

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 **17.09.2018 – present**

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 FF); (Methodology of Scientific Research (IVth year F/FFR and IInd year AsF); Methods of documentation / information and self - improvement / (OTC Master's IInd year); Introduction into research and documentation (optional IIIrd year F); Homeopathic and veterinary products (IIIrd year AsF);

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), silver / iron oxide nanoparticles (Ag-FeNPs), via 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; obtaining magnetic 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 SiO₂ 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), 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**

Main activities and responsibilities	<ul style="list-style-type: none"> • 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 to magnetic paper making; • Responsible for precursor’s 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/ctcfa/
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 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

Trainings

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

Dates	01.10.2018 – present
Title of qualification	PhD Student at Faculty of Pharmacy
Name and type of organisation 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 Degree in Pharmacy – OTC drugs, dietary supplements, cosmetics, series MA No. 0108177 <i>Project title: Complexation of some β-cyclodextrins with iron oxides magnetic nanoparticles. Synthesis, characterization and applications</i>
Name and type of organisation 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 **PhD. 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 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 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 Cu²⁺ and Cd²⁺ 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 competences

Native language(s) Romanian

Other language(s)

Self-assessment
 European level (*)

English

French

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production		Writing	
C1	Independent user	C1	Independent user	C1	Independent user	C1	Independent user	C1	Independent user
B1	Beginner user	B1	Beginner user	B1	Beginner user	B1	Beginner user	B1	Beginner user

(*) [Common European Framework of Reference for Languages](#)

Technical skills and competences

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.

Skills and competences

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

My research activity can be quantified in:

- 60 – published articles in ISI journals;
- 5 – ISI proceedings articles;
- 3 – ISI abstracts;
- 17 – abstracts published in volume of abstracts with ISBN
- 2 – articles published in CNCSIS-B/B+ journals (BDI);
- 2 – books chapter in international publishing houses;
- 2 – books in national publishing houses
- 1 – patent
- 57 – articles communicated in international / national conference / workshop;
- 16 – research projects: (as manager – 1 intern national project; as member - 13 national projects and 2 international projects)
- Hirsch Factor h = 16 (according to ISI web of knowledge)

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 - PhD 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://dpc-dru.ro>

UEFISCDI Awarding research results - scientific articles

<https://uefiscdi.gov.ro/premierea-rezultatelor-cercetarii-articole>

PN-III-P1-1.1-PRECISI-2021-67401 – Oleogel Formulations for the Topical Delivery of Betulin and Lupeol in Skin Injuries—Preparation, Physicochemical Characterization, and Pharmacotoxicological Evaluation – *Molecules* – zona galbenă (2000 lei)

PN-III-P1-1.1-PRECISI-2021-66567 – Effects of Simulated Gastric Acid Exposure on Surface Topography, Mechanical and Optical Features of Commercial CAD/CAM Ceramic Blocks – *Applied Sciences-Basel* – yellow zone (2000 RON)

PN-III-P1-1.1-PRECISI-2021-60186 – Melissa officinalis L. Aqueous Extract Exerts Antioxidant and Antiangiogenic Effects and Improves Physiological Skin Parameters – *Molecules* – yellow zone (2000 RON)

PN-III-P1-1.1-PRECISI-2021-61674 – Development and Characterization of Fe₃O₄@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-2021-58870-2021-09-15 – 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 – Fe₃O₄@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, $\gamma\text{-Fe}_2\text{O}_3$, 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, $\text{LaAl}_{1-x}\text{Fe}_x\text{O}_3$ – *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, $\text{LaAl}_{1-x}\text{Cr}_x\text{O}_3$, 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)

PN-II-RU-PRECISI-2015-9-8803 – Synthesis and characterization of $\gamma\text{-Fe}_2\text{O}_3/\text{SiO}_2$ composites as possible candidates for magnetic paper manufacture – *Ceramics International* – red zone (4000 RON)

