study Program (in French) Committee of the Faculty of Pharmacy, from 2022
- Member of the Admissions and License Committee of the Faculty of Pharmacy, since 2016
- Member of the Evaluation Committee regarding the filling of vacant teaching positions in the Faculty of Pharmacy, since 2018
- Member within the Research Center for Pharmacotoxicological Evaluations (FARMATOX), https://www.umft.ro/cercetare/centre-de-cercetare/farmatox/, from 2021

Scientific Coordinator of:

- 44 undergraduate theses within the Pharmacy Study Program, 2017-2025
- 4 undergraduate theses within the Pharmacy Assistance Study Program from Lugoj, 2016-2021
- 5 undergraduate theses within the Medical Cosmetics and Cosmetic Product Technology Study Program, 2024-2025
- 5 dissertation works within the Master's Program - OTC drugs, food supplements, cosmetics, 2020-2021

Invited reviewer ISI journal:

- International Journal of Nanomedicine (Dove Medical Press), ISSN: 1176-9114
- Cancer Management and Research (Dove Medical Press), ISSN: 1179-1322
- Journal of Functional Biomaterials (MDPI), ISSN: 2079-4983
- Materials (MDPI), ISSN: 1996-1944
- Nanomaterials (MDPI), ISSN: 2079-4991
- International Journal of Molecular Science (MDPI), ISSN: 1422-0067
- International Journal of Environmental Research and Public Health (MDPI), ISSN: 1660-4601
- Drug Design, Development and Therapy (Dove Medical Press), ISSN: 1177-8881
- Naunyn-Schmiedeberg's Archives of Pharmacology (Springer Link), ISSN: 0028-1298

- **Guest Editor in 2021** at Pharmaceutics Journal (MDPI), ISSN: 1999-4923 – Special Issue: Magnetic Nanomaterials – a promising approach in cancer therapy (https://www.mdpi.com/journal/pharmaceutics/special_issues/Magnetic_Cancer)
- **Guest Editor in 2024** of Pharmaceutics Journal (MDPI), ISSN: 1999-4923 – Special Issue: Recent insights concerning the use of supramolecular systems for biomedical application (https://www.mdpi.com/journal/pharmaceutics/special_issues/68EUE35G7A)
- **Guest Editor in 2024** of Pharmaceutics Journal (MDPI), ISSN: 1999-4923 – Special Issue: Nano-enabled formulations: recent insights and biomedical applications (https://www.mdpi.com/journal/pharmaceutics/special_issues/PU3R2A6M5C)
- **Guest Editor in 2024** of Gels Journal (MDPI), ISSN: 2310-2861 – Special Issue: Smart Hydrogel-Type Formulations: New Insights Regarding Design and Biomedical Applications (https://www.mdpi.com/journal/gels/special_issues/T1P5H6XX61)

- BrainMap ID (UEFISCDI) - U-1700-039P-3144
- ORCID ID - http://orcid.org/0000-0002-2631-7028

National scholarships

- **2010 – 2013 - Doctoral Scholarship** – **POSDRU 107/1.5/S/77265**, entitled *To research careers through doctoral studies*. Affiliation: Politehnica University of Timisoara, http://www.bursedoctorale-upt-2010.ro
- **01.06.2014 – 15.12.2015 - Postdoctoral Scholarship** – **POSDRU/159/1.5/S/141531**, entitled *Human resources development - Ph.D. and postdoctoral students - for excellence research in health and biotechnology*. Affiliation: „Victor Babes" National Institute of Research and Development in the Pathology Domain and Biomedical Science, Bucharest Romania, http://dpd-dru.ro

