



Student Scientific Research Group
Pharmaceutical and Cosmetic Chemistry – Pharm&CosmCHEM
Academic year 2019/2020

Members:

Aura Rusu, PhD, associate professor (head coordinator)
Gabriel Hancu, PhD, associate professor (coordinator)
Blanka Székely Szentmiklósi, PhD, lecturer (coordinator)
Attila Lajos Papp, PhD student, assistant professor (coordinator)
Katerina Komán, chemist technician

PhD students currently involved:

Lungu Ioana-Andreea
Moldovan Octavia
Sarkany Anita

Students currently involved:

Andronic Laura Stefania
Vișcă Ioana
Salanki Timea
Birtalan Marco
Soare Alexandra
Pápai Zsuzsanna
Pál-Kendy Botond

Contact

George Emil Palade University of Medicine, Pharmacy, Science and Technology of Targu Mures
38 Gheorghe Marinescu Street, Targu Mureș, 540139, ROMANIA
Telephone: +40-265-21 55 51, Email: aura.rusu@umfst.ro

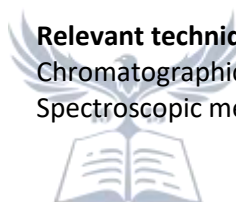
Research topics:

**APIs – active pharmaceutical ingredients; CIs – cosmetic ingredients*

1. Design and synthesis of compounds with biological properties (APIs and CIs): metal complexes, hybrids, complexes with cyclodextrins, derivatives of known compounds;
2. Structural analysis of newly obtained compounds through spectroscopic, chromatographic, electrophoretic methods, and thermal methods;
3. Structural analysis, development & validation of new analytical methods for known APIs and CIs (spectroscopic, chromatographic and electrophoretic methods, thermal methods) from raw materials, pharmaceuticals or dermocosmetics, biological & environmental samples;
4. Structural analysis of APIs and CIs through computational methods;
5. Structural analysis of metal- and cyclodextrin complexes of APIs and CIs through computational methods;
6. The study of chemical interactions and incompatibilities between APIs / CIs;
7. Communication in pharmacy practice.

Relevant techniques:

Chromatographic methods (HPLC, EC, TLC)
Spectroscopic methods (FTIR, LC-MS, UV-VIS)





Thermal methods (TGA, DSC)
Elemental analysis
Acid-base properties and molar conductance

Papers presented at scientific meetings by students' member of the scientific research group (highlighted name):

1. *Lungu I.-A. Uivarosi V. Imre S. Mare A.D. Rusu A. *Levofloxacin triflate – synthesis, characterization a microbiological activity assessment*, The 11th Conference of PhD Students and Young Doctors, 11 December 2018, Targu Mures, Book of Abstracts 1(109), 2018, ISSN 2602-1609, ISSN-L 2602-1609
2. Rusu A. Hancu G. *Sbanca M.-A. Vari C.E., *Capillary Zone Electrophoresis Applicability for Determination of Some Aromatase Inhibitors*, Scientific Session of University Educational Staff, 11-15 December 2017, Book of Abstracts, Acta Medica Marisiensis, 63(4): 49, ISSN-L/ISSN 2068-3324,
3. *Pavăl A.A. Rusu A. *New design of old antibiotics focused on drug-resistant Mycobacterium tuberculosis*, International Congress for Students, Young Doctors and Pharmacists Marisiensis 29 March - 2rd of April 2017, Târgu Mureș, Volume of abstracts, Acta Medica Marisiensis, Volume of abstracts, 2017, 63(1):87 ISSN/ISSN-L 2068-3324,
4. *Stratan D. Rusu A. *Screening methods for obtaining new silver complexes of levofloxacin*, International Congress for Students, Young Doctors and Pharmacists Marisiensis 30 March - 3 April 2016, Târgu Mureș, Volume of abstracts, Acta Medica Marisiensis, 2016, 62(4):86 ISSN/ISSN-L 2068-3324,
5. *Moldovan A., *Uilăcan A. Rusu A. *Preliminary UV spectrophotometric study of interaction silver ions-levofloxacin*, International Congress for Students, Young Doctors and Pharmacists Marisiensis 30 March - 3 April 2016, Târgu Mureș, Volume of abstracts, Acta Medica Marisiensis, Volume of abstracts, 2016, 62(4):89 ISSN/ISSN-L 2068-3324,
6. *Iriminescu DN. Hancu G. *Simultaneous equation and first-derivative UV spectrophotometric methods for the simultaneous determination of rifampicin and isoniazid*, International Congress for Students, Young Physicians and Pharmacists, Marisiensis, Tîrgu Mureș, 30 March – 3 April 2016, Acta Medica Marisiensis, 62(4): 93
7. Rusu A. Hancu G. Vancea S. *Stratan D. Kelemen H. *New Methods of Obtaining New Silver Complexes of Ofloxacin and Levofloxacin*, The 8th Conference of PhD Students, The 5th Conference Of Postdoc Fellows in Medicine and Pharmacy, 9-10 December 2015, Book of Abstracts, Acta Medica Marisiensis, 61(7): 1, ISSN-L/ISSN 2068-3324,
8. Rusu A. *Popescu G.-C. Imre S. Ion V. Vancea S. Hancu G. Kelemen H. Uivarosi V. *Preliminary Methods of Obtaining Silver Complexes with Representatives of the Fluoroquinolone Class*, The 15th International Symposium and Summer School on Bioanalysis, 13-18 July 2015, Târgu Mureș, Book of Abstracts, Acta Medica Marisiensis, 61(5): 37, ISSN: 2247-6113
9. Kelemen H. *Papp L.A. Hancu G. Rusu A. Cârje AG. Szentmiklósi-Székely B. *Simultaneous determination of amoxicillin and clavulanic acid: UV-spectrometry versus capillary electrophoresis*, The 15th International Symposium and Summer School on Bioanalysis, Tîrgu Mureș, 13-18 Julie 2015, Acta Medica Marisiensis, 2015, 61(5): 31.

