
Department of Pharmacology

The members of the Department are continuously working on the maintenance of highest possible quality of teaching strategies and research achievements within the Pharmacology keeping up with current methods based on evidence-based approaches.

We have gradually created and continuously upgrade study texts available to our students at the webpages of our department, and have introduced three supporting computer applications. The first such applications were interactive presentations purchased from the companies Pharmac-a-logy and Pharmatutor. They provide students illustrative presentations of individual problems in the field. This has been closely related with the usage of computer simulations which have gradually replaced demanding experiments on animals or on isolated organs and help demonstrate the mechanisms of the effect of the chosen drugs or their pharmacokinetics. The third supporting application are case reports from clinical practice which were prepared in cooperation with specialists from individual clinics and presented in the form of interactive web applications describing solutions to specific pharmacotherapy situations. All the created teaching materials are at present available on our faculty's secure server – moodle.lfhk.cuni.cz.

Main research topics

- Cardiovascular toxicity of anticancer drugs and pharmacological cardioprotection in vivo.
- Hepatic effects of existing or newly developed drugs.
- Modelling pharmacodynamics and pharmacokinetics of drugs in clinical practice.

Equipment

Management and introduction into research of the device located in the central laboratory of Vivarium LFHK: High-frequency ultrasound device for examination of small laboratory animals VEVO3100 (FUJIFILM VisualSonics, Canada) with accessories. Use for experimental research of cardiotoxicity in mice (doc. Štěřba) and cooperation with doc. Kacerovská (Gyn-Por Clinic) and the use of the device to investigate the effect of intra-amnion inflammation and drugs on the rat fetus

Achievements

- D1 publications with other authors from our department (co-corresponding author doc. Štěřba): Jirkovsky et al. Circulation-Heart Failure 2021;14:e008209, IF 10,447, AIS 4,101
- D1 publications (corresponding author doc. Chládek): Parizkova RC et al. Critical Care 2021;14:e008209, IF 19.3, AIS 3.95

J Roh, M. Štěřba et al. International patent WO2021/144746 A1 (PCT/IB2021/050285). M. Štěřba as Associate Editor in ESC Heart Failure (2017-present, IF 4.411, Wiley, Journal of European Society of Cardiology) and Cardiovascular Toxicology (2018-2022, IF 3.239, Springer), M. Štěřba was awarded the Arnost of Pardubice Prize by the Rector of Charles University in 2019 as a member of the author collective. DSP Medical Pharmacology student Mgr. Petra Kollárová (supervisor doc. Štěřba) won the 1st prize at the DSP LFHK UK student conference in 2021. The same prize was won in 2018 by Mgr. Alena Prašnická (supervisor prof. Mičuda). Award of the CSCEFT CSL JEP for the best publication (4 times since 2018).