PN-II-RU-PRECISI-2015-9-8398 – $\gamma\text{-Fe}_2\text{O}_3$ nanoparticles prepared by combustion synthesis, followed by chemical oxidation of residual carbon with H_2O_2 – *Materials Chemistry and Physics* – yellow zone (2000 RON)

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)

PN-II-RU-PRECISI-2013-7-3168 – Dielectric response of transformer oil based ferrofluid in low frequency range – *Journal of Applied Physics* – yellow zone (2000 RON)

PN-II-RU-PRECISI-2013-7-2722 – Fabrication and characterization of magnetoresponseive electrospun nanocomposite membranes based on methacrylic random copolymers and magnetite nanoparticles – *Journal of Nanomaterials* – yellow zone (2000 RON)

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 competences of computer use

Microsoft Office (Word, Excel, Power Point), Internet, programs for data processing (Origin, Table Curves 2D)

Other competences

Fast learning; tenacious; analytical behavior, with strong capacity of synthesis; entrepreneurship behavior expressed by approaching and solving some existing problems; work experience in team organization; eager to gain new knowledge, development and improvement 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

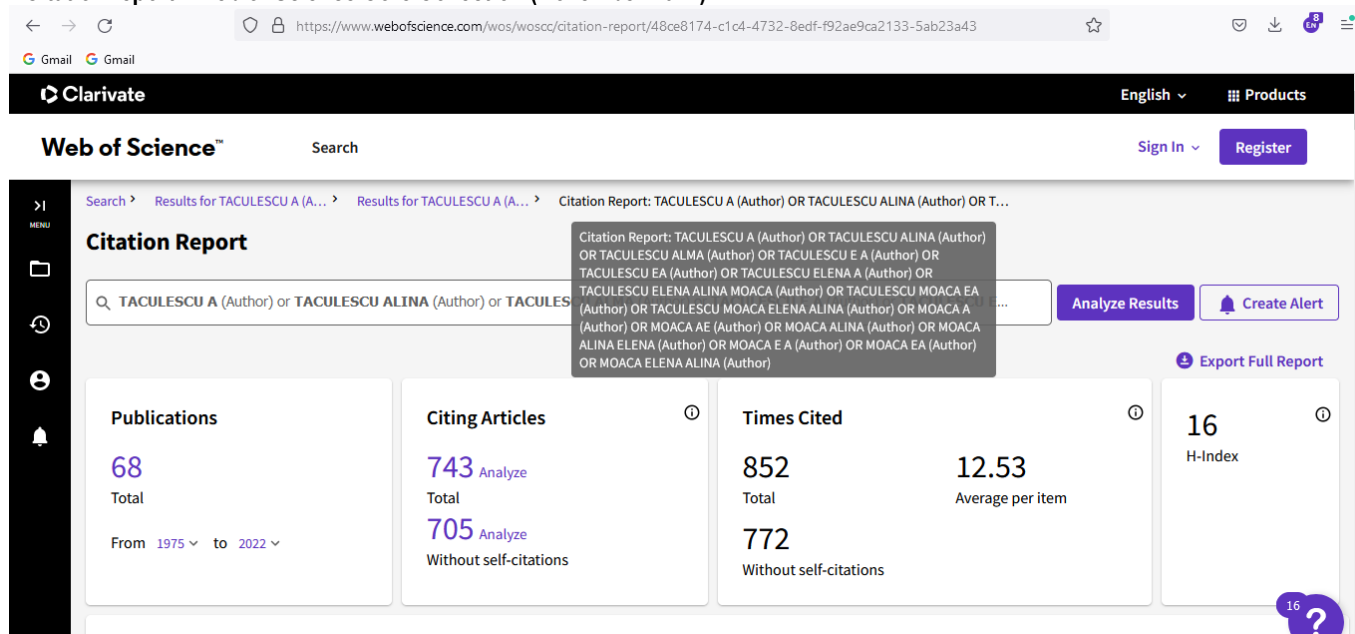
Prof. Univ. Habil. PhD. Pharm. Cristina Adriana Dehelean („Victor Babes” University of Medicine and Pharmacy, Faculty of Pharmacy from Timisoara);
CS I – Member of Romanian Academy PhD.Phys. Ladislau Vékás (Romanian Academy – Timisoara Branch, Center for Fundamental and Advanced Technical Research, Laboratory of Magnetic Liquids);
Prof. Univ. PhD. Chem. Cornelia Păcurariu (Politehnica University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering).