UEFISCDI Awarding research results - scientific articles https://uefiscdi.gov.ro/premierea-rezultatelor-cercetarii-articole	**Over 30 scientific articles have been awarded at national level** **PN-IV-P2-2.3-PRECISI-2023-81714** – Q1 area; **PN-IV-P2-2.3-PRECISI-2023-72024** – Q1 area; **PN-IV-P2-2.3-PRECISI-2023-82218** – Q2 area; **PN-III-P1-1.1-PRECISI-2021-67401** – Q2 area; **PN-III-P1-1.1-PRECISI-2021-66567** – Q2 area; **PN-III-P1-1.1-PRECISI-2021-60186** – Q2 area; **PN-III-P1-1.1-PRECISI-2021-61674** – Q2 area; **PN-III-P1-1.1-PRECISI-2021-60618 –** Q1 area; **PN-III-P1-1.1-PRECISI-2021-60626** – Q2 area; **PN-III-P1-1.1-PRECISI-2021-59293** – Q1 area; **PN-III-P1-1.1-PRECISI-2021-58870** – Q1 area; **PN-III-P1-1.1-PRECISI-2019-39660** – Q2 area; **PN-III-P1-1.1-PRECISI-2019-39666 –** Q1 area; **PN-III-P1-1.1-PRECISI-2019-35025** – Q2 area; **PN-III-P1-1.1-PRECISI-2019-35343** – Q2 area; **PN-III-P1-1.1-PRECISI-2019-34566** – Q2 area; **PN-III-P1-1.1-PRECISI-2019-30408** – Q1 area; **PN-III-P1-1.1-PRECISI-2019-30519** – Q2 area; **PN-III-P1-1.1-PRECISI-2019-30648 –** Q2 area; **PN-III-P1-1.1-PRECISI-2018-25554 –** Q1 area; **PN-III-P1-1.1-PRECISI-2018-25367 –** Q1 area; **PN-III-P1-1.1-PRECISI-2018-23991 –** Q1 area; **PN-III-P1-1.1-PRECISI-2018-23985 –** Q1 area; **PN-III-P1-1.1-PRECISI-2018-23950 –** Q2 area; **PN-III-P1-1.1-PRECISI-2017-16345** – Q1 area; **PN-II-RU-PRECISI-2015-9-8803** – Q1 area; **PN-II-RU-PRECISI-2015-9-8398** – Q2 area; **PN-II-RU-PRECISI-2014-8-4615** – Q2 area; **PN-II-RU-PRECISI-2013-7-3168** – Q2 area; **PN-II-RU-PRECISI-2013-7-2722** – Q2 area; **PN-II-RU-PRECISI-2012-6-0897** – Q1 area
Skills and competencies of computer use	Microsoft Office (Word, Excel, PowerPoint), Internet, processing data programs (Origin, Table Curves 2D)
Other competencies	Fast learning; tenacious; analytical behavior, with a strong capacity for synthesis; entrepreneurship behavior expressed by approaching and solving some existing problems; work experience in team organization; eagerness to gain new knowledge, develop and improve the career; perseverance in pursuing and achieving a goal; devotion and respect for work tasks; eager for affirmation and promotion.
License (s) driving	B Category since 2006
Additional references	**Prof. Univ. Habil. Ph.D. Pharm. Cristina Adriana Dehelean** („Victor Babes" University of Medicine and Pharmacy, Faculty of Pharmacy from Timisoara); **Academician CS I Ph.D. Phys. Ladislau Vékás** (Romanian Academy – Timisoara Branch, Center for Fundamental and Advanced Technical Research, Laboratory of Magnetic Liquids); **Prof. Univ. Ph.D. Chem. Cornelia Păcurariu** (Politehnica University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering).
Annexes	

ANNEX I. SCIENTIFIC RESEARCH ACTIVITY

I.1 RESEARCH PROJECTS (research team member)

1. **Project PRV/6.1.D/1, MYSMIS:321935, funded by the West regional program 2021-2027, Priority: 6 – An educational and attractive region** (Period: December 2024 – November 2026)

Modernizing learning conditions, developing students' skills and ensuring non-discretionary access to quality education at UMFVBT
Project Coordinator: „Victor Babeş" University of Medicine and Pharmacy Timişoara; Project Manager: Prof.Univ.Dr. Oancea Cristian

2. **Internal Competition Post-Doctoral Grant, ctr. no. 3POSTDOC/1238/2020 (238.340 RON)** (Period: 02.02.2020 – 02.02.2022)

Populi gemmae - a double win for the pharmaceutical field: therapeutic potential and bio-source for green synthesis of silver nanoparticles
Project Coordinator: „Victor Babes" University of Medicine and Pharmacy Timisoara; Project Manager: Assoc. Prof. Ph.D. Corina Danciu

3. **PN-III-P1-1.1-TE-2019-2134 Project, BAPRONIO, ctr. no. 79/30.10.2020 (431.840 RON)** (Period: 2.11.2020 – 31.10.2022)

Rendering to the dermo-cosmetic market a modern topical formulation with betulinic acid incorporated in proniosomes
Project Coordinator: „Victor Babes" University of Medicine and Pharmacy Timisoara; Project Manager: Assoc. Prof. Ph.D. Dorina Coricovac

4. **CNFIS-FDI-2019-0393 Project, ctr. no. 104/21.05.2019** (Period: 21.05.2019 - 15.12.2019)

