MASARYKOVA UNIVERZITA
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EXPORT ÚDAJŮ O STUDIJNÍM PROGRAMU

Pharmacy

Farmaceutická fakulta

Sestava byla vytvořena: 8. 10. 2024 08:11, pro akreditační období

Obsah

Sestavu vytvořila: PharmDr. Tünde Ambrus, Ph.D., učo 245375

1 Základní údaje o studijním programu

Pharmacy

Garant	doc. PharmDr. Peter Kollár, Ph.D.	*Standardní doba studia*	5 r.
Fakulta	Farmaceutická fakulta	*Zkratka*	M-FARMA
Forma	prezenční	*Titul*	Mgr.
Ve spolupráci s	——	*Kód*	M0916A080005
Typ	magisterský	*Vyučovací jazyk*	angličtina
Profil	akademický	*Rigorózní řízení*	ano
Oblast vzdělávání	Farmacie (100 %)	*Stav*	uskutečňovaný

1.1 Charakteristika programu

Cíle

The Master's degree programme Pharmacy is designed to meet the current level of pharmaceutical, medical, and natural sciences, the needs of the practice, and to be a quality basis for further education (doctoral degree programme, post-gradual specialization, and lifelong education). It is carried out in full-time form and the standard period of study is five years. The goal of education in the programme Pharmacy is to prepare graduates to practice the healthcare profession of a pharmacist and to acquire general and special knowledge about medicines, which leads to maximizing the effect and minimizing risks for the patient and society. The study is ended with a state final exam, which includes the defence of a diploma thesis. The programme allows students to choose elective subjects in order to a higher degree of specialization and adaptation to individual interests. The content of education is in accrodance with the requirements of Directive 2005/36/EC on the recognition of professional qualifications, Decree of the Ministry of Health of the Czech Republic No. 187/2009 Coll. on the minimum requirements for study programs in general medicine, dentistry, pharmacy and the educational program in general practical medicine and Government Regulation No. 275/2016 Coll. on areas of education in higher education.
The goal is to enable the acquisition of knowledge about:
- medicines and substances used in the production and preparation of medicinal products, their safe and effective use, effectiveness and indications, contraindications, interactions, dosage and method of administration, health prevention when working with pharmaceutical products, chemical, carcinogenic and mutagenic substances and substances toxic to reproduction,
- metabolism and effects of medicines, pharmacokinetics, as well as about the effects of toxic substances, and about the way of using medicines,
- pharmaceutical technology, preclinical and clinical trials of medicines, and on clinical pharmacy,
- scientific and practical knowledge enabling to provide appropriate information about medicines and to cooperate with attending physicians in optimizing pharmacotherapy for specific patients,
- health promotion preparations and medical devices,
- basic legal regulations related to healthcare and the profession of pharmacist,
- provision of professional information about medicines,
- radiation protection,
- professional ethics of pharmacist-patient contact,
- issues of healthcare financing and basic economic relations, knowledge of the basics of management,
- the basics of managing the quality of healthcare provided and ensuring the safety of patients;
and skills at:
- preparation of dosage forms of medicinal products,
- production and control of medicines,
- storage and distribution of medicines,
- preparation, control, storage, and dispensing of medicinal products in pharmacies,
- practical communication with the patient with an emphasis on patient rights and their application.

Výstupy z učení

Absolvent je po úspěšném ukončení studia schopen:

1. orientovat se v léčivech a látkách použitých při výrobě a přípravě léčivých orient in medicines and substances used in the production and preparation of medicinal products, their safe and effective use, effectiveness and indications, contraindication
2. communicate with the patient with an emphasis on patient rights and their application
3. prepare, control, store, and dispense medicinal products in pharmacies
4. store and distribute medicines at pharmaceutical wholesalers
5. cooperate with physicians in optimizing pharmacotherapy for specific patients and participate in the work of multidisciplinary teams
6. orient in the field of public health protection and promotion, healthcare financing and basic economic relations, and apply the basics of management,
7. propose, explain, and use methods of evaluation the quality, safety, effectiveness and efficiency of medicines, and apply them in the process of health protection and disease management,
8. solve complex professional problems of medicines handling and to coordinate related professional activities

9. use at least one foreign language and apply relevant information and digital technologies in their professional activities
10. make decision on professional problems taking into account the social consequences of this decision and further deepen professional education