Relevant *in extenso* articles of the student scientific research team (students are marked with *):

BDI articles:





1. *Moldovan O.-L., *Brihan D.-N., Todoran N., Rusu A., *Thin layer chromatographic compatibility study in preformulation of new transdermal therapeutic systems*, Acta Medica Marisiensis, 2020, 66(1): xx-xx (in press) ISSN: 2247-6113, Rusu A. *Sbanca M.-A. Todoran N. Vari C.-E. *Letrozole Determination by Capillary Zone Electrophoresis and UV Spectrophotometry Methods*, Acta Medica Marisiensis, 2017, 63(2): 80-86, ISSN 2068-3324, on-line: 2247-6113,
2. Rusu A. *Popescu G.-C. Imre S. Ion V. Vancea S. Grama A.-L. Kelemen H. Hancu G. *A New Silver Complex with Ofloxacin – Preliminary Study*, Acta Medica Marisiensis, 2016, 62: 192-198, ISSN: 2247-6113
3. *Gorea D. Hancu G. Rusu A. Cârje A. Barabás E. *Indicatori de evaluare a calitatii apelor de suprafața și solurilor în proximitatea fostei exploatare de sulf din Munții Calimani*. Forum Geografic, 2014, XIII(2): 212-218.

ISI articles:

1. Rusu A. Vari C.-E. Hancu G. Pașca M.D. *Botezatu R. *Cucoranu D. Muntean D.L. *Brief Assessment of Pharmacist-Patient Communication Efficiency in Romanian Pharmacies*, Farmacia 2018, 66(6): 1091-1098, ISSN: 0014-8237 (printed edition), ISSN: 2065-0019 (on-line edition), DOI: [HTTP://DOI.ORG/10.31925/FARMACIA.2018.6.25](http://doi.org/10.31925/farmacia.2018.6.25) FI: 1,527
2. Tilinca M. Hancu G. Mircia E. *Iriminescu D. Rusu A. *Vlad R.A. Barabás E. *Simultaneous determination of isoniazid and rifampicin by UV spectrophotometry*, Farmacia 2017, 65(2): 219-224, ISSN: 0014-8237 (printed edition), ISSN: 2065-0019 (on-line edition), FI: 1,507
3. Pașca M.D. Hancu G. *Soare R. *Budău M. Rusu A. *Logistic and constructive attitude perception of pharmacist students towards medicine*, Farmacia 2015, 5: 720-725, ISSN: 0014-8237 (printed edition), ISSN: 2065-0019 (on-line edition), FI: 1,162