Professional development center in the field of dermato-cosmetic products based on medicinal plants
Project Coordinator: „Victor Babes" University of Medicine and Pharmacy Timisoara; Project Manager: Professor Ph.D. Cristina Dehelean

5. **CNFIS-FDI-2018-0159 Project, ctr. no. 35/16.05.2018** (Period: 16.05.2018 - 15.12.2018)

Center for the development of practical skills in the field of medicinal plants
Project Coordinator: „Victor Babes" University of Medicine and Pharmacy Timisoara; Project Manager: Professor Ph.D. Cristina Dehelean

6. **PN-III-P4-ID-PCE-2016-0765 Project, ctr. no. 10718/21.07.2017** (Period: 2017-2019)

Advanced materials based on combustion-synthesized magnetic iron oxide nanoparticles and their cytotoxicity designed for cancer treatment - MagNanoCytoTox
Project Coordinator: Politehnica University of Timisoara; Project Manager: Professor Ph.D. Cornelia Păcurariu

7. **PN-III-P2-2.1-2016-BG-0354 Project, ctr. no. 1506/21.10.2016** (Period: 2016-2018)

Betulin and gold nanoparticles - based formulations in preventing skin aging - BETGOSKIN

Project Coordinator: „Victor Babes" University of Medicine and Pharmacy Timisoara; Project Manager: Professor Ph.D. Şoica Codruţa Marinela

8. **PN-II-RU-TE-2014-4-0514 Project, ctr. no. 60 from 01/10/2015** (Period: 2015-2017)

Development of nanostructured magnetic composite used as nano-adsorbents and nano-catalysts with high performance in environmental applications

Project Coordinator: Politehnica University of Timisoara; Project Manager: Lecturer Ph.D. Stoia Marcela Elena

9. **PN-II-RU-TE-2014-4-1587 Project, ctr. no. 142 from 01/10/2015** (Period: 2015-2017)

Combustion synthesis of smart near-infrared reflective nanopigments for heat-reflective (cool) coatings

Project Coordinator: Politehnica University of Timisoara; Project Manager: Assoc. Prof. Ph.D. Ianoş Robert Gabriel

10. **FP7 (RPF'S FP 2009 – 2010, Cyprus) Project** (Period: 2013-2014)

Novel, multi-responsive cross-linked films with controlled architectures: synthesis, characterization and application in icon restoration

Project Coordinator: University of Cyprus; Partner 2: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Responsible: Dr. Ladislau Vékás, CS1

11. **PN-II-PT-PCCA-2011-3.2-0538 Project - MagNanoMicroSeal, ctr. no. 157/2012** (Period: 2012-2015)

High magnetization magnetic nanofluids and nano-micro composite magnetizable fluids: applications in high pressure and heavy duty rotating seals and the magnetorheological controller device

Project Coordinator: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Manager: Dr. Ladislau VÉKÁS, CS1

12. **ID_76 Project Surface and Interface Science: physics, chemistry, biology, and applications** (Period: 2012-2013)

Project Coordinator: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Responsible: Dr. Victor SOFONEA, CS1

13. **FP7 (MAGPRO2LIFE) Project** (Period: 2009-2013)

Advanced Magnetic nanoparticles deliver smart processes and products for life

Project Coordinator: SOLAE Co., Denmark; Partner 11: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Responsible: Dr. Ladislau VÉKÁS, CS1

14. **PN-II ERA-NET (MAFINCO) Project, ctr. no. 7-018/2009** (Period: 2009-2011)

Nanofluid magnetic - a new isolating and cooling medium for electrical transformers

Project Coordinator: Politehnica University of Timisoara; Partner 1: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Responsible: Dr. Ladislau VÉKÁS, CS 1

15. **PN-II (CFEEL) Project, ctr. no. 21-043/2007** (Period: 2007-2010)

Functional compatibility of special electrical equipment, with magnetic ferrofluid (bushings, measuring transformers, curling tong for physical microparticles industrial frequency voltage dividers)

Project Coordinator: National Institute for Research and Development for Electrical Engineering ICPE-CA, Bucharest; Partner 2: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Responsible: Dr. Ladislau VÉKÁS, CS1

16. **PN-II (BIMAPAFLU) Project, ctr. no. 71-083/2007** (Period: 2007-2010)

Advanced magnetic nanostructure processing in the form of nanoparticles and nanofluids based on Fe, for biomedical applications

Project Coordinator: National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca; Partner 1: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Responsible: Dr. Ladislau VÉKÁS, CS 1