Uplatnění absolventa

A graduate of the degree programme can be employed as a: - pharmacist in facilities providing pharmaceutical care,
- clinical pharmacist in hospitals, possibly other healthcare facilities,
- bioanalyst in healthcare laboratories,
- professional in laboratories for research, development, and drug control,
- professional in pharmaceutical production and wholesaler companies,
- academic/researcher in the academic sphere and in other institutions dealing with science, research, development, and innovation,
- professional in the management structures of healthcare,
- expert/researcher in the field of chemical, food, and cosmetic industry,
- expert/consultant in the non-profit sector involved in the protection, support, and development of the health of individuals and specific groups of the population

Regulovaná povolání

- Farmaceut

Pravidla a podmínky pro vytváření studijních plánů

Bakalářské a magisterské studium probíhá podle celouniverzitního kreditního systému, který je v souladu s pravidly European Credit Transfer System (ECTS). Povinně volitelné předměty jsou ve studijním plánu organizovány do jedné čí více skupin; student volí povinně volitelné předměty na základě stanoveného minimálního počtu kreditů v každé skupině. Celouniverzitní pravidla pro tvorbu studijních programů, která zpřesňují pravidla vymezená v metodice Národního akreditačního úřadu *Doporučené postupy pro přípravu studijních programů*, upravuje směrnice Masarykovy univeritzy č. 1/2024 Pravidla pro tvorbu studijních programů a programů celoživotního vzdělávání. Směrnice vymezuje šest typů studijních plánů a jejich použití a kombinace v jednotlivých typech studijních programů. Jedná se o

1. jednooborový studijní plán,
2. studijní plán se specializací,
3. hlavní studijní plán (maior),
4. vedlejší studijní plán (minor),
5. studijní plán ve spolupráci s jinou vysokou školou či jinou právnickou osobou,
6. studijní plán na dostudování (určen pouze pro dostudování ve studijním oboru, studijním programu nebo studijním plánu, který zanikne).

Premisou pravidel je, že studijní plány umožňují naplnění cílů studia a dosažení profilu absolventa studijního programu. Výjimkou je pouze vedlejší studijní plán, který doplňuje hlavní studijního plán jiného studijního programu. Student nemůže studovat pouze podle vedlejšího studijního plánu.

Praxe

Among the minimum requirements for obtaining the professional qualification of pharmacist belongs the obligation to complete at least 6 months of practical training in a pharmacy. The content and scope of professional practice is fully in accordance with Directive 2005/36/EC, on the recognition of professional qualifications and its amendment 20013/ 55/EC, and corresponds to Act No. 95/2004 Coll., on the conditions for obtaining and recognizing professional competence and specialized competence to perform the medical profession of doctor, dentist and pharmacist, as amended, and its implementing decree No. 187/2009 Coll. , on the minimum requirements for the study programs of general medicine, dentistry, pharmacy, and the educational program of general practical medicine, as amended. During the internship, students perform professional activities under the supervision of a qualified employee of the healthcare facility (trainer). The practice gives students the opportunity to become familiar with the daily operation of pharmacy care facilities and to participate in all professional pharmacy activities, thereby achieving the required connection of theoretical knowledge and practical skills.
Students also have the opportunity to choose from a range of elective subjects and attend professional practical training at a workplace other than a pharmacy (pharmaceutical industry, wholesaler, control, medicines information centers, medical device dispensaries, medical laboratories, scientific research institutions, social care and veterinary care facilities, etc.).

Cíle kvalifikačních prací

Working out a diploma thesis is an obligatory part of the study in the degree programme Pharmacy. Diploma thesis defence is one of the parts of the final state examination. Most diploma theses defended in this degree programme have original character, based on a laboratory experiment, or clinical/social original research. The diploma thesis consists of a theoretical part, a methodical part, results, discussion, and conclusions. The aim of the diploma thesis is to support the own creative and explorational activities of the student, the ability of practical application of acquired theoretical knowledge, and the presentation of the results of own work.

Návaznost na další studijní programy

Study in the Master's degree programme Pharmacy can be followed by study in doctoral degree programmes in the field of Pharmacy. Graduates of the programme may also apply for admission to doctoral degree programmes offered by other faculties of Masaryk University or other universities of a related field (e.g. medical, natural science,

chemical-technological fields).