Annexes

Publication list
List of Projects / Grants / Research Contracts

PUBLICATION LIST / PROJECTS / GRANTS / RESEARCH CONTRACTS Lecturer PhD in Chem. Eng. Elena-Alina MOACĂ (born TĂCULESCU)

Citation report - Web of Science Core Collection (November 2022)



A. PUBLICATIONS

I. Articles published in ISI journals

1. A. Popa, C. Păcurariu, **E.A. Tăculescu**, L. Lupa, Sol-gel synthesized sorbents for Cu²⁺ and Cd²⁺ separation from solutions, *Optoelectronics and Advanced Materials - Rapid Communications*, 4(3), pp. 340-344, 2010 (I.F = 0.477)
2. P. Papaphilippou, A. Pourgouris, O. Marinică, **E.A. Tăculescu**, G.I. Athanasopoulos, L. Vékás, T. Krasia-Christoforou, Fabrication and characterization of superparamagnetic and thermoresponsive hydrogels based on oleic-acid-coated Fe₃O₄ nanoparticles, hexa(ethylene glycol) methyl ether methacrylate and 2-(acetoacetoxy)ethyl methacrylate, *Journal of Magnetism and Magnetic Materials*, 323(5), pp. 557-563, DOI: 10.1016/j.jmmm.2010.10.009, 2011 (I.F = 1.780)
3. I. Savva, G. Krekos, **E.A. Tăculescu**, O. Marinică, L. Vékás, T. Krasia-Christoforou, Fabrication and characterization of magnetoresponsive electrospun nanocomposite membranes based on methacrylic random copolymers and magnetite nanoparticles, *Journal of Nanomaterials*, 578026, DOI: 10.1155/2012/578026, 2012 (I.F = 1.547)
4. P. Papaphilippou, M. Christodoulou, O. Marinică, **E.A. Tăculescu**, L. Vékás, K. Chrissafis, T. Krasia-Christoforou, Multi-responsive polymer conetworks capable of responding to changes in pH, temperature and magnetic field: synthesis, characterization and evaluation of their ability for controlled uptake and release of solutes, *ACS Applied Materials & Interfaces*, 4(4), pp. 2139-2147, DOI: 10.1021/am300144w, 2012 (I.F = 5.008)
5. M. Timko, K. Marton, L. Tomco, J. Kiraly, M. Molcan, M. Rajnak, P. Kopcansky, R. Cimbala, F. Stoian, S. Holotescu, **E.A. Tăculescu**, Magneto-dielectric properties of transformer oil based magnetic fluids in the frequency range up to 2 MHz, *Magneto-hydrodynamics*, 48(2), pp. 427-434, DOI: 10.22364/MHD.48.2.21, 2012 (I.F = 0.550)

