



Curriculum vitae
Europass



Name / Surname

Loredana Florina Leopold

Professional experience

Period / Position/ Name of employer i/ Main activities and responsibilities

February 2024 – present, Professor

University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Faculty of Food Science and Technology - Teaching activities and coordination of research, development, and optimization of spectroscopic and chromatographic methods with biotechnological applications.

July 2018 – February 2024, Associate Professor

University of Agricultural Sciences and Veterinary Medicine, Cluj Napoca, Faculty of Food Science and Technology - Lectures, seminars, laboratories: Physical Chemistry and Colloidal Chemistry. Food Safety and Authenticity. Research

July 2016 – July 2018, Lecturer

University of Agricultural Sciences and Veterinary Medicine, Cluj Napoca, Faculty of Food Science and Technology - Coordination of research activity, development and optimization of spectroscopic and chromatographic methods

February 2011 – July 2016 University assistant

University of Agricultural Sciences and Veterinary Medicine, Cluj Napoca, Faculty of Agriculture / Faculty of Food Science and Technology - Teaching and research activity in the field of biologically active compounds using spectroscopic and chromatographic methods

October 2009 – February 2011, Associate teaching

University of Agricultural Sciences and Veterinary Medicine, Cluj Napoca, Faculty of Agriculture - Teaching and research activity in the field of Physical and Colloidal Chemistry.

Education and Training

January 2011 – December 2011, Postdoctoral Stage

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, POSDRU 89/1.5/S/52432, Quality and authenticity determination of oils and juices by phytochemicals evaluation using UV-VIS, FTIR and Raman techniques

Period / Level of studies / obtained diplomas

October 2004 – September 2010, Doctor's Degree in Biotechnologies

University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca

October 2003 – July 2004, Master's Degree in Advanced Organic Chemistry

Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University Cluj-Napoca

October 1999 - July 2003, Bachelor's Degree in Chemistry - Physics

Faculty of Chemistry and Chemical Engineering, Babeş-Bolyai University, Cluj-Napoca

Specializations and qualifications

October 2022

Workshop FEBS- European Federation of Biochemistry Societies. University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca

January 2008

Mass Spectrometry Training Course. Technical University of Vienna, Austria

January 2007- December 2008

Doctoral research internship University of Natural Resources and Applied Life Sciences (BOKU) Vienna, Austria, Project member - FWF (Austria) L382-B16, *Naked Barley – a rediscovered source for functional foods*

October 2004 – September 2005

Doctoral internship at the University of Tübingen, Institute of Theoretical and Physical Chemistry Tübingen/Germany Project member - EU FP5 EVK1-CT-2000-00045, *Automated Water Analyser Computer Supported System*

April 2000 – September 2000

Erasmus-Socrates student at the University of Würzburg/Germany

Published works

2 scientific chapters in international books

2 scientific books published by national publishers

1 practical work guide

2 teaching manuals

52 scientific articles published in ISI journals

>20 scientific articles published in BDI journals (first author / co-author)

>50 short communications in the volumes of international conferences

Hirsch index: 19 (Web of Science)

Significant works published

Scurtu, V. F., Clapa, D., **Leopold, L. F.**, Ranga, F., Iancu, S. D., Cadis, A. I., Coman, V., Socaci, S. A., Mot, A. C. & Coman, C. Gadolinium Accumulation and Toxicity on In Vitro Grown Stevia rebaudiana: A Case-Study on Gadobutrol (2022) International Journal of Molecular Sciences 23. <https://doi.org/10.3390/ijms231911368>

Oprea, I., Farcas, A. C., **Leopold, L. F.**, Diaconeasa, Z., Coman, C. & Socaci, S. A. Nano-Encapsulation of Citrus Essential Oils: Methods and Applications of Interest for the Food Sector (2022) Polymers 14. <https://doi.org/10.3390/polym14214505>

Leopold, L. F., Coman, C., Clapa, D., Oprea, I., Toma, A., Iancu, S. D., Barbu-Tudoran, L., Suci, M., Ciorita, A., Cadis, A. I., Muresan, L. E., Perhaita, I. M., Copolovici, L., Copolovici, D. M., Copaciu, F., Leopold, N., Vodnar, D. C. & Coman, V. The effect of 100-200 nm ZnO and TiO₂ nanoparticles on the in vitro-grown soybean plants (2022) Colloids and Surfaces B-Biointerfaces 216. <https://doi.org/10.1016/j.colsurfb.2022.112536>