The general conditions for admission to study at MSP Pharmacy are:
a) attainment of secondary education with matriculation examination;
b) passing the admission procedure.
The entrance exam has a written form and includes a test in Biology (40%) and Chemistry (40%) in the scope of the grammar school curriculum, as well as a test of general study prerequisites (20%). The result obtained from the entrance exams will be decisive for admission. Applicants who rank in the bottom 30% will not be admitted to study. Successful applicants will be invited to register. Estimated number of applicants admitted to the 1st year of study: 50. The terms and conditions of the admission procedure for studying MSP for each academic year will be approved by the Academic Senate of FaF MU in accordance with § 27, paragraph 1, letter e) Act No. 111/1998 Coll., on universities.

1.2 Studijní plány

1.2.1 Pharmacy (prezenční, jednooborový)

Kód	PH003
Zkratka	Pharm
Forma	magisterský prezenční
Stav	uskutečňovaný

Součásti SZZ a jejich obsah

1. Diploma Thesis Defence

Final state exam:

a) Medicinal Chemistry

b) Pharmacognosy

c) Pharmacology

d) Pharmaceutical Technology

e) Social Pharmacy

Doporučený průchod studijním plánem

Compulsory courses
For successful completion of the studies, it is necessary to complete all compulsory subjects specified by the study plan.
Diploma Thesis
It is necessary to register and complete 1-1 subject from the blocks according to the guarantee department of the assigned diploma thesis (Diploma Thesis I, II and III).

Diploma Thesis I
Diploma Thesis II
Diploma Thesis III
Physical Education
For successfull completion of the studies, the student must pass 2 courses (=2 credits) of sport activities offered under codes p901-p999 by the Faculty of Sports Studies of MU.

Compulsory selective courses
1) for students who started their studies in the academic year 2020/2021 and earlier: the obligation to complete at least 4 compulsory selective subjects listed in the study plan; 2) for students who started their studies in the academic year 2021/2022 and later: the obligation to complete compulsory selective subjects listed in the study plan in the minimum range of 25 credits
Selective courses
The student registers selective subjects according to his preferences beyond the scope of compulsory and compulsory selective subjects.
*Rozsah informuje o týdenní hodinové dotaci v závislosti na formě výuky. Ve formátu (přednáška/cvičení/praktické a jiné aktivity).
**Profilace značí, zda je předmět „Profilujícího základu (P)“ nebo „Základní teoretický profilujícího základu (Z)“.

1.2.2 Pharmacy (rigorózní řízení, jednooborový)

Kód	PH004
Zkratka	Rigo
Forma	rigorózní řízení
Stav	uskutečňovaný

Součásti SRZ a jejich obsah

1. Advanced Master’s Thesis Defence

2. Theoretical exam - topics (each candidate recieve one of the below listed topic in accrodance with the orientation of the Advanced Master’s Thesis:

a) Medicinal Chemistry

b) Pharmacognosy

c) Pharmacology and Toxicology

d) Pharmaceutical Technology

e) Social Pharmacy

Návrh témat rigorózních prací a témata obhájených prací

Izolace fenolických látek z Morus alba a jejich možné využití v topické aplikaci

https://is.muni.cz/th/qh2c9/

Optimalizace složení sprejově sušených mikročástic s obsahem ciprofloxacinu

https://is.muni.cz/th/jqeqx/

Syntéza fenylpiperazinových derivátů 3-alkyl-1H-indol-2-karboxylových kyselin a jejich kvarterních solí

https://is.muni.cz/th/maqbp/

Olaparib v terapii recidivujícího ovariálního karcinomu - klinická praxe v Masarykově onkologickém ústavu a popsané klinické studie

https://is.muni.cz/th/hjt3x/

Analýza výdeje chorobu-modifikujících antirevmatických léků při léčbě revmatoidní artritidy v okrese České Budějovice

https://is.muni.cz/th/fw7wr/

Pozn.: v letech 2020-2024 neproběhla na FaF MU žádná státní rigorózní zkouška v rámci MSP Pharmacy

Doporučený průchod studijním plánem
Studijní plán nemá vyplněny žádné předměty.

