Department of Chemical Technology of Drugs

Poznan University of Medical Sciences

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Scientific publications
http://syntezy.ump.edu.pl/katedra/publikacje

Didactics
The Department conducts classes with students in the following subjects:

Pharmacy:

- Drug design I, 3rd year
- Drug design II, 3rd year
- Technology of a biotechnological drug, 3rd year
- Synthesis and technology of therapeutic agents, 3rd year
- Synthesis and technology of therapeutic agents with elements of biotechnology, 4th year

Pharmaceutical Engineering:

- Crystallography, 3rd year
- Synthesis and technology of therapeutic agents, 3rd year

Medical biotechnology:

- Nanotechnology, 2nd year
- Intellectual property protection, 2nd year
- Bioprocess Engineering, 2nd year
- Biocrystallography, 3rd year
- Commercialization of research results, 3rd year
- Computer modeling of structures, 3rd year

Forensic analytics:

- Unit physical and chemical processes in preparation of analytical samples, 2nd year
- Nanotechnology and biomaterials, 2nd year
- Crystallography, 2nd year

Cosmetology, 2nd degree:

- Industrial cosmetics technology, 2nd year

Doctoral School:

- Economics of a research project – 3rd year
- Fundamentals of scientific information – 1st year

Extracurricular activities for students

- SKN Chemistry of Macrocycles and Nanotechnology – dr n. farm. Tomasz Koczorowski
- SKN Drug Design and Synthesis – dr hab. n. farm. Marcin Wierzchowski

Research projects of the NCN carried out at the Department

- Photoactive nanoparticles sensitized with azulene derivatives (dr n. farm. Dariusz Młynarczyk)
- Targeted poloxamer micelles with selected drugs as a strategy for overcoming the mechanisms of multidrug resistance in primary liver tumours (prof. dr hab. Tomasz Gośliński)
- Intelligent polymer systems for the delivery of photosensitizers to cancer cells (prof. dr hab. Tomasz Gośliński)
- Conjugates of curcuminoids and polyphenols as potential therapeutics for the treatment of cancers of the urinary system (prof. dr hab. Tomasz Gośliński)

Cooperation

The Chair and Department of Chemical Technology of Medicinal Agents has the following research equipment:

- Shimadzu HPLC system with UV-Vis detection
- Metrohm Autolab PGSTAT128N
- Anton Paar Monowave 400
- Teledyne ISCO CombiFlash Rf+
- Malvern Panalytical Nanosight LM10
- Microtox M500 analyzer
- Ocean Optics USB 2000+ spectrophotometer
- Hitachi U-1900 spectrophotometer
- Jasco V-770 UV-Visible/NIR spectrophotometer
- Jasco FP-6200 spectrofluorometer
- Bruker D2 PHASER powder diffractometer
- Buchi Kugelrohr B-585 glass oven
- Bibby Sterlin Ltd Stuart melting point apparatus

Research and development work at the Chair and Department of Chemical Technology of Drugs covers the following topics:

- inorganic and organic nanoparticles with potential application in medicine, nanotechnology and environmental protection,
- macrocyclic compounds from the group of porphyrazines or phthalocyanines with extensive peripheral groups and diverse metal centers with potential application in medicine, nanotechnology, chemical catalysis, and biomimetics,
- glycyrrhetinic acid derivatives with potential application in pharmacy and medicine,
- methoxy and methylthiol derivatives of trans- and cis-stilbene with potential anticancer or chemoprotective effects,
- nitroimidazole derivatives with potential anticancer activity,
- kynurenic acid derivatives with potential application in neurodegenerative diseases.

The Chair and Department of Chemical Technology of Drugs offers cooperation to the scientific and business environment in several areas:

- joint implementation of research projects,
- providing organic synthesis services on a laboratory scale,
- spectral and electrochemical studies of chemical compounds.

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Trading in exclusive rights in the field of sale or licensing of technologies owned by patents, rights to patents, rights to the priority of filing an invention or business secrets is determined by the internal policy of the Poznan University of Medical Sciences in the field of economic and pro-innovative activities.

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Office invites students and guests from 9:00 am to 2:00 pm