6. M. Timko, P. Kopcansky, M. Molcan, L. Tomco, K. Marton, S. Molokac, P. Rybar, F. Stoian, S. Holotescu, **E.A. Tăculescu**, Magnetodielectric Properties of Transformer Oil Based Magnetic Fluids, *Acta Physica Polonica A*, 121(5-6), pp. 1253-1256, DOI: 10.12693/APHYSPOLA.121.1253, 2012 (I.F = 0.531)
7. R. Ianoș, **E.A. Tăculescu**, C. Păcurariu, I. Lazău, Solution Combustion Synthesis and Characterization of Magnetite, Fe₃O₄, Nanopowders, *Journal of the American Ceramic Society*, 95(7), pp. 2236-2240, DOI: 10.1111/j.1551-2916.2012.05159.x, 2012 (I.F = 2.107)
8. M. Rajnak, J. Kurimsky, B. Dolnik, K. Marton, L. Tomco, **E.A. Tăculescu**, L. Vékás, J. Kovac, I. Vavra, J. Tothova, P. Kopcansky, M. Timko, Dielectric response of transformer oil based ferrofluid in low frequency range, *Journal of Applied Physics*, 114(3), pp. 034313-1 – 034313-6, DOI: 10.1063/1.4816012, 2013 (I.F = 2.185)
9. V. Socoliuc, C. Daia, **E.A. Tăculescu**, L. Vékás, Colloidal stability loss with increasing dilution of polar carrier based magnetic colloids stabilized by steric repulsion, *Chemistry Magazine*, 64(10), pp. 1194-1196, 2013 (I.F = 0.677)
10. V. Păunescu, M.F. Bojin, O.I. Gavriiliuc, **E.A. Tăculescu**, R. Ianoș, V.L. Ordodí, V.F. Iman, C.A. Tatu, Enucleation: a possible mechanism of cancer cell death, *Journal of Cellular and Molecular Medicine*, 18(6), pp. 962-965, DOI: 10.1111/jcmm.12271, 2014 (I.F = 4.014)
11. M. Rajnak, J. Kurimsky, B. Dolnik, P. Kopcansky, N. Tomasovicova, **E.A. Tăculescu-Moacă**, M. Timko, Dielectric-spectroscopy approach to ferrofluid nanoparticle clustering induced by an external electric field, *Physical Review E*, 90(3), Article Number: 032310, DOI: 10.1103/PhysRevE.90.032310, 2014 (I.F = 2.288)
12. R. Ianoș, **E.A. Tăculescu (Moacă)**, C. Păcurariu, D. Niznansky, γ -Fe₂O₃ nanoparticles prepared by combustion synthesis, followed by chemical oxidation of residual carbon with H₂O₂, *Materials Chemistry and Physics*, 148(3), pp. 705-711, DOI:10.1016/j.matchemphys.2014.08.038, 2014 (I.F = 2.259)
13. C. Păcurariu, **E.A. Tăculescu (Moacă)**, R. Ianoș, O. Marinică, C.V. Mihali, V. Socoliuc, Synthesis and characterization of γ -Fe₂O₃/SiO₂ composites as possible candidates for magnetic paper manufacture, *Ceramics International*, 41(1), Part B, pp. 1079-1085, DOI: 10.1016/j.ceramint.2014.09.031, 2015 (I.F = 2.758)
14. F. Ardelean, D. Susan, F. Borcan, **E.A. Moacă**, D.S. Antal, C. Soica, R. Moldovan, D.B. Vaduva, D. Marti, Synthesis and physico-chemical evaluation of polyurethane microstructures for transmembrane delivery of reynoutria japonica extract, *Materiale Plastice*, 54(4), pp. 651-654, 2017, (I.F = 1.248)
15. I.Z. Pavel, O.A. Iftode, I. Pinzaru, D. Coricovac, **A. Moacă**, C. Farcas, S.C. Simu, C. Soica, C. Dehelean, A. Motoc, Skin Specific Cells and UVB Damage - An experimental assessment, *Chemistry Magazine*, 68(6), pp. 1227-1231, 2017 (I.F = 1.412)
16. D.E. Coricovac#, **E.A. Moacă# (#equal contribution)**, I. Pinzaru, C. Cîtu, C. Șoica, C.V. Mihali, C. Păcurariu, V.A. Tutelyan, A. Tsatsakis, C.A. Dehelean, Biocompatible Colloidal Suspensions Based on Magnetic Iron Oxide Nanoparticles: Synthesis, Characterization and Toxicological Profile, *Frontiers in Pharmacology*, 8(154), pp. 1-18, 2017 (I.F = 4.418)
17. C. Danciu, S. Avram, I. Pavel, R. Ghiulai, C. Dehelean, A. Ersilia, D. Minda, C. Petrescu, **E.A. Moacă**, C. Soica, Main Isoflavones Found in Dietary Sources as Natural Anti-inflammatory Agents, *Current Drug Metabolism*, 19(7) pp. 841-853, DOI: 10.2174/1389450118666171109150731, 2018 (I.F = 2.277)
18. I. Pinzaru, D. Coricovac, C. Dehelean, **E.A. Moacă**, M. Mioc, F. Baderca, I. Sizemore, S. Brittle, D. Marti, D. Calina, A. Tsatsakis, C. Soica, PEG-coated silver nanoparticles – A comprehensive toxicological profile, *Food and Chemical Toxicology*, 111, pp. 546-556, 2018, DOI: 10.1016/j.fct.2017.11.051, (I.F = 3.775)
19. R. Ianoș, E. Muntean, R. Lazău, R. (Băbuță), **E.A. Moacă**, C. Păcurariu, A. Dabici, I. Hulka, One-step synthesis of near-infrared reflective brown pigments based on iron-doped lanthanum aluminate, LaAl_{1-x}Fe_xO₃, *Dyes and Pigments*, 152, pp. 105-111, 2018, DOI: 10.1016/j.dyepig.2018.01.037, (I.F = 4.018)
20. I. Pinzaru, A. Hegheș, D. Marti, C. Dehelean, D. Coricovac, **E.A. Moacă**, M. Moatar, D. Camen, Therapeutically potential of medicago sativa extracts chemical and in vitro assessments, *Chemistry Magazine*, 69(1), pp. 121-124, 2018, (I.F = 1.605)
21. R. Ianoș, R. Lazău, R. Băbuță, E. Muntean, **E.A. Moacă**, C. Păcurariu, Solution combustion synthesis: A straightforward route for the preparation of chromium-doped lanthanum aluminate, LaAl_{1-x}Cr_xO₃, pink red pigments, *Dyes and Pigments*, 155, pp. 218-224, 2018, DOI: 10.1016/j.dyepig.2018.03.041, (I.F = 4.018)
22. **E.A. Moacă**, C. Farcas, A. Ghițu, D. Coricovac, R. Popovici, N.L. Cărăba-Meiță, F. Ardelean, D.S. Antal, C. Dehelean, Ș. Avram, 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*, 2018, Article ID 7860456, pp. 1-12, 2018, DOI: 10.1155/2018/7860456, (I.F = 1.984)

