

Curriculum Vitae

Personal information

Name:	Petrovici Anca Roxana
Date and place of birth	13.08.1983; Rădauți, Jud. Suceava.
Adress:	-
Gender:	Female
Nationality:	Romanian
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Maternal Language:	Romanian
Foreign language:	English; Italian.

Studies

2008-2011	<ul style="list-style-type: none">• Ph.D. degree in Chemical Engineering, „Gh Asachi” Technical University of Iassy, Faculty of Chemical Engineering and Environmental Protection, Field Chemical Engineering, Department of Natural and Synthetic Polymers, thesis title: “Study of the influence of polyphenolic products on metabolic processes and development of micro-organism”;
03.2011-05.2011	<ul style="list-style-type: none">• Research internship – University of Perugia – Department of Applied Biology, Section of Microbiology & Industrial Yeasts Collection DBVPG, Perugia, Italy; I learn how to perform a strain identification based on physiological and molecular analyses under Prof. Pietro Buzzini supervision.
2006-2008	<ul style="list-style-type: none">• M.Sc. degree, Al. I. Cuza” University of Iassy, Faculty of Chemistry, Structure and reactivity of radioactive inorganic compounds Department;
2002-2006	<ul style="list-style-type: none">• Bachelor’s Degree in technological biochemistry, „Al. I. Cuza” University of Iassy, Faculty of Chemistry, Department of Tehnological Biochemistry

Involvement in projects (director or member)

<p>Research team member – Nationale Projects</p>	<ul style="list-style-type: none"> • 2021-2023 - „Vectori moleculari versatili, destinați transportului și eliberării de gene și medicamente în lupta împotriva cancerului” acronim TM-Vector, codul PN-III-P4-ID-PCE-2020-1523, director proiect dr. Mariana Pinteala; • 2018-2021 - „Terapii inteligente pentru boli non-comunicabile bazate pe eliberarea controlata de compusi farmacologici din celule incapsulate dupa manipulare genetica sau bionanoparticule vectorizate”, acronim INTERA, codul PN-III-P1-1.2-PCCDI-2017-0697, nr. 13PCCDI/04.04.2018, Coordonator ICMPP dr. Fundueanu-Gheorghe Constantin; • 2016-2018 - „Analytical methods for characterization of oligo/polypeptides and polysaccharides applied in cosmetics and foods: proposal, development and validation” acronim AnaMet, cod PN-III-P2-2.1-BG-2016-0175, Director proiect dr. Hurduc Nicolae, responsabil ICMPP: Ibănescu Sorin Alexandru; • 2015-2017 - „Innovative biopolymer-based hydrophilic matrices with tailored properties for medical application” acronim MATINOV, cod PN-II-RU-TE-2014-4-0558, Director proiect: Dr. Diana Elena Ciolacu; • 2014-2017 - „Sistem inovativ de produse si tehnologii destinat stimulării creșterii eco-eficienței industriei de pielarie” acronim PROECOPEL, cod PN-II-PT-PCCA-2013-4-0436, Parteneriat cu Institutul National de Cercetare Dezvoltare pentru Textile si Pielarie - sucursala Institutul de Cercetare Pielarie Incaltaminte, Bucuresti/ responsabil ICMPP: dr. Dan Rosu; • 2012-2015 - „Biologically inspired systems for engineered structural and functional entities”, cod PN-II-ID-PCCE-2011-2-0028, director dr. Mariana Pinteala;
<p>Research team member – European Projects</p>	<ul style="list-style-type: none"> • 2016-2020 - „Polimeri coordinativi porosi noi cu liganzi organici de dimensiuni variabile pentru stocarea gazelor”, acronim POCPOLIG, POC-A1-A1,1,4-E-2015, Director de proiect Vasile Lozan; • 2016-2020 - „SupraChem Lab - Laboratory of Supramolecular Chemistry for Adaptive Delivery Systems - ERA Chair initiative” acronim SupraChem Lab, cod PN-III-P3-3.6-H2020-2016-0011-SupraChemLab, Director proiect Teodora Rusu,
<p>Research team coordonator– IMM Projects</p>	<ul style="list-style-type: none"> • 09.08.2019-31.05.2022 - Contract de finanțare nr. 5289/09.08.2019 semnat de Institutul de Chimie Macromoleculară „Petru Poni” cu compania Corthotec Limited-“Formulation of bio-absorbable class III medical device for local drug delivery”; director proiect Rami Kallala, responsabil ICMPP dr. Mariana Pinteală; • 2012-2014 - Research Services Contract no. 4598, beneficiar Zeelandia H.J. Doeleman bv, Contract prestari servicii de cercetare stiintifica cu IMM, Director de proiect dr. Stoica Irina, Responsabil ICMPP dr. Pinteala Mariana;

Scientific Domains

- Lactic acid bacteria (LAB) and red yeast strains' isolation, purification, fermentation processes, exopolysaccharide biosynthesis by LAB fermentations, extraction, purification and characterization of exopolysaccharides;
- Probiotic and prebiotic properties of LAB fermentations;
- Antioxidant properties of natural and synthetic biologically active compounds;
- HPLC-MS methods' development and validation;
- Cryo-gels synthesis by using natural and synthetic biopolymers;

Personal Skills

- Good communication and relationship skills, supervision and training of Master and Ph.D. students, synthetic writing, integrating interdisciplinary information.
- Able to work in a team and under stress conditions

Skills related to the research activity

- Lactic acid bacteria and yeasts' isolation and purification;
- Adjustments of culture medium composition for required biosynthesis compounds;
- Biotechnological process optimization in order to obtain the wanted biological compounds;
- Extraction, purification and characterization of biological compounds obtained from microbial biosynthesis;
- Cryo-gels' synthesis by using microorganism-biosynthesized polymers and synthetic polymers;
- Isolation, purification and quantification of natural biologically active compounds from vegetal sources and raw materials;
- Isolation and quantification of cellular metabolomics;
- HPLC-MS methods' development and validation for natural or synthetic compounds determination, isolated from vegetal material or from cells or cell culture media;
- Probiotic and prebiotic properties' determination of LAB fermentations;
- Antioxidant properties' determination of natural and synthetic biologically active compounds;
- Knowledge of characterization techniques used for biological compounds' characterization (biopolymers, flavors, natural pigments): NMR (signals' identification for anomeric protons in the polysaccharide spectrum), FTIR (identification of the characteristic vibrations for exopolysaccharide and lignin compounds), TG/DSC (identification of the degradation steps for polysaccharide compounds, determination of sample purity and crystallinity), GPC (exopolysaccharide fractions' separation and mass determination), HPLC (exopolysaccharide breakdown by chemicals technique and monosugars identification and quantification), GC (flavors (acetaldehyde and diacetyl) identification and quantification), UV-VIS (carotenoid pigments' quantification), AAS (heavy metal (copper ions) quantification from residual culture medium and polyphenols' solutions);

Digital skills

- Good knowledge of Microsoft Office, Origin, Specview programs, ChemDraw, ChemSketch;

Scientific Contribution

- **23** scientific papers published in ISI rated journals with a cumulative impact factor of 87.87.
- **17** oral presentations at International and National Conferences.
- **21** posters presented at International and National Conferences.

Scientific Visibility (Hirsh, Citations, etc.)

- Hirsch Index (according to ISI Web of Science, March 2023) – **7**
- Citations (without self-citations- according to ISI Web of Science, March 2023) - **122**