1.2.3 Pharmacy (prezenční, jednooborový)

Kód	PH005
Zkratka	Pharm2
Forma	magisterský prezenční
Stav	v přípravě

Součásti SZZ a jejich obsah

1. Diploma Thesis Defence

2. Complex theoretical exam including disciplines:

a) Medicinal Chemistry

b) Pharmacognosy

c) Pharmacology

d) Pharmaceutical Technology

e) Social Pharmacy

Návrh témat kvalifikačních prací a témata obhájených prací

- Phytochemical analysis of selected plant species with pharmaceutical/medical potential
- Excipients and technologies in a selected dosage form - a formulation study
- Physico-chemical properites and their relation to biological activity of potential drug candidates
- Selected aspects of the access to health care with a focus on pharmaceutical care
- Clinical aspects of medicines use

Doporučený průchod studijním plánem

Povinné předměty

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFAAC1_15	General and Inorganic Chemistry	T. Goněc	zk	3/2/0 42p+28c.	6	1	P
aFABB1_16	Cell Biology for Pharmacists	J. Hošek	zk	2/2/0 28p+28c.	5	1	P
aFABO1_12	Pharmaceutical Botany I	P. Babula	z	2/2/0 28p+28c.	4	1	P
aFACV1_15	Chemical Calculations	A. Kroutil	z	0/2/0 28s.	2	1	P
aFAHF1_11	History of Pharmacy	T. Ambrus	zk	2/0/0 28p.	3	1	P

pokračování na další straně

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFAMC1_14	Human Morphology	M. Chalupová	zk	2/1/0 28p+14c.	4	1	P
aFAOL1_cjv	Professional Latin I	R. Prucklová	z	0/2/0 28s.	2	1	-
aFAPP1_LF	Premedical First Aid	P. Štourač	k	0/2/0 28c.	3	1	P
aFABF1_13	Biophysics for Pharmacists	J. Muselík	zk	2/0/0 28p.	3	2	P
aFABO2_12	Pharmaceutical Botany II	P. Babula	zk	2/2/0 28p+28c.	5	2	P
aFAFC1_14	Human Physiology and Pathophysiology I	T. Parák	z	2/1/0 28p+14c.	3	2	P
aFAFY1_13	Physical Pharmacy	D. Vetchý	zk	2/2/0 28p+28c.	5	2	P
aFAOC1_15	Organic Chemistry for Pharmacists I	P. Bobáľ	zk	2/1/0 28p+14s.	4	2	P
aFAOL2_cjv	Professional Latin II	R. Prucklová	zk	0/2/0 28s.	3	2	-
aFAUF1_11	Introduction to Pharmaceuticals and Pharmacy	L. Smejkalová	zk	1/2/0 14p+28s.	4	2	P
aFAAI1_15	Analytical Chemistry for Pharmacists I	J. Pazourek	z	2/3/0 28p+42c.	4	3	P
aFABC1_16	Biochemistry for Pharmacists	J. Treml	zk	3/1/0 42p+14c.	5	3	P
aFAFC2_14	Human Physiology and Pathophysiology II	T. Parák	zk	2/2/0 28p+28c.	5	3	P
aFAFO1_12	Phytochemistry	K. Šmejkal	z	1/1/0 14p+14c.	3	3	P
aFAMO1_16	Molecular Biology for Pharmacists	J. Treml	zk	2/1/0 28p+14s.	4	3	P
aFAOC2_15	Organic Chemistry for Pharmacists II	P. Bobáľ	zk	2/1/0 28p+14s.	4	3	P
aFAOC3_15	Organic Chemistry - Practical Classes	P. Bobáľ	z	0/4/0 56c.	3	3	P
aFAAI2_15	Analytical Chemistry for Pharmacists II	J. Pazourek	zk	2/3/0 28p+42c.	6	4	P
aFABT1_16	Pharmaceutical Biotechnology	J. Hošek	zk	2/2/0 28p+28c.	5	4	P
aFAFG1_12	Pharmacognosy I	K. Šmejkal	z	2/4/0 42p+56c.	5	4	Z
aFAFK1_14	Pharmacology I	P. Kollár	z	2/0/0 28p.	3	4	Z
aFAMB1_16	Microbiology for Pharmacists	J. Treml	zk	2/2/0 28p+28c.	5	4	P
aFACH1_15	Medicinal Chemistry I	O. Farsa	z	3/1/0 42p+14s.	4	5	Z
aFAFG2_12	Pharmacognosy II	K. Šmejkal	zk	3/0/3 28p+42c.	7	5	Z
aFAFK2_14	Pharmacology II	P. Kollár	z	3/0/2 42p+28s.	5	5	Z
aFALK1_11	Pharmacy Practice I	L. Smejkalová	zk	2/0/2 28p+28s.	5	5	P
aFATO1_14	Toxicology	P. Suchý	zk	2/1/0 28p+14s.	4	5	P
aFACH2_15	Medicinal Chemistry II	O. Farsa	zk	3/4/0 42p+56c.	8	6	Z
aFAFK3_14	Pharmacology III	P. Kollár	zk	3/2/0 42p+28s.	6	6	Z

