



STUDENT RESEARCH GROUP ON PHARMACEUTICAL BOTANY

Academic year 2025-2026

Acronym: **FARMAPLANT**

Research team:

Professor **Corneliu Tanase** PhD - Head coordinator

Assistant professor **Mihai Babotă** PhD - coordinator

Technician **Darko Bela**

Contact: George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures
Faculty of Pharmacy, Department of Pharmaceutical Botany, Gheorghe Marinescu street, no 38, Postal
Code 540139, Phone: +40.265.215551 ext. 361, **Email:** corneliu.tanase@umfst.ro

Students currently involved:

- Adrian Nisca, PhD student
- Alina-Năstaca Coman, PhD student
- Ingrid Nădășan, PhD student
- 5th Year of study, pharmacy program: Gorea Maria.
- 4th Year of study, pharmacy program: Haut Anișoara
- 3rd Year of study, nutrition and dietetics program: Sirbu Ștefana

Research topics:

- Identification and valorization of spontaneous medicinal plants from the flora of Romania
- Contributions to the biological activity of natural extracts with a high content of polyphenols
- The study of symbiotic mushroom groups with implications for the growth and development of medicinal plants
- The influence of ecological factors on the growth and development of some medicinal plants

Research infrastructure:

- Research Center for Medicinal and Aromatic Plants
- University Botanical Garden
- Pharmaceutical Botany Laboratory





Relevant in extenso ISI articles of the research team with student's contribution:

1. Coman, N.-A.; Babotă, M.; Nădășan, I.; Nicolescu, A.; Pitaru, A.R.; Ștefănescu, R.; Mocan, A.; Frumuzachi, O.; Tanase, C. The Influence of Ecological Factors on the Phytochemical Characteristics of *Pinus cembra* L. Appl. Sci. 2023, 13, 10184. <https://doi.org/10.3390/app131810184>
2. Nisca, A.; Ștefănescu, R.; Mocan, A.; Babotă, M.; Nicolescu, A.; Mare, A.D.; Ciurea, C.N.; Man, A.; Tanase, C. A Comparative Analysis of Polyphenol Content and Biological Potential of *Quercus petraea* Matt. and *Q. pubescens* Willd. Bark Extracts. Forests 2023, 14, 116. <https://doi.org/10.3390/f14010116>, Fi: 2,9 (Q1),
3. Nisca, A.; Ștefănescu, R.; Moldovan, C.; Mocan, A.; Mare, A.D.; Ciurea, C.N.; Man, A.; Muntean, D.-L.; Tanase C. Optimization of Microwave Assisted Extraction Conditions to Improve Phenolic Content and In Vitro Antioxidant and Anti-Microbial Activity in *Quercus cerris* Bark Extracts, Plants 2022, 11, 240. <https://doi.org/10.3390/plants11030240> 3.935 (Q1)
4. Berta L., Coman N.A., Rusu A., Tanase C. A Review on Plant-Mediated Synthesis of Bimetallic Nanoparticles, Characterisation and Their Biological Applications, Materials, 2021, 14, doi.org/10.3390/ma14247677, 7677, 1996-19443.623 (Q1)
5. Nisca, A.; Ștefănescu, R.; Stegăruș, D.I.; Mare, A.D.; Farczadi, L.; Tanase, C. Phytochemical Profile and Biological Effects of Spruce (*Picea abies*) Bark Subjected to Ultrasound Assisted and Microwave-Assisted Extractions. Plants 2021, 10, Fi: 3,935 (Q1) 870.
6. Nisca A., Ștefănescu R., Stegăruș D.I., Mare A.D., Farczadi L., Tanase C., Comparative Study Regarding the Chemical Composition and Biological Activity of Pine (*Pinus nigra* and *P. sylvestris*) Bark Extracts, Antioxidants 2021, 10, 327. <https://doi.org/10.3390/antiox10020327> Fi: 6.312 (Q1)
7. Coman, A.N.; Mare, A.; Tanase, C*.; Bud, E.; Rusu, A. Silver-Deposited Nanoparticles on the Titanium Nanotubes Surface as a Promising Antibacterial Material into Implants. Metals 2021, 11, 92. <https://doi.org/10.3390/met11010092>, Fi: 2.351 (Q2)
8. Burlacu E, Nisca A, Tanase C., A comprehensive review of phytochemistry and biological activities of *Quercus* species, Forests 2020, 11(9), 904, doi.org/10.3390/f11090904 Fi: 2,221
9. Tanase C., Ștefănescu R., Gheorghieș D.G.; Dandu L., Nisca A., Darkó B., Socaci S.A., Effects of Beech Bark Extract in the Sage (*Salvia officinalis* L.) Plant Growth and Volatile Oil Profile, Agronomy 2020, 10, 676; [doi:10.3390/agronomy10050676](https://doi.org/10.3390/agronomy10050676), Fi: 2.603
10. Tanase C., Lavinia Berta, Năstaca Alina Coman, Ioana Roșca , Adrian Man, Felicia Toma, Andrei Mocan, László Jakab-Farkas, Domokos Biró and Anca Mare, Investigation of In-Vitro antioxidant and antibacterial potential of silver nanoparticles obtained by biosynthesis using beech bark extract, 2019, Antioxidants, Fi: 4,520

Relevant abstracts with student's contribution:

1. Roșca Ioana, Berța Lavinia, Corneliu Tanase, BIOSYNTHESIS OF SILVER NANOPARTICLES USING AQUEOUS EXTRACTS OBTAINED FROM *PICEA ABIES* L. AND *FAGUS SYLVATICA* L. BARK, National Congress for Students, Young Doctors and Pharmacists “Marisiensis”, 27-31 martie, 2018, Târgu Mureș, Romania.
2. Adrian Nișca, Andreea Milan, Mirica Anca, Corneliu Tanase, WOOD BARK AS VALUABLE RAW MATERIAL FOR COMPOUNDS WITH BIOREGULATOR EFFECT IN LEMON BALM (*MELISSA OFFICINALIS*



L.) PLANTS, National Congress for Students, Young Doctors and Pharmacists “Marisiensis”, 28 martie - 1 Aprilie 2018, Tîrgu Mureș, Romania.

3. Sanda-Liliana Coșarcă, Elena-Alina Moacă, Corneliu Tanase, Daniela Lucia Muntean, Ioana Zinuca Pavel, Silvia Oroian, Cristina Adriana Dehelean, BARK AQUEOUS EXTRACTS CORRELATED TO IN VITRO ANTITUMOR POTENTIAL ON TWO DIFFERENT CELL LINES, Scientific Anniversary Symposium - 70 Years from Foundation of University Botanical Garden, Tîrgu-Mureș: 1948 — 2018, Tîrgu Mureș, Romania, 30 May - 01 June 2018