# Curriculum Vitae

## Personal information


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| First name / Surname(s) | **MOACĂ, ELENA ALINA (born TĂCULESCU)** |
| E-mail | alina.moaca@umft.ro<br>alina_taculescu@yahoo.com |
| Nationality | Romanian |


## Work experience

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| Dates | **17.09.2018 – present** |
| Occupation or position held | **Lecturer, Department I, Discipline 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<br>**Didactic activity – courses –** Toxicology (IV$^{th}$ year F); OTC supplements (optional V$^{th}$ year FF); (Methodology of Scientific Research (IV$^{th}$ year F/FFR; II$^{nd}$ year AsF; II$^{nd}$ year CM); Methods of documentation/information and self-improvement / (OTC Master's II$^{nd}$ year); Introduction into research and documentation (optional III$^{rd}$ year F); Homeopathic and veterinary products (III$^{rd}$ year AsF); Nutrition and Dietetic Products (III$^{rd}$ year FFR)<br>**Laboratory/seminar didactic activity** – Toxicology (IV$^{th}$ and V$^{th}$ years F/FFR); Methodology of Scientific Research (IV$^{th}$ year F/FFR); Drug Industry and Pharmaceutical Biotechnology (V$^{th}$ year F)); Methods of documentation and self-improvement/information (OTC Master's II$^{nd}$ year);<br>**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 Fe / Ag-FeNPs 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; obtaining magnetic nanoparticles and silver nanoparticles from vegetable extracts by green synthesis, coating and dispersing them in biocompatible dispersion media; 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 II, Discipline of Toxicology** |
| Main activities and responsibilities | **Higher education** (**laboratory/seminar didactic activity** – Toxicology (IV$^{rd}$ and V$^{ed}$ years F); Methodology of Scientific Research (IV$^{rd}$ year F/FFR)<br>**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 Fe / Ag-FeNPs 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** |

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| 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;<br>• Preparation of magnetic fluids with iron oxide nanoparticles obtained by laser pyrolysis;<br>• Synthesis of magnetic composites „core-shell" type, by encapsulation of magnetic nanoparticles in a silica gel matrix, used for magnetic paper making;<br>• 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**

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| Dates | **1.11.2023 – 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 |
| 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 |
| 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**

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| 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**<br>*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 |

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| Dates | **21.09.2015 – 17.07.2017** |
| Title of qualification | **Master's Degree in Pharmacy – OTC drugs, dietary supplements, cosmetics, series MA No. 0108177**<br>*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**<br>*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**<br>*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**<br>*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 | Understanding | | | | Speaking | | | | Writing | |
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| *European level (*)* | Listening | | Reading | | Spoken interaction | | Spoken production | | Writing | |
| **English** | C1 | Independent user | C1 | Independent user | C1 | Independent user | C1 | Independent user | C1 | Independent user |
| **French** | C1 | Independent user | C1 | Independent user | C1 | Independent user | C1 | Independent user | C1 | 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:

- 69 – *in extenso* articles published in indexed ISI journals;
- 5 – ISI proceedings articles;
- 5 – 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
- 62 – communications at international/national conference/workshop;
- 18 – research projects: (as manager – 2 internal national projects; as a member – 14 national projects and 2 international projects)
- Hirsch Factor h = 19 (according to ISI Web of Knowledge)

**Professional skills and competencies**

- Member of the Department I Council 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" Timişoara, from 2023
- 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 License Committee of the Faculty of Pharmacy, since 2016
- Member of the Admissions 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 35 undergraduate theses within the Pharmacy Study Program and 4 undergraduate theses within the Lugoj Pharmacy Assistance Study Program, since 2016
- Scientific Coordinator of 5 dissertation works within the Master's Program - OTC drugs, food supplements, cosmetics, from 2020
- ISI journal reviewer: International Journal of Nanomedicine (Dove Medical Press), ISSN: 1176-9114; 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: ISSN: 1660-4601
- Guest Editor of ISI journal: Pharmaceutics (MDPI), ISSN: 1999-4923 – Special Issue: Magnetic Nanomaterials – a promising approach in cancer therapy (https://www.mdpi.com/journal/pharmaceutics/special_issues/Magnetic_Cancer)
- 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