pokračování na další straně

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFAFT1_13	Pharmaceutical Technology I	D. Vetchý	zk	2/0/0 28p.	3	6	Z
aFASF1_11	Social Pharmacy I	J. Kolář	z	2/1/0 28p+14s.	3	6	Z
aFAOP1_11	Pharmacy Internship I (2 weeks)	L. Smejkalová	z	0/0/80 80c.	2	6	P
aFABL1_15	Biological Medicinal Products	O. Farsa	zk	2/0/0 28p.	3	7	Z
aFAFP1_11	Pharmaceutical Care I	D. Mazánková	k	0/3/0 42s.	4	7	P
aFAFT2_13	Pharmceutical Technology II	K. Kubová	z	3/2/4 42p+28s+56c.	7	7	Z
aFAKF1_14	Clinical Pharmacy and Pharmacotherapy	P. Kollár	zk	2/0/0 28p.	3	7	Z
aFAKL1_15	Quality Control of Pharmaceuticals	R. Opatřilová	zk	2/3/0 28p+42c.	6	7	Z
aFASF2_11	Social Pharmacy II	J. Kolář	zk	2/1/0 28p+14s.	4	7	Z
aFAFP2_LF	Pharmaceutical Care II	R. Demlová	k	0/2/0 28s.	3	8	P
aFAFT3_13	Pharmaceutical Technology III	K. Kubová	zk	3/2/4 42p+28s+56c.	8	8	Z
aFAPF1_13	Industrial Pharmacy	A. Franc	zk	2/0/0 28p.	3	8	P
aFAPM1_15	Advanced Analytical Methods in Pharmacy and Biomedicine	M. Kuchynka	zk	2/0/0 28p.	3	8	P
aFAOP2_11	Pharmacy Internship II (4 weeks)	D. Mazánková	z	0/0/160 160c.	4	8	P
aFAOP3_11	Pharmacy Internship III (20 weeks)	D. Mazánková	k	0/0/800 800c.	20	9	P
aFAFP3_14	Pharmaceutical Care III	H. Kotolová	k	0/2/0 28s.	4	10	P
aFALK2_11	Pharmacy Practice II	L. Smejkalová	k	0/2/0 28s.	4	10	P

231 kreditů

Povinně volitelné předměty

Selective courses - Group 1
For successful completion of the studies, the student must obtain min. 15 credits from the Selective courses - Group 1.

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFAAM1_13	Additive Manufacturing in Pharmaceutical Technology	J. Elbl	k	1/1/0 14p+14c.	3	-	-
aFAAT1_16	Advanced Therapy Medicinal Products	J. Treml	zk	2/0/0 28p.	3	-	-
aFACP1_15	Food Chemistry	R. Opatřilová	zk	2/0/0 28p.	3	-	-
aFAEX1_13	Excursion to Pharmaceutical Industry	D. Vetchý	z	0/1/0 14c.	2	-	-
aFAFF1_12	Phytopharmaceuticals and Phytotherapy	I. Daňková	zk	2/0/0 28p.	3	-	-
aFAFI1_14	Pharmacokinetics and Biopharmacy	T. Kauerová	zk	1/1/0 14p+14s.	3	-	-
aFAGE1_16	Applied Genetics	P. Hořín	zk	2/0/0 28p.	3	-	-
aFAGF1_14	Geriatric Pharmacotherapy	R. Blechová	zk	2/0/0 28p.	3	-	-

