

**PROFESSIONAL CURRICULUM VITAE - Associate prof. PharmDr. Katerina Kubova,
Ph.D. (Dvořáčková - until 2014) - 15. 1. 1973 in Zlin**

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Faculty of Pharmacy, Masaryk University, Palackého tř. 1946/1, 61200 Brno, Czech Republic

Education:

2013 - *Associate Professor* - Pharmaceutical Technology - Galenic Pharmacy. The topic of habilitation thesis:- Selected controlled release dosage forms for oral administration
2005-2009 Doctoral study program, Pharmaceutical Technology - Galenic Pharmacy, *Ph.D.*
2005-2006 *PharmDr.* - Pharmaceutical Technology - Galenic Pharmacy
1992–1997 *Mgr.* - Faculty of Pharmacy UVFS Brno, degree

Employment

from 1. 7. 2020 (full-time 1.0) - associate professor at the Department of Pharmaceutical Technology, Faculty of Pharmacy, Masaryk University (FaF MU)
1. 2. 2013 - associate professor (full-time 1.0), Department of Pharmaceutics FaF UVFS Brno (University of Veterinary and Pharmaceutical Sciences)
1. 4. 2009 - assistant professor (full-time 1.0, Department of Pharmaceutics) FaF UVFS Brno
1. 9. 2005 - assistant (full-time 1.0), Department of Pharmaceutics FaF UVFS Brno
1. 9. 2004 - assistant (part-time 0.5), Department of Pharmaceutics FaF UVFS Brno

Guarantor of the study programs, subjects, other

Guarantor of the Pharmacy study program at FaF MU (Czech, English study program)
Guarantor of mandatory subjects Dosage forms and biopharmacy I and II (Czech, English)
Guarantor of the compulsory elective course Advanced drug delivery (Czech, English)
Guarantor of compulsory elective course Cosmetic products (English study program)
Consultant, supervisor of students in the elaboration of doctoral, diploma and rigorous theses and diploma theses within the Erasmus program

Doctoral students – totally 9

Number of successfully completed doctoral students – 4

Number of unsuccessfully completed doctoral students -1

Number of students n the study interruption - 1

Students enrolled in doctoral programme - 3

Number of successfully completed master's theses (Czech) – 38

Number of successfully completed master's theses (English) - 7

Number of successfully completed master's theses within Erasmus program– 1

Number of successfully completed rigorous thesis - 29

Membership in boards, commissions, societies

Chairwoman of the Program Board of Pharmacy FaF MU
Member of the Board of Pharmaceutical Technology FaF MU in Brno
Member of the Board of Pharmaceutical Technology, Faculty of Pharmacy, Charles University
Chairwoman of the commission for rigorous thesis in the field of Pharmaceutical Technology FaF MU
Chairwoman of the Drug Technology Section of the Czech Pharmaceutical Society
Member of International Society for Drug Delivery Sciences and Technology

Research Interests

1. Solid dosage forms with controlled drug release for oral and mucosal administration, formulation and evaluation of pellets, microparticles, tablets, capsules. Investigation of the effect of pharmaceutical excipients on quality parameters of dosage forms.

2. Formulation and evaluation of innovative single or particulate colon and vaginal drug delivery systems with different manner of drug release for systemic or local treatment and their *in vitro*, *ex vivo* and *in vivo* testing.
3. Development and evaluation of liquid self-emulsifying systems and its transformation into solid dosage forms by extrusion/spheronization method for enhancement of drug solubility and bioavailability in biosystem.
4. Research of innovative pharmaceutical approach in the field of treatment of addiction on benzodiazepines and Z-drugs.

Project activities



NAZV - QK1810221 (2018–2021) - Using of microparticles as carriers of hormonally active substances in artificial reproduction of fish.

IGA MZ NS10222 (2009–2011): Microparticle dosage form for treating inflammatory bowel diseases. Main solver.