**PN-IV-P2-2.3-PRECISI-2023-81714** – Development and characterization of magnetic iron oxide nanoparticles using microwave for the combustion reaction ignition, as possible candidates for biomedical applications – *Powder Technology* – red zone (6000 RON)

**PN-IV-P2-2.3-PRECISI-2023-72024** – Green Synthesis of Silver Nanoparticles Using Populi gemmae Extract: Preparation, Physicochemical Characterization, Antimicrobial Potential and In Vitro Antiproliferative Assessment – *Materials* – red zone (7000 RON)

**PN-IV-P2-2.3-PRECISI-2023-82218** – Biosynthesis of Iron Oxide Nanoparticles: Physico-ChemicalCharacterization and Their In Vitro Cytotoxicity on Healthy andTumorigenic Cell Lines – *Nanomaterials* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2021-61674** – Development and Characterization of $Fe_3O_4$@Carbon Nanoparticles and Their Biological Screening Related to Oral Administration – *Materials* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2021-60618 –** Inorganic Element Determination of Romanian Populus nigra L. Buds Extract and In Vitro Antiproliferative and Pro-Apoptotic Evaluation on A549 Human Lung Cancer Cell Line – *Pharmaceutics* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2021-60626** – Comparative Toxicological In Vitro and In Ovo Screening of Different Orthodontic Implants Currently Used in Dentistry – *Materials* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2021-59293** – Biocompatible Magnetic Colloidal Suspension Used as a Tool for Localized Hyperthermia in Human Breast Adenocarcinoma Cells: Physicochemical Analysis and Complex In Vitro Biological Profile – *Nanomaterials* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2021-58870** – Thermosensitive Betulinic Acid-Loaded Magnetoliposomes: A Promising Antitumor Potential for Highly Aggressive Human Breast Adenocarcinoma Cells Under Hyperthermic Conditions – *International Journal of Nanomedicine* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2019-39660** – Romanian Wormwood (*Artemisia absinthium* L.): Physicochemical and Nutraceutical Screening – *Molecules* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2019-39666 –** Spruce and beech bark aqueous extracts: source of polyphenols, tannins, and antioxidants correlated to in vitro antitumor potential on two different cell lines – *Wood Science and Technology* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2019-35025** – $Fe_3O_4$@C Matrix with Tailorable Adsorption Capacities for Paracetamol and Acetylsalicylic Acid: Synthesis, Characterization, and Kinetic Modeling – *Molecules* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2019-35343** – Cocrystal Formation of Betulinic Acid and Ascorbic Acid: Synthesis, Physico-Chemical Assessment, Antioxidant and Antiproliferative Activity – *Frontiers in Chemistry* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2019-34566** – Assessment of the Antiangiogenic and Anti-Inflammatory Properties of a Maslinic Acid Derivative and its Potentiation using Zinc Chloride – *International Journal of Molecular Sciences* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2019-30408** – A comparative study of *Melissa officinalis* leaves and stems ethanolic extracts in terms of antioxidant, cytotoxic and antiproliferative potential – *Evidence-based Complementary and Alternative Medicine* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2019-30519** – Cutaneous melanoma a long road from experimental models to clinical outcome: a review – *International Journal of Molecular Sciences* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2019-30648 –** Thermal degradation, kinetic analysis and evaluation of biological activity on human melanoma for artemisinin – *Journal of Thermal Analysis and Calorimetry* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2018-25554 –** Maghemite, gamma-$Fe_2O_3$, nanoparticles preparation via carbon-templated solution combustion synthesis – *Ceramics International* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2018-25367 –** Stable PEG-coated silver nanoparticles – A comprehensive toxicological profile – *Food and Chemical Toxicology* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2018-23991 –** One-step synthesis of near-infrared reflective brown pigments based on iron-doped lanthanum aluminate, $LaAl_{1-x}Fe_xO_3$ – *Dyes and Pigments* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2018-23985 –** Solution combustion synthesis: a straightforward route for the preparation of chromium-doped lanthanum aluminate, $LaAl_{1-x}Cr_xO_3$, pink-red pigments – *Dyes and Pigments* – red zone (6000 RON)