pokračování na další straně

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFAHL1_14	Preclinical and Clinical Trials of Medicines	K. Horská	zk	1/0/0 14p.	2	-	-
aFAHT1_11	Health Technology Assessment	D. Grega	k	1/1/0 14p+14s.	3	-	-
aFAIA1_13	Instrumental Methods in Medicinal Products Characterization	J. Muselík	zk	1/1/0 14p+14c.	3	-	-
aFAIF1_16	Immunology for Pharmacists	M. Číž	zk	2/0/0 28p.	3	-	-
aFAKP1_13	Cosmetology for Pharmacists	K. Kubová	zk	2/0/0 28p.	3	-	-
aFAMH1_13	Methods of Evaluation and Formualtion Dossiers of Medicinal Products	D. Vetchý	zk	1/1/0 14p+14s.	3	-	-
aFAMI1_12	Modern Methods of Extraction and Identification of Natural Compounds	M. Malaník	zk	1/0/0 14p.	2	-	-
aFAMZ1_15	Molecular Principles of Drug Design	O. Farsa	zk	1/1/0 28p+14c.	4	-	-
aFANF1_13	Hospital Pharmacy	J. Vysloužil	zk	2/1/0 28p+14c.	4	-	-
aFANM1_15	NMR Structural Analysis of Organic Compounds	J. Otevřel	zk	0/2/0 28s.	3	-	-
aFAPB1_16	Pathobiochemistry	M. Brázdová	zk	2/1/0 28p+14c.	4	-	-
aFAPK1_11	Pharmacy Counselling	K. Vašut	zk	0/2/0 28s.	3	-	-
aFARF1_13	Radiopharmaceuticals	M. Budinský	zk	1/0/1 14p+14s.	3	-	-
aFASC1_15	Drug Stereochemistry	J. Otevřel	zk	2/0/0 28p.	3	-	-
aFATL1_12	Toxicology of Natural Compounds	K. Šmejkal	zk	2/1/0 28p+14c.	4	-	-
aFAVF1_14	Veterinary Pharmacology and Pharmacotherapy	Z. Široká	zk	0/2/0 28s.	3	-	-
aFAVG1_13	Advanced Drug Delivery and Technologies	J. Gajdziok	zk	2/2/0 28p+28c.	5	-	-
aFAVL1_13	Veterinary Dosage Forms	A. Franc	zk	2/0/0 28p.	3	-	-

81 kreditů

Selective courses - Group 2
For successful completion of the studies, the student must obtain min. 15 credits from the Selective courses - Group 2.

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFAAO1_12	Antioxidants and Free Radicals	R. Kubínová	zk	2/0/0 28p.	3	-	-
aFAAS1_15	Applied Statistics	J. Pazourek	zk	2/2/0 28p+28s.	4	-	-
aFACF1_15	Chemistry of Pharmaceutical Excipients	O. Farsa	zk	1/1/0 14p+14c.	3	-	-
aFAEK1_PrF	General Ecology and Ecology of Human Health	M. Gelnar	zk	2/0/0 28p.	3	-	-
aFAIC1_15	Interactions of Medicines, People and Environment	R. Opatřilová	zk	2/0/0 28p.	3	-	-

pokračování na další straně

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFAIZ1_12	Work with Information Sources	M. Malaník	z	0/2/0 14s.	3	-	-
aFALR1_12	Production of Medicinal Plants	M. Dvorská	zk	2/1/0 28p+14c.	4	-	-
aFAMA1_13	Mathemathics and Basics of Data Analysis	S. Pavloková	k	0/1/0 14s.	2	-	-
aFAMF1_15	Forensic Analysis Methods	R. Opatřilová	zk	2/0/0 28p.	3	-	-
aFAPL1_11	Managed Practice in Pharmacies (2 weeks)	M. Šutorová	z	0/0/80 80c.	2	-	-
aFAPX1_11	Managed Pharmaceutical Practice (2 weeks)	T. Ambrus	z	0/0/80 80c.	2	-	-
aFASI1_15	Substance Interactions Analysis	R. Opatřilová	zk	2/0/0 28p.	3	-	-
aFAZL1_15	Basics of Chemical Drugs	P. Mokrý	zk	2/1/0 28p+14s.	-	-	-
					35 kreditů		

Diplomová práce

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFADP1_FaF	Diploma Thesis I	P. Kollár	z	0/2/0 28c.	2	7	P
aFADP2_FaF	Diploma Thesis II	P. Kollár	z	0/4/0 56c.	4	8	P
aFADP3_FaF	Diploma Thesis III	P. Kollár	z	0/5/0 70c.	5	9	P
aFADP4_FaF	Diploma Thesis IV	P. Kollár	z	0/15/0 210c.	15	10	P
aFADP5_FaF	Diploma Thesis Submission	T. Ambrus	z	0/1/0	1	10	-
					27 kreditů		

Cizí jazyk + TV

Blok jazyků
Czech Language I - compulsory course; Czech Language II - selective course

Kód	Název	Garant	Uk.	Rozsah*	Kreditů	Sem.	Profilace**
aFACJ1_cjv	Czech Language I	R. Prucklová	zk	0/2/0 28s.	3	-	-
aFACJ2_cjv	Czech Language II	R. Prucklová	zk	0/2/0 28s.	3	-	-
					6 kreditů		

TV
For successfull completion of the studies, the student must pass 2 courses (=2 credits) of sport activities offered under codes p901-p999 by the Faculty of Sports Studies of MU.