IGA VFU - 310/2017 / FaF - *In vitro* evaluation of vaginal inserts containing PG E2 for veterinary use; IGA VFU - 306 / 2016.FaF - Development of vaginal rings for veterinary use; IGA VFU - 306/2015 / FaF - Preparation of mucoadhesive microparticles based on biocompatible polymers with biological effect against vaginal pathogens; IGA VFU - 306/2015 / FaF - 99/2013 / FaF - Use of pH modifiers to achieve a pH-independent dissolution profile of a weakly basic drug from matrix tablets; IGA VFU - 306/2015 / FaF - 44/2011 / FaF - Development of chitosan microparticles to deliver a model drug to the colon.

Awards and other activities

Honorable mention of the Minister of Health of the Czech Republic for Medical Research And Development for 2011 for the results achieved in the project IGA MZ NS10222; Winner of the public award for the project IGA MZ NS10222 (Ministry of Health of the Czech Republic)

Editor-in-Chief of the journal Czech and Slovak Pharmacy (Scopus database)

The organizer of the professional conference - Working day of Drug Technology Section (2014-2019)

10 most important scholarly publications

Pavelková M. et al. Assessment of antimicrobial, antiviral and cytotoxic potential of alginate beads cross-linked by bivalent ions for vaginal administration. **Pharmaceutics** 2021, 13(2), 165, <https://doi.org/10.3390/pharmaceutics13020165>; Mašková, E. et al. Hypromellose – a traditional pharmaceutical excipient with modern applications in oral and oromucosal drug delivery. **J. Control. Rel.** 2020, 324, 695-727, <https://doi.org/10.1016/j.jconrel.2020.05.045>; Bernkop-Schnürch A. et al. Self-emulsifying drug delivery systems: *In vivo* evaluation of their potential for oral vaccination. **Acta Biomaterial.** 2019, 94, 425-434, <https://doi.org/10.1016/j.actbio.2019.06.026>; Urbanova, M. et al. Interaction pathways and structure–chemical transformations of alginate gels in physiological environments. **Biomacromolecules**, 2019, 20, 4158-4170, <https://doi.org/10.1021/acs.biomac.9b01052>; Nováková Tkadlečková V. et al. The development of a silicone vaginal ring with a prostaglandin analogue for potential use in the treatment of canine reproductive disorders. **Pharm. Dev. Tech.** 2019, 24(8), 1021-1031, <https://doi.org/10.1080/10837450.2019.1622565>; Naiserova, M. et al. Investigation of dissolution behavior HPMC/Eudragit/magnesium aluminometasilicate oral matrices based on NMR solid-state spectroscopy and dynamic characteristics of gel layer. **AAPS PharmSciTech.** 2018, 19, 681-692, <https://doi.org/10.1208/s12249-017-0870-6>; Brus, J. et al. Structure and dynamics of alginate gels cross-linked by polyvalent ions probed via solid state NMR spectroscopy. **Biomacromolecules** 2017, 8, 2478-2488, <https://doi.org/10.1021/acs.biomac.7b00627>; Mašková, E. et al. Influence of pH modulation on dynamic behavior of gel layer and release of weakly basic drug from HPMC/wax matrices, controlled by acidic modifiers evaluated by multivariate data analysis. **AAPS PharmSciTech.** 2017, 18(4), 1242-1253, <https://doi.org/10.1208/s12249-016-0588-x>; Pavelková M. et al. Biological effects of drug-free alginate beads cross-linked by copper ions prepared using external ionotropic gelation. **AAPS PharmSciTech** 2017, 18, 1343-

1354, <https://doi.org/10.1208/s12249-016-0601-4>; Rabišková, M. et al. Coated chitosan pellets containing rutin intended for the treatment of inflammatory bowel disease: *In vitro* characteristics and *in vivo* evaluation. *Int. J. Pharm.* 2012, 422(1-2), 151-159 <https://doi.org/10.1016/j.ijpharm.2011.10.045>
H-index – 10, Number of Web of Science publications: 40, Number of citations WOS 303, Number of Scopus publications: 67, Number of citations without self-citations of Scopus: 427