23. D. Coricovac, C. Dehelean, **E.A. Moacă**, I. Pinzaru, T. Bratu, D. Navolan, O. Boruga, Cutaneous Melanoma—A Long Road from Experimental Models to Clinical Outcome: A Review, *International Journal of Molecular Science*, 19(6), pp. 1566-1583, 2018, DOI: 10.3390/ijms19061566 (I.F = 4.183)
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13. I.Z. Pavel, C. Danciu, S. Avram, **E.A. Moacă**, A. Lombrea, O.M. Aburel, D.M. Muntean, R. Csuk, C.A. Dehelean, Assessment of a Benzylamide Derivative of Maslinic Acid Effects on Human Keratinocytes, in: Plants between nature and health - Development of the practice base in the field of medicinal plants of the “Victor Babeş” University of Medicine and Pharmacy Timişoara, edited by: C. Dehelean, I. Pinzaru, D. Coricovac, „Victor Babeş” Publisher, Timişoara, 2021, ISBN 978-606-786-253-9

14. **E.A. Moacă**, C.G. Watz, A.D. Scurtu, D. Flondor (Ionescu), D. Dragoş, G.A. Drăghici, C.A. Dehelean, Betulinic acid – conjugated magnetic nanoparticles. Design of a potential theranostic nanoplatform, in: Plants between nature and health - Development of the practice base in the

field of medicinal plants of the "Victor Babeș" University of Medicine and Pharmacy Timișoara, edited by: C. Dehelean, I. Pinzaru, D. Coricovac, „Victor Babeș” Publisher, Timișoara, 2021, ISBN 978-606-786-253-9