**PN-III-P1-1.1-PRECISI-2018-23950 –** Main Isoflavones Found in Dietary Sources as Natural Anti-inflammatory Agents – *Current Drug Targets* – yellow zone (2000 RON)

**PN-III-P1-1.1-PRECISI-2017-16345** – Biocompatible Colloidal Suspensions Based on Magnetic Iron Oxide Nanoparticles: Synthesis, Characterization and Toxicological Profile – *Frontiers in Pharmacology* – red zone (6000 RON)

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| | **PN-II-RU-PRECISI-2015-9-8803** – Synthesis and characterization of γ-$Fe_2O_3$/$SiO_2$ composites as possible candidates for magnetic paper manufacture – *Ceramics International* – red zone (4000 RON)<br>**PN-II-RU-PRECISI-2015-9-8398** – gamma-$Fe_2O_3$ nanoparticles prepared by combustion synthesis, followed by chemical oxidation of residual carbon with $H_2O_2$ – *Materials Chemistry and Physics* – yellow zone (2000 RON)<br>**PN-II-RU-PRECISI-2014-8-4615** – Dielectric-spectroscopy approach to ferrofluid nanoparticle clustering induced by an external electric field – *Physical Review E* – yellow zone (2000 RON)<br>**PN-II-RU-PRECISI-2013-7-3168** – Dielectric response of transformer oil-based ferrofluid in the low-frequency range – *Journal of Applied Physics* – yellow zone (2000 RON)<br>**PN-II-RU-PRECISI-2013-7-2722** – Fabrication and characterization of magnetoresponsive electrospun nanocomposite membranes based on methacrylic random copolymers and magnetite nanoparticles – *Journal of Nanomaterials* – yellow zone (2000 RON)<br>**PN-II-RU-PRECISI-2012-6-0897** – Solution Combustion Synthesis and Characterization of Magnetite, $Fe_3O_4$, Nanopowders – *Journal of the American Ceramic Society* – red zone (4000 RON) |
| **Skills and competencies of computer use** | Microsoft Office (Word, Excel, PowerPoint), Processing experimental 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);<br>**CS I – Member of Romanian Academy – Ph.D. Phys. Ladislau Vékás** (Romanian Academy – Timisoara Branch, Center for Fundamental and Advanced Technical Research, Laboratory of Magnetic Liquids);<br>**Prof. Univ. Ph.D. Chem. Cornelia Păcurariu** (Politehnica University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering). |
| **Annexes** | Publication list<br>List of Projects / Grants / Research Contracts |

**LIST OF PUBLICATIONS AND RESEARCH PROJECTS**

**A. BOOKS PUBLISHED IN NATIONAL PUBLISHERS**

1. **Tăculescu Elena Alina**, Noi abordări privind sinteza şi utilizarea unor nanomateriale cu proprietăţi magnetice, Teze de doctorat ale UPT (Universitatea Politehnica Timişoara), Seria 4, Nr. 78, Editura Politehnica, ISSN:1842-8223, ISBN:978-606-554-785-8, 2014
2. D. Coricovac, C. Dehelean, I. Pînzaru, **A. Moacă**, Noi aspecte în ceea ce privește utilizarea plantelor toxice, Editura Victor Babeş, 126 pagini, ISBN 978-606-786-107-5, 2018

**B. BOOKS CHAPTERS PUBLISHED IN INTERNATIONAL PUBLISHERS**

1. 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
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. 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