Moisoiu, V., Iancu, S. D., Stefanu, A., Moisoiu, T., Pardini, B., Dragomir, M. P., Crisan, N., Avram, L., Crisan, D., Andras, I., Fodor, D., **Leopold, L. F.**, Socaciu, C., Balint, Z., Tomuleasa, C., Elec, F. & Leopold, N. *SERS liquid biopsy: An emerging tool for medical diagnosis* (2021) Colloids and Surfaces B-Biointerfaces **208**. <https://doi.org/10.1016/j.colsurfb.2021.112064>

Leopold, L. F., Rugina, D., Oprea, I., Diaconeasa, Z., Leopold, N., Suci, M., Coman, V., Vodnar, D. C., Pinte, A. & Coman, C. *Warfarin-Capped Gold Nanoparticles: Synthesis, Cytotoxicity, and Cellular Uptake* (2019) *Molecules* **24**. <https://doi.org/10.3390/molecules24224145>

Iancu, S. D., Stefancu, A., Moisoiu, V., **Leopold, L. F.** & Leopold, N. *The role of Ag⁺, Ca²⁺, Pb²⁺ and Al³⁺ adions in the SERS turn-on effect of anionic analytes* (2019) *Beilstein Journal of Nanotechnology* **10** 2338-2345.. <https://doi.org/10.3762/bjnano.10.224>

Frond, A. D., Iuhas, C. I., Stirbu, I., **Leopold, L.**, Socaci, S., Andreea, S., Ayvaz, H., Andreea, S., Mihai, S., Diaconeasa, Z. & Carmen, S. *Phytochemical Characterization of Five Edible Purple-Reddish Vegetables: Anthocyanins, Flavonoids, and Phenolic Acid Derivatives* (2019) *Molecules* **24**. <https://doi.org/10.3390/molecules24081536>

Leopold, N., Stefancu, A., Herman, K., Todor, I. S., Iancu, S. D., Moisoiu, V. & **Leopold, L. F.** *The role of adatoms in chloride-activated colloidal silver nanoparticles for surface-enhanced Raman scattering enhancement* (2018) *Beilstein Journal of Nanotechnology* **9** 2236-2247. <https://doi.org/10.3762/bjnano.9.208>

Leopold, L. F., Todor, I. S., Diaconeasa, Z., Rugina, D., Stefancu, A., Leopold, N. & Coman, C. *Assessment of PEG and BSA-PEG gold nanoparticles cellular interaction* (2017) *Colloids and Surfaces a-Physicochemical and Engineering Aspects* **532** 70-76. <https://doi.org/10.1016/j.colsurfa.2017.06.061>

Diaconeasa, Z., **Leopold, L.**, Rugina, D., Ayvaz, H. & Socaci, C. *Antiproliferative and Antioxidant Properties of Anthocyanin Rich Extracts from Blueberry and Blackcurrant Juice* (2015) *International Journal of Molecular Sciences* **16** 2352-2365. <https://doi.org/10.3390/ijms16022352>

Rugina, D., Sonta, Z., **Leopold, L.**, Pinte, A., Bunea, A. & Socaci, C. *Antioxidant Activities of Chokeberry Extracts and the Cytotoxic Action of Their Anthocyanin Fraction on HeLa Human Cervical Tumor Cells* (2012) *Journal of Medicinal Food* **15** 700-706. <https://doi.org/10.1089/jmf.2011.0246>

Leopold, L. F., Leopold, N., Diehl, H. A. & Socaci, C. *Prediction of Total Antioxidant Capacity of Fruit Juices Using FTIR Spectroscopy and PLS Regression* (2012) *Food Analytical Methods* **5** 405-407. <https://doi.org/10.1007/s12161-011-9251-z>

Research contracts

Project leader

Coordinator of the national research project: *Rapid determination of quality and authenticity of food products rich in active antioxidant compounds by Raman and IR spectroscopic methods*, TD_353/CNCSIS, 2006-2008