17. **PN-II (NANOMAGPOLI) Project, ctr. no. 71-068/2007** (Period: 2007-2010)

Biocompatible nanostructured systems based on magnetic nanoparticles and polymers with response to external stimuli

Project Coordinator: National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca; Partner 1: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid; Project Responsible: Dr. Ladislau VÉKÁS, CS 1

I.2 PUBLICATIONS

I.2.1. INTERNATIONAL BOOK CHAPTERS

1. D.C. Lazăr, **E.A. Moacă**, M. Cornianu, S. Tăban, A. Faur, A. Goldiș, Efficiency of Treatment Targeted on Gut Microbiota in Inflammatory Bowel Diseases: Current Strategies and Perspectives, Chapter 4, DOI: 10.5772/intechopen.108664, In Benign Anorectal Disorders - An Update, edited by: Dr. Alberto Vannelli and Dr. Daniela Cornelia Lazar, ISBN 978-1-80355-705-2, InTech Open 2022
2. **E.A. Moacă**, E.D. Coricovac, C.M. Soica, I.A. Pinzaru, C.S. Păcurariu, C.A. Dehelean, Preclinical aspects on magnetic iron oxides nanoparticles and their interventions as anticancer agents: enucleation, apoptosis and other mechanism, Chapter 12, DOI: 10.5772/intechopen.74176, in: Iron ores and iron oxide materials, edited by: Dr. Volodymyr Shatokha, ISBN 978-1-78923-321-6, InTech Open 2018
3. C. Şoica, D. Antal, F. Andrica, R. Băbuţa, **A. Moacă**, F. Ardelean, R. Ghiulai, S. Avram, C. Danciu, D. Coricovac, C. Dehelean, V. Păunescu, Lupan-Skeleton Pentacyclic Triterpenes with Activity against Skin Cancer: Preclinical Trials Evolution, Chapter 5, DOI: 10.5772/intechopen.68908, In Unique Aspects of Anti-cancer Drug Development, edited by Jolanta Natalia Latosinska and Magdalena Latosinska, ISBN 978-953-51-3347-6, InTech Open 2017

I.2.2. ISI INDEXED SCIENTIFIC ARTICLES (selection)

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Models Under Standard and UV Conditions. International Journal of Nanomedicine 20, 3653–3670. https://doi.org/10.2147/IJN.S513423, 2025 (I.F.=6.7)

2. Ciobotaru, G.V.; Goje, I.D.; Dehelean, C.A.; Danciu, C.; Magyari-Pavel, I.Z.; **Moacă, E.-A.**; Muntean, D.; Imbrea, I.M.; Sărățeanu, V.; Pop, G. Analysis of the Antioxidant and Antimicrobial Activity, Cytotoxic, and Anti-Migratory Properties of the Essential Oils Obtained from Cultivated Medicinal Lamiaceae Species. Plants-Basel 14, 846. https://doi.org/10.3390/plants14060846, 2025 (I.F.=4.0)
3. Marcovici, I.; Chioibas, R.; Zupko, I.; Pinzaru, I.; **Moaca, A.**; Ledeti, A.; Barbu-Tudoran, L.; Geamantan, A.; Predescu, I.; Dehelean, C.A. Preclinical Pharmaco-Toxicological Screening of Biomimetic Melanin-Like Nanoparticles as a Potential Therapeutic Strategy for Cutaneous Melanoma. Frontiers in Pharmacology 16, 1487854. https://doi.org/10.3389/fphar.2025.1487854, 2025 (I.F.=4.4)
4. Ruse, G.; Jîjie, A.-R.; **Moacă, E.-A.**; Pătrașcu, D.; Ardelean, F.; Jojic, A.-A.; Ardelean, S.; Tchiakpe-Antal, D.-S. Coffea arabica: An Emerging Active Ingredient in Dermato-Cosmetic Applications. Pharmaceuticals 18, 171:1-36. https://doi.org/10.3390/ph18020171, 2025 (I.F.=4.3)
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7. Moise, G.; Jîjie, A.-R.; **Moacă, E.-A.**; Predescu, I.-A.; Dehelean, C.A.; Hegheș, A.; Vlad, D.C.; Popescu, R.; Vlad, C.S. Plants' Impact on the Human Brain—Exploring the Neuroprotective and Neurotoxic Potential of Plants. Pharmaceuticals 17, 1339. https://doi.org/10.3390/ph17101339, 2024 (I.F.=4.3)
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