

DEPARTMENT OF GALENIC PHARMACY

|                           |                                      |
|---------------------------|--------------------------------------|
| <b>Subject:</b>           | <b>PHARMACEUTICAL TECHNOLOGY 2</b>   |
| <b>Type of course:</b>    | lectures, practical exercises        |
| <b>Year:</b>              | 4.                                   |
| <b>Hours in week:</b>     | lectures - 4 practical exercises - 5 |
| <b>Number of credits:</b> | 10                                   |
| <b>Lectures:</b>          | Monday 9.20 – 12.50, classroom O419  |

PROGRAMME OF LECTURES, WINTER TERM 2022/2023

- 1. Semi-solid preparation for cutaneous application. Skin, its anatomy and physiology. Biogalenical aspects of topical preparations. Liberation, penetration, absorption of drugs from semi-solid preparations.**

19.9.2022

PharmDr. Alžbeta Lengyelová

- 2. Polymers as pharmaceutical excipients. Gels and gel structure.**

19.9.2022

PharmDr. Veronika Šimunková, PhD.

- 3. Ointments, creams, pastes. Bases for ointments, creams, pastes. Production of semi-solid preparations (solution, emulsion, suspension systems).**

26.9.2022

PharmDr. Alžbeta Lengyelová

- 4. Viscosity, apparent viscosity, rheology.**

26.9.2022

PharmDr. Alžbeta Lengyelová

- 5. Rectal drug products, constitutive excipients, bioavailability. Suppositories. Production methods, quality control.**

3.10.2022

PharmDr. Veronika Mikušová, PhD.

- 6. Vaginal drug delivery.**

3.10.2022

PharmDr. Veronika Mikušová, PhD.

**7. Liberation of drug from dosage form. Kinetic of liberation. Dissociation and absorption of drugs. Kinetic of absorption – construction of absorption curve.**

10.10.2022

Mgr. Martina Čierna, PhD.

**8. Transport of drug through biological membranes. Processes LADME and their parameters.**

10.10.2022

Mgr. Martina Čierna, PhD.

**9. Ophthalmic dosage forms. Physical and microbiological aspects of eye preparations. Bioavailability, excipients, production, quality control.**

17.10.2022

PharmDr. Veronika Šimunková, PhD.

**10. Nasal dosage forms. Ear dosage forms. Bioavailability from nasal and ear preparations.**

17.10.2022

PharmDr. Miroslava Špaglová, PhD.

**11. Modified release peroral dosage forms – prolonged, sustained, delayed release and controlled release of drugs from peroral dosage forms. Drug targeting.**

24.10.2022

PharmDr. Veronika Šimunková, PhD.

**12. Transdermal therapeutic systems, characterization. Advantages, disadvantages. Enhancers of penetration.**

24.10.2022

Mgr. Jarmila Ferková

**13. Pharmacopoeial methods used for the evaluation of dosage forms.**

31.10.2022

PharmDr. Miroslava Potůčková, PhD.

**14. Oromucosal preparations.**

31.10.2022

PharmDr. Desana Matušová, PhD.

**15. Therapeutic systems: peroral, parenteral, ocular, intrauterine. Characterisation, advantages, disadvantages.**

7.11.2022

Mgr. Martina Čierna, PhD.

**16. Dosage microforms – pellets, microcapsules, microdragees. Auxiliary materials, methods of preparation.**

7.11.2022

PharmDr. Miroslava Špaglová, PhD.

- 17. Pharmaceutical packs and packaging – functions, type of packs, primary and secondary packs, packaging material.**
- 14.11.2022 Ing. Michael Kenneth Lawson, PhD.
- 18. Stability and stabilization of drug products. Stability testing. Prediction of stability.**
- 14.11.2022 PharmDr. Mária Raučinová, PhD
- 19. Pulmonary drug delivery. Therapeutic aerosols. Formulation, devices, production, quality control.**
- 21.11.2022 PharmDr. Miroslava Špaglová, PhD.
- 20. Quality assurance in pharmaceutical production and quality control.**
- 21.11.2022 PharmDr. Desana Matušová, PhD.
- 21. Biologics. Development, formulation and production of biological drugs.**
- 28.11.2022 Ing. Michael Kenneth Lawson, PhD.
- 22. Technological aspects of vaccine production.**
- 28.11.2022 Ing. Michael Kenneth Lawson, PhD.
- 23. Aerodispersions as dosage forms, medicated foams. Liquid preparations for cutaneous application. Medicated tampons, sticks.**
- 5.12.2022 PharmDr. Veronika Mikušová, PhD.
- 24. Nanocarriers as drug delivery systems.**
- 5.12.2022 Ing. Michael Kenneth Lawson, PhD.

**(12.12-16.12 Credit week)**