Coordinator of the national research project: *FTIR and Raman spectroscopy as new molecular tools in the targeted action of nano and microstructures for fibrosis* UEFISCDI PN-II-RU-PD-2012-3-0283, 2013-2015

Responsible for the project component, "Assessment of bioaccumulation, biodistribution and toxicity of titanium oxide, zinc oxide and silver nanoparticles in soybean plant" within the project consortium "Model of functional collaboration between public research organizations and the economic environment with the aim of providing high scientific and technological services level in the field of bioeconomy", PN-III-P1-1.2-PCCDI-2017-0056; 2PCCDI/2018, 2018-2020

Coordinator of the national research project: *Nanoplastic toxicity on vegetable crops - assessment of accumulation and effects at the morphological and phytochemical level*, PN-III-P1-1.1-TE-2021-1585, 2022-2024

Member

Member of the project: MENDOS/ EU FP6/ coordonat de „Institut für Theoretische und Physikalische Chemie“, Universitatea Tübingen, Germania

Member of the project: QUALIJUICE/ EU/ Quality assurance and Development of an early warning system for microbial contaminations for the European fruit juice industry

Member of the project: CEEX tip ET 5895/2006: Noi senzori optici pentru determinarea ionilor metalelor grele

Member of the project: CEEX modul I Nr. 65/1/2006: Metode fototermice si tehnici complemetare pentru studiul calitatii, autenticitatii, degradarii si contrafacerii a uleiurilor vegetale (CALULVE)

Member of the project: CEEX modul III Nr. 195/2006:Retea tematica de promovare a parteneriatului european in microtehnologii de bioincapsulare cu implicatii in nutritie, biofarmacie si nanomedicina (BRGRONET)

Member of the project: FWF coordonat de Universitatea BOKU Viena : Naked Barley – a rediscovered source for functional foods!

Member of the project: CEEX modul IV Nr. 109/2006: Extinderea laboratoarelor Agrial pentru evaluarea si certificarea autenticitatii, calitatii si conformitatii unor produse alimentare functionale, conform normelor UE (AGRICERT)

Member of the project: PN II, Nr. 51049/2007: Metodologii avansate (chemometrice si instrumentale) aplicate pentru evaluarea amprentei specifice de calitate si autenticitate a unor alimente functionale (AMPRENTAL)

Member of the project: PNII-RU-TE-2011-3-0154, 2011-2015, "Instrumente nanobiotehnologice cu aplicatii în medicina moleculară: sinteză, caracterizare și studii in vitro". director proiect Dr. Cristina Coman, USAMV, Cluj-Napoca.

Member of the project: PNII-RU-TE- 2014-4-2211, 2015-2017, “Nanoparticule plasmonice incapsulate pentru eliberarea controlata de molecule bioactive”. director proiect Dr. Cristina Coman, USAMV, Cluj-Napoca.

Member of the project: PNII-TE-168, 2010-2012, Contract 109, “Testarea proprietăților antioxidante, antiproliferative și proapoptotice al extractului polifenolic din afine pe culturi celulare tumorale”, Dr. Bunea Andrea, USAMV, Cluj-Napoca

Member of the project: PN-II-PT-PCCA-2013-4-0743, 2014-2016, "O nouă generație de băuturi probiotice funcționale cu impact asupra sănătății gastrointestinale", director proiect Dr. Dan Vodnar, USAMV, Cluj-Napoca

Member of the project: PN-III-P2- 2.1-PED-2016-1237. 2017-2019 "Utilizarea eficientă a glicerolului brut de biodiesel în producția de acid lactic" director proiect. Dr. Dan Vodnar, USAMV, Cluj-Napoca.

Member of the project: PN II-RU-TE-2009-1 Nr. 323/2010: „Noi abordari in detectia reziduurilor chimice din matrici complexe folosind cuplajul TLC-SERS: detectia melaminei, antibioticelor si a pesticidelor in lapte si lapte praf.”, director proiect Conf. Dr. Leopold Nicolae, UBB Cluj-Napoca

Member of the project: PN-II-RU-TE-16, 2015-2017, "Sisteme de livrare țintită prin liposomi a antocianilor și implicarea acestora în semnalizarea moleculară în bolile dermatologice", director proiect Dr. Diaconeasa Zorița Maria, USAMV, Cluj-Napoca.