*Rozsah informuje o týdenní hodinové dotaci v závislosti na formě výuky. Ve formátu (přednáška/cvičení/praktické a jiné aktivity).
**Profilace značí, zda je předmět „Profilujícího základu (P)“ nebo „Základní teoretický profilujícího základu (Z)“.

2 Charakteristiky předmětů

Tato kapitola obsahuje charakteristiky povinných a povinně-volitelných předmětů ze šablon studijních plánů.

2.1 Základní teoretické předměty profilujícího základu (Z)

Jedná se o podmnožinu předmětů profilujícího základu (P) (viz 2.2), které jsou pro dosažení profilu absolventa natolik významné, že tvoří zpravidla základní jádro všech studijních plánů studijního programu.

FaF:aFABL1_15 **Biological Medicinal Products**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Oldřich Farsa, Ph.D.

Vyučující

doc. PharmDr. Oldřich Farsa, Ph.D. (přednášející)
doc. PharmDr. Aleš Franc, Ph.D. (přednášející)

Cíle předmětu

Biological Medicinal Products or simply Biotherapeutics ("or biological and biotechnological substances" in WHO terms) are medicines with relative molecular mass in most greater than 1 000 (in contrast to classical "chemical" medicines called "small molecules"). They are typically produced by other way than by a common chemical synthesis (recombinant technologies are the most typical ones in production of proteine structure drugs). They mostly have neither exactly defined chemical structure nor exactly known relative molecular mass because they are often mixtures of structurally related biopolymers. They frequently exhibit primary structure (monomeres' sequence, eg. that of amino acids, nucleotides or monosaccharides) and secondary, tertiary and quarternary one. This group includes eg. monoclonal antibodies, modified receptor molecules, protein and peptide hormones, cytokines, haematopoietic factors, modified oligonucleotides, vaccines of all generations and heparines. Biologic therapy grows rapidly during past decades and is often considered to be the last chance in treatment of cancer or autoimune diseases. The wider usage of biotherapeutics is still slowed down by their high price. This problem is, however, beeing stepwisely overcome by introduction of biosimilar products which mean an analogy of generics in terms of small molecules.

Výukové metody

Lectures.

Metody hodnocení

A grade. A written exam: a test combining multiple-choice questions and questions requiring verbal answers or answers by drawing a structure.

Primární způsob výuky

Žádné informace.

Výstupy z učení

A student will, after passing the subject, be capable to enumerate:
- main groups of biologic drugs;
- their main structural characteristics;
- their general mechanisms of activity;
- the names, approximate structure, mechanism of action and use of biotherapeutics presented at the lectures.

Osnova

Content of the discipline expressed as topics of lectures:Biological therapeutics (biologics) and conventional small molecule drugs - definition, history, contemporary situation, classification of biologics, fundamentals of their INN nomenclature. (Farsa)
Immunopeparations. Vaccines of both traditional and novel type. (assoc. prof.Aleš Franc from Department of Pharmaceutical Technology)
Drugs with peptide structure (except for enzymes and antibodies). (Farsa)
Therapeutic oligonucleotides. Poly- and oligosacharides used as medicines. (Farsa)
Therapeutic monoclonal antibodies. (Farsa)
Modified receptor molecules and transmembrane proteins as medicines.(Farsa)
Enzymes as drugs. (Farsa)

Literatura

doporučená literatura

FARSA, Oldřich a Peter ZUBÁČ. Protein and Small-Molecule Leucopoiesis and Thrombopoiesis Stimulators. *Mini-reviews in medicinal chemistry*. Sharjah: Betham Science Publ Ltd., 2021, roč. 21, č. 13, s. 1638-1645. ISSN 1389-5575. Dostupné z: https://dx.doi.org/10.2174/1389557521999201230195926. https://www.eurekaselect.com/189654/article

Ministry of Health, Labour and Welfare of Japan. *The Japanese Pharmacopoeia ? 17th Edition, English version.*. Tokio, 2016. https://www.mhlw.go.jp/file/06-Seisakujouhou-11120000-Iyakushokuhinkyoku/JP17_REV_1.pdf