**C. PUBLICATIONS**

I. In extenso articles published in ISI Web of Science indexed journals

1. S. Liga, C. Paul, **E.A. Moacă**, F. Péter. Niosomes: Composition, Formulation Techniques, and Recent Progress as Delivery Systems in Cancer Therapy. Pharmaceutics 16(2), 223-245. https://doi.org/10.3390/pharmaceutics16020223, 2024 (I.F.=5.4)
2. Prodan-Bărbulescu C, Watz C-G, **Moacă E-A* (*-autor corespondent)**, Faur A-C, Dehelean C-A, Faur FI, Grigoriţă LO, Maghiari AL, Tuţac P, Duţă C, Bolintineanu S, Ghenciu LA. A Preliminary Report Regarding the Morphological Changes of Nano-Enabled Pharmaceutical Formulation on Human Lung Carcinoma Monolayer and 3D Bronchial Microtissue. Medicina 60(2), 208. https://doi.org/10.3390/medicina60020208, 2024 (I.F.= 2.6)
3. Semenescu, A.D.; **Moacă, E.A.**; Iftode, A.; Dehelean, C.A.; Tchiakpe-Antal, D.S.; Vlase, L.; Rotunjanu, S.; Muntean, D.; Chiriac, S.D.; Chioibaş, R. Recent updates regarding the anti-proliferative activity of Galium verum extracts on A375 human malignant melanoma cell line. Life-Basel 14, 112. https://doi.org/10.3390/life14010112, 2024 (I.F. = 3.2)
4. A.D. Semenescu, **E.A. Moacă**, R. Chioibaş, A. Iftode, D.S. Tchiakpe-Antal, L. Vlase, A.M. Vlase, D. Muntean, C.A. Dehelean. Phytochemical and biological screening of aqueous Galium verum L. extract. The Annals of the University Dunarea de Jos of Galati Fascicle VI – Food Technology 47(2), 172-189, https://doi.org/10.35219/foodtechnology.2023.2.11, 2023 (I.F. = 1)
5. A.D. Semenescu, **E.A. Moacă**, R. Chioibaş, A. Iftode, D.S. Tchiakpe-Antal, L. Vlase, A.M. Vlase, D. Muntean, C.A. Dehelean. Galium verum L. Petroleum ether extract – antitumor potential on human melanoma cells. Ovidius University Annals of Chemistry 34(2), 140-149, https://doi.org/10.2478/auoc-2023-0018, 2023 (I.F. = 0.9)
6. Semenescu, A.D.; **Moacă, E.A.**; Iftode, A.; Dehelean, C.A.; Tchiakpe-Antal, D.S.; Vlase, L.; Vlase, A.M.; Muntean, D.; Chioibaş, R. Phytochemical and Nutraceutical Screening of Ethanol and Ethyl Acetate Phases of Romanian Galium verum Herba (Rubiaceae). Molecules 28, 7804. https://doi.org/10.3390/molecules28237804, 2023 (I.F. = 4.6)
7. G.A. Draghici, C.A. Dehelean, **A.E. Moaca**, M.L. Moise, I. Pinzaru, V.N. Vladut, I. Banatean-Dunea, D. Nica. Cadmium nitrate and DNA methylation in gastropods: comparison between ovotestis and hepatopancreas. PeerJ 1-21, https://doi.org/10.7717/peerj.15032. 2023 (I.F. = 2.7)
8. C.E. Ille, **E.A. Moacă**, M. Suciu, L. Barbu-Tudoran, M.L. Negruțiu, A. Jivănescu. The Biological Activity of Fragmented Computer-Aided Design/Manufacturing Dental Materials before and after Exposure to Acidic Environment. Medicina 59(1), 104-127. https://doi.org/10.3390/medicina59010104, 2023 (I.F. = 2.6)
9. **E.A. Moacă**, C. Watz, A.C. Faur, D. Lazăr, V. Socoliuc, C. Păcurariu, R. Ianoș, C.I. Rus, D. Minda, L. Barbu-Tudoran, C.A. Dehelean. Biologic Impact of Green Synthetized Magnetic Iron Oxide Nanoparticles on Two Different Lung Tumorigenic Monolayers and a 3D Normal Bronchial Model—EpiAirway™ Microtissue. Pharmaceutics 15(2), 1-26, https://doi.org/10.3390/pharmaceutics15010002, 2023 (I.F. = 5.4)
10. **E.A. Moacă**, V. Socoliuc, D. Stoian, C. Watz, D. Flondor, C. Păcurariu, R. Ianoș, C.I. Rus, L. Barbu-Tudoran, A. Semenescu, C. Sarău, A. Chevereșan, C.A. Dehelean. Synthesis and Characterization of Bioactive Magnetic Nanoparticles from the Perspective of Hyperthermia Applications. Magnetochemistry 8(11), 145-168, https://doi.org/10.3390/magnetochemistry8110145, 2022 (I.F. = 2.7)
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**II. In extenso articles published in ISI Proceedings indexed journals**