15. D. Minda, C. Watz, I.Z. Pavel, Ș. Avram, C. Danciu, S. Florescu, S. Iurciuc, C. Dehelean, G.A. Drăghici, **E.A. Moacă**, Green biosynthesis of iron oxide magnetic nanoparticles and their biomedical applications in targeted anticancer drug delivery system, in: Plants between nature and health - Development of the practice base in the field of medicinal plants of the "Victor Babeș" University of Medicine and Pharmacy Timișoara, edited by: C. Dehelean, I. Pinzaru, D. Coricovac, „Victor Babeș” Publisher, Timișoara, 2021, ISBN 978-606-786-253-9

16. D. Minda, I.Z. Pavel, C. Danciu, R. Ghiulai, I. Macaso, D. Coricovac, I. Pinzaru, **A.E. Moaca**, C. Soica, C. Dehelean, S. Avram, Sweet wormwood phytochemical analysis and bioactive effects on CAM assay, in: Plants between nature and health - Development of the practice base in the field of medicinal plants of the "Victor Babeș" University of Medicine and Pharmacy Timișoara, edited by: C. Dehelean, I. Pinzaru, D. Coricovac, „Victor Babeș” Publisher, Timișoara, 2021, ISBN 978-606-786-253-9

17. S. Liga, **E.A. Moacă**, D. Flondor (Ionescu), D. Dragoș, C.A. Dehelean, Physicochemical screening and biological evaluation of Aesculus hippocastanum extracts with potential therapeutic applications in dermato-cosmetology, in: Plants between nature and health - Development of the practice base in the field of medicinal plants of the "Victor Babeș" University of Medicine and Pharmacy Timișoara, edited by: C. Dehelean, I. Pinzaru, D. Coricovac, „Victor Babeș” Publisher, Timișoara, 2021, ISBN 978-606-786-253-9

V. Articles published in CNCSIS – B/B+ indexed journals (BDI)

1. F. Ardelean, **E.A. Moacă**, C. Păcurariu, D.S. Antal, C. Dehelean, C.C. Toma, S. Drăgan, Invasive polygonum cuspidatum: physico-chemical analysis of a plant extract with pharmaceutical potential, Studia Universitatis "Vasile Goldiș", Life Sciences Series, 26 (4), pp. 415-421, 2016

2. M. Preda, E. Sisu, V. Vlaia, T. Olariu, **A. Moaca**, L.C. Borcan, F. Borcan, In vitro experimental evaluations of birch bark extracts with selectivity in the obtaining of betulinol, Journal of Agroalimentary Processes and Technologies, 24(4), pp. 289-294, 2018

VI. Book Chapters in international publishing houses

1. C. Șoica, D. Antal, F. Andrica, R. Băbuța, **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. **EA Moacă**, ED Coricovac, CM Soica, IA Pinzaru, CS Păcurariu, CA 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

VII. Books in national publishing houses

1. **E.A. Tăculescu**, New approaches regarding the synthesis and the use of some nanomaterials with magnetic properties, Doctoral thesis of UPT (Politehnica University of Timisoara), Series 4, No. 78, Politehnica Publishing House, ISSN:1842-8223, ISBN:978-606-554-785-8, 2014

2. D. Coricovac, C. Dehelean, I. Pinzaru, **A. Moacă**, Noi aspecte în ceea ce privește utilizarea plantelor toxice (New aspects regarding the use of toxic plants), Victor Babeș Publishing House, Timisoara, 126 pages, 2018, ISBN 978-606-786-107-5

VIII. Patents

1. RG Ianoș, EC Muntean, RI Lazău, RM Băbuța, **EA Moacă**, CS Păcurariu, RG Cornea: Method of obtaining the brown pigments based on $\text{LaAl}_{1-x}\text{Fe}_x\text{O}_3$ ($x = 0.2 - 0.8$), with thermoreflexive properties, Patent application: A 201700506 / 24.07.2017, 2017