Member of the project: PN-III-P2-2.1-PED-2016-1002, 2017-2018 "Extracte bogate in antociani și implicarea acestora în studiile biologice: ingrediente bioactive pentru nutraceutice" director proiect Dr. Diaconeasa Zorița Maria, USAMV, Cluj-Napoca.

Member of the project: PN-II-RU-TE-2014-4-1255, 2015-2017, "Bioconversia reziduurilor agro-alimentare în metaboliți fungici cu valoare adăugată", director proiect Dr. Francisc Dulf, USAMV, Cluj-Napoca.

Member of the project: POC, P-37_637/2016. 2016-2020, "Dezvoltarea si modelarea bioproceselor pentru obtinerea de 1,3 Propandiol si acid citric din glicerol brut, cu aplicatii in industria alimentara." director proiect Dr. Trif Monica

Patents Patent application

Detection method of TiO₂, ZnO, and Ag nanoparticles in the plant matrix through dark-field microscopy coupled with hyperspectral imaging (Vis-NIR), 2020, authors: Leopold Loredana Florina, Coman Cristina, Iancu Stefania Dana, Stefanu Andrei, Leopold Nicolae

Awards

2019 – Diploma of Excellence at the International Salon of Research, Innovation, and Inventions "Pro Invent," 17th Edition, 2019, Cluj-Napoca, Romania, authors: Cristea Peronela Iulia, Loredana Leopold, Zorița Diaconeasa.

2019 - Diploma of Excellence and Proinvent Medal at the International Salon of Scientific Research, Innovation, and Inventions "Pro Invent" in Cluj-Napoca, 17th Edition – "Biscuits with Coffee Addition," authors: Melinda Magiari, Sonia Socaci, Anca Fărcaș, Loredana Leopold.

2022 - Gold Medal, EuroInvent 14th edition, "Nanosystems for essential oils encapsulation," authors: Sonia Socaci, Anca Fărcaș, Cristina Coman, Loredana Leopold, Zorița Diaconeasa, Dan Vodnar.

2022 - Bronze Medal, International Salon of Inventions and Innovations "TRAIAN VUIA" Timișoara, 8th edition, "Nanosystems for the Encapsulation of Volatile Oils," authors: Sonia Socaci, Anca Fărcaș, Cristina Coman, Loredana Leopold, Zorița Diaconeasa, Dan Vodnar.

Member in organizations

2019 – present – Member SChR (Romanian Society of Chemistry)

2018 – present – Member of ASIAR (Association of Romanian Food Industry Specialists)

2016 – present – Member of "Slow Food" Cluj Transilvania

2015 – present – Member SRBBM (Romanian Society of Biochemistry and Molecular Biology)

Personal skills and competences

Native language

Romanian

Foreign languages

European level ()***English****German**

Understanding		Speaking		Writing
Listening	Reading	Participating in conversation	Oral speech	Written expression
B2	B2	B2	B2	B2
C1	C1	C1	C1	C1

(*) [Nivelul Cadrului European Comun de Referință Pentru Limbi Străine](#)

Social skills and competences**Organisational skills and competences**

Communication skills, team spirit

Teamwork and coordination skills in research activities; flexibility, availability, adaptability, critical thinking and evaluation of results, punctuality, perseverance, and seriousness.

Technical skills and competences

Areas of interest: molecular spectroscopy, chromatographic separation, plant and food biotechnologies, phytochemical analysis, cellular biotechnologies, synthesis and characterization of metallic nanoparticles.

Areas of expertise: optical spectroscopy (IR, Raman, SERS, UV-VIS, Fluorescence), Multivariate Statistical Analysis (Chemometrics), Chromatography (TLC, HPLC), cellular biochemistry, assessment of antioxidant activity (DPPH, TEAC, FRAP, ORAC, Folin Ciocâlteu).

Computer skills and abilities

Microsoft office (Word, Excel, Power Point), Unscrambler, GraphPad, Origin

Cluj-Napoca

Prof. dr. Loredana Leopold

24.04.2026