1. F.D. Stoian, S. Holotescu, **E.A. Tăculescu**, O. Marinică, D. Resiga, M. Timko, P. Kopcansky, M. Rajnak, Characteristic properties of a magnetic nanofluid used as cooling and insulating medium in a power transformer, 8th International Symposium on Advanced Topics in Electrical Engineering, ATEE 2013, Bucharest, Romania, 23-25 Mai 2013, https://doi.org/10.1109/ATEE.2013.6563463, Article number 6563463, 2013
2. I. Savva, D. Constantinou, L. Evaggelou, O.M. Marinică, **E.A. Tăculescu**, L. Vékás, PEO/PLLA and PVP/PLLA-based magnetoresponsive nanocomposite membranes: Fabrication via electrospinning, characterization and evaluation in drug delivery, Euromembrane Conference, Westminster, London, United Kingdom, 23-27 Septembrie 2012, https://doi.org/10.1016/j.proeng.2012.08.674, Procedia Engineering, 44, pp. 1052-1053, 2012
3. I. Sawa, O.M. Marinică, **E.A. Tăculescu**, L. Vékás, T. Krasia-Christoforou, Superparamagnetic nanocomposite PEO/PLLA-based fibrous membranes: Synthesis, characterization and evaluation in drug release applications, Euromembrane Conference, Westminster, London, United Kingdom, 23-27 Septembrie 2012, https://doi.org/10.1016/j.proeng.2012.08.673, Procedia Engineering, 44, pp. 1050-1051, 2012
4. V. Socoliuc, **E.A. Tăculescu**, C. Podaru, A. Dobra, C. Daia, O. Marinică, R. Turcu, L. Vékás, Clustering in water based magnetic nanofluids: investigations by light scattering methods, AIP Conference Proceedings - 8th International Conference on the Scientific and Clinical Applications of Magnetic Carriers, Rostock, Germany, 25-29 Mai 2010, https://doi.org/10.1063/1.3530065, 1311, pp. 89-95, 2010
5. R. Turcu, A. Nan, I. Crăciunescu, C. Leoştean, S. Macavei, **E.A. Tăculescu**, O. Marinică, C. Daia, L. Vékás, Synthesis and characterization of magnetically controllable nanostructures using different polymers, AIP Conference Proceedings - 8th International Conference on the Scientific and Clinical Applications of Magnetic Carriers, Rostock, Germany, 25-29 Mai 2010, https://doi.org/10.1063/1.3530014, 1311, pp. 20-27, 2010

**III. Abstracts published in ISI Web of Science indexed journals**

1. Semenescu, AD; **Moaca, EA**; Vlase, L; Vlase, AM; Dehelean, CA. Physicochemical screening and preliminary in vitro assessment of Galium verum L. alcoholic extract. 57th Congress of the European-Societies-of-Toxicology (EUROTOX), Ljubljana, Slovenia, 10-13 Septembrie 2023, Toxicology Letters, 384, pp. S200-S200, Supplement 1, Meeting Abstract P16-50, 2023 (I.F = 3.5)
2. Magyari-Pavel, IZ; Vlaia, L; **Moaca, EA**; Barbu, L; Muntean, D; Cioca, A; Avram, S; Minda, D; Muntean, DM; Csuk, R; Dehelean, CA; Danciu, C. Maslinic Acid Derivative Nanoemulsion: Physicochemical Characterization, Antimicrobial Activity and Three-Dimensional (3D) Reconstructed Human Epidermal Model Screening. Planta Medica, 88(15), pp. 1574-1574, Meeting Abstract 386, 2022 (I.F = 2.7)
3. Coricovac, D; Pinzaru, IA; Marcovici, I; Iftode, AO; **Moaca, A**; Macasoi, I; Vlaia, L; Dehelean, C. Betulinic acid formulated as proniosomal gel - a promising candidate for skin cancer management. 16th International Congress of Toxicology, Maastricht, Olanda, 18-21 Septembrie, 2022, https://doi.org/10.1016/j.toxlet.2022.07.530, Toxicology Letters, 368, pp. S195-S195, Supplement S, Meeting Abstract P12-51, 2022 (I.F = 3.5)
4. C.G. Farcas, **E.A. Moacă**, D. Coricovac, C. Dehelean, F. Loghin, In vitro antiproliferative effects of Fe3O4_BA loaded liposomes, 54th Congress of the European Societies of Toxicology (EUROTOX) Bruxel, Belgia, 2 – 5 Septembrie, 2018, https://doi.org/10.1016/j.toxlet.2018.06.646, Toxicology Letters, 295, pp. S113, Supplement 1, Meeting Abstract P06-26, 2018 (I.F = 3.499)
5. C.A. Dehelean, I. Pinzaru, D. Ionescu, **A. Moacă**, D. Coricovac, C. Soica, Reproducible animal models used for external toxicants tests, 52nd Congress of the European-Societies of Toxicology (Eurotox), Seville, Spania, 04 Iulie 2016, https://doi.org/10.1016/j.toxlet.2016.06.2006, Toxicology Letters, 258, pp. S289-S289, Supplement S, Meeting Abstract P19-021, 2016 (I.F = 3.858)