B. PROJECTS, GRANTS AND RESEARCH CONTRACTS

1. PN-II (NANOMAGPOLI), 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: Dr. Ladislau VÉKÁS, CS 1

Period: 2007-2010

2. PN-II (BIMAPAFLU), ctr. no. 71-083/2007

Advanced magnetic nanostructures 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
Period: 2007-2010

3. PN-II (CFEEL), ctr. no. 21-043/2007

Functional compatibility of special electrical equipment, whit 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

Period: 2007-2010

4. PN-II ERA-NET (MAFINCO), ctr. no. 7-018/2009

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

Project Coordinator: Politehnica University of Timisoara, CNISFC

Partner 1: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid

Project Responsible: Dr. Ladislau VÉKÁS, CS 1

Period: 2009-2011

5. FP7 (MAGPRO2LIFE)

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

Period: 2009-2013

6. ID_76 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 Manager: Dr. Victor SOFONEA, CS1

Period: 2012-2013

7. FP7 (RPF'S FP 2009 – 2010, Cyprus)

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

Project Coordinator: Cyprus University

Partner 2: Romania Academy Timisoara Branch, Center of Technical, Fundamental and Advanced Research, Laboratory of Magnetic Liquid

Project Responsible: Dr. Ladislau VÉKÁS, CS1

Period: 2013-2014

8. PN-II-PT-PCCA-2011-3.2-0538-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 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

Period: 2012-2015

9. PN-II-RU-TE-2014-4-1587, ctr. no. 142 din 01/10/2015

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

Project Coordinator: Politehnica University of Timisoara

Project Manager: Dr. Robert Gabriel IANOS

Period: 2015-2017

10. PN-II-RU-TE-2014-4-0514, ctr. no. 60 din 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: Dr. Marcela Elena STOIA

Period: 2015-2017

11. PN-III-P2-2.1-2016-BG-0354, 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: Dr. Codruța Marinela ȘOICA

Period: 2016-2018

12. PN-III-P4-ID-PCE-2016-0765, ctr. no. 10718/21.07.2017

Advanced materials based on combustion-synthesized magnetic iron oxides nanoparticles and their cytotoxicity designed for cancer treatment - MagNanoCytoTox

Project Coordinator: Politehnica University of Timisoara

Project Manager: Dr. Cornelia PĂCURARIU

Period: 2017-2019

13. CNFIS-FDI-2018-0159, ctr. no. 35/16.05.2018

Center for the development of practical abilities in medicinal plants field

Project Coordinator: „Victor Babes” University of Medicine and Pharmacy Timisoara

Project Manager: Dr. Cristina DEHELEAN

Period: 16.05.2018 - 15.12.2018

14. CNFIS-FDI-2019-0393, ctr. no. 104/21.05.2019

Center for professional development in the field of dermatocosmetics products based on medical plants

Project Coordinator: „Victor Babes” University of Medicine and Pharmacy Timisoara

Project Manager: Dr. Cristina DEHELEAN

Period: 21.05.2019 - 15.12.2019

15. Internal Doctoral Grant, TRITERPENS@MNP, ctr. no. 4DOC/1276/30.01.2020

Magnetic nanoparticles as support for triterpenic antitumor active principles

Project Coordinator: „Victor Babes” University of Medicine and Pharmacy Timișoara

Project Manager: Dr. Alina MOACĂ

Period: 02.02.2020 – 02.02.2022

16. PN-III-P1-1.1-TE-2019-2134, BAPRONIO, ctr. no. 79/30.10.2020

Rendering to the dermocosmetic market of a modern topical formulation with betulinic acid incorporated in proniosomes

Project Coordinator: „Victor Babes” University of Medicine and Pharmacy Timișoara

Project Manager: Dr. Dorina CORICOVAC

Period: 2.11.2020 – 31.10.2022

Date

November, 2022

Lecturer PhD. Elena-Alina Moacă