**D. PROJECTS, GRANTS, AND RESEARCH CONTRACTS**

**1. Advanced Research Grant – Young Researchers, ONCO-MNPs ctr. no. 1682/26.01.2024 (10.000 euro)**
New advances in the development of smart magnetic nanoparticles used in cancer pathology

Project Coordinator: „Victor Babes" University of Medicine and Pharmacy Timisoara
Project Manager: Lecturer Ph.D. Alina MOACĂ
Period: 26.01.2024 – 26.07.2025

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

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

**4. Internal Competition Doctoral Grant, TRITERPENS@MNP, ctr. no. 4DOC/1276/30.01.2020 (20.000 euro)**
Magnetic nanoparticles as a support for triterpenic antitumor active principles
Project Coordinator: „Victor Babes" University of Medicine and Pharmacy Timisoara
Project Manager: Lecturer Ph.D. Alina MOACĂ
Period: 02.02.2020 – 02.02.2022

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

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

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

**8. PN-III-P2-2.1-2016-BG-0354 Project, ctr. no. 1506/21.10.2016**
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. Codruţa Marinela ŞOICA
Period: 2016-2018

**9. PN-II-RU-TE-2014-4-0514 Project, ctr. no. 60 from 01/10/2015**
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. Marcela Elena STOIA
Period: 2015-2017

**10. PN-II-RU-TE-2014-4-1587 Project, ctr. no. 142 from 01/10/2015**
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. Robert Gabriel IANOŞ
Period: 2015-2017

**11. FP7 (RPF'S FP 2009 – 2010, Cyprus) Project**
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: CS1 Dr. Ladislau VÉKÁS

Period: 2013-2014

**12. PN-II-PT-PCCA-2011-3.2-0538 Project - MagNanoMicroSeal, ctr. no. 157/2012**
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: CS1 Dr. Ladislau VÉKÁS
Period: 2012-2015

**13. ID_76 Project Surface and Interface Science: physics, chemistry, biology, and applications**
Project Coordinator: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid
Project Responsible: CS1 Dr. Victor SOFONEA
Period: 2012-2013

**14. FP7 (MAGPRO2LIFE) Project**
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: CS1 Dr. Ladislau VÉKÁS
Period: 2009-2013

**15. PN-II ERA-NET (MAFINCO) Project, ctr. no. 7-018/2009**
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: CS1 Dr. Ladislau VÉKÁS
Period: 2009-2011

**16. PN-II (CFEEL) Project, ctr. no. 21-043/2007**
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: CS1 Dr. Ladislau VÉKÁS
Period: 2007-2010

**17. PN-II (BIMAPAFLU) Project, ctr. no. 71-083/2007**
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: CS1 Dr. Ladislau VÉKÁS
Period: 2007-2010

**18. PN-II (NANOMAGPOLI) Project, ctr. no. 71-068/2007**
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: CS1 Dr. Ladislau VÉKÁS
Period: 2007-2010

**April, 2024** **Lecturer Ph.D. Elena-Alina MOACĂ**