WHO. *World Health Organization: International Nonproprietary Names (INN) for biological and biotechnological substances (a review), WHO/EMP/RHT/TSN/2016.1*. Geneva, 2016. http://www.who.int/medicines/services/inn/inn_bio_inn/en/

U.S. Department of Health and Human Services Food and Drug Admin. *Scientific Considerations in Demonstrating Biosimilarity to a Reference Product*. Silver Spring, MD, USA, 2015. https://www.fda.gov/downloads/drugs/guidancecomplianceregulatoryinformation/guidances/ucm291128.pdf

WHO Expert Committee on Biological Standardization. *Guidelines on evaluation of similar biotherapeutic products (SBPs)*. Geneva, 2013. http://www.who.int/biologicals/publications/trs/areas/biological_therapeutics/TRS_

977_Annex_2.pdf?ua=1

Ng Rick. *Drugs: From Discovery to Approval. Second Edition.*. 2009. ISBN 978-0-470403587. http://sis.vfu.cz/eiz/e-books/ebooklist.html

FaF:aFAFG1_12 **Pharmacognosy I**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení z, garant předmětu prof. PharmDr. Karel Šmejkal, Ph.D.

Vyučující

doc. PharmDr. Renata Kubínová, Ph.D. (přednášející)
prof. PharmDr. Karel Šmejkal, Ph.D. (přednášející)
PharmDr. Ivana Daňková, Ph.D. (cvičící)
PharmDr. Margita Dvorská, Ph.D. (cvičící)
PharmDr. Dagmar Jankovská, Ph.D. (cvičící)
doc. PharmDr. Renata Kubínová, Ph.D. (cvičící)
PharmDr. Milan Malaník, Ph.D. (cvičící)
PharmDr. Lenka Molčanová, Ph.D. (cvičící)
PharmDr. Alice Sychrová, Ph.D. (cvičící)
Mgr. Ing. Jiří Václavík, Ph.D. (cvičící)

Cíle předmětu

Objectives of Pharmacognosy are to impart knowledges of those drugs of biological origin and their constituents that are of value for their therapeutic, profylactic and diagnostic use in the human and veterinary medicine. Its scope includes the study of the physical, chemical, biochemical and biological properties of drugs, drug substances, or potential drugs or drug substances of natural origin as well as the search for new drugs from natural sources. Research problems in pharmacognosy include studies in the areas of phytochemistry, microbial chemistry, biosynthesis, biotransformation, chemotaxonomy, and other biological and chemical sciences.
Pharmacognosy represents a highly interdisciplinary science which is one of five major areas of pharmaceutical education.

Výukové metody

Lectures, practical classes

Metody hodnocení

Written tests

Primární způsob výuky

Žádné informace.

Výstupy z učení

The student must be able to microscopically and macroscopically identify selected drugs, know their main content substances, use, basic biosynthetic reactions, basal classes of secondary metabolites. Know the main plants used in the pharmacy. Chemical characteristics of secondary metabolites, basic knowledge of structure-activity relationships, basic knowledge of adverse effects and interactions.

Osnova

Syllabus of lectures" Introduction and historical background.
" Generalities on collection, preservation, evaluation, and factors that influence the quality and price of drugs.
" Systemes for classification and characterization of natural drugs.
" Methodology of pharmacognosy.
" Natural drugs in relation to the European Pharmacopoeia.
" Biosynthesis of natural compounds, primary and secondary metabolism, precursors, relationship.
" Carbohydrates and their derivatives. Monosaccharides, oligosaccharides, polysaccharides (starches, mucilages). Polysaccharides from microorganisms, fungi, and algae, glycoconjugates. Lipids.
" General characterization of the individual class of plant constituents:
glycosides, essential oils, terpenoids and steroids, bitter substances, alkaloids, tannins, flavonoids, compounds with hormonal activity, vitamins, coloring principles, sweeteners.
" Antibiotics, macrolides, cytostatics, important drugs of animal origin.
" Natural compounds derived from the shikimic acid.
" Natural compounds derived from the acetic acid.
" Natural compounds derived from mevalonic acid.
" Natural compounds derived from the aminoacids.SYLABUS OF PRACTICAL CLASSES FROM PHARMACOGNOSY II
1. Drugs containing carbohydrates
Identification assays
Purity assays
2. Drugs containing polysaccharides and mucilages
Identification assays
Determination of number of swelling
3. Drugs containing phenolics glycosides
Identification assays
Chromatographic proof of hydroquinones and arbutin
Determination of arbutin content by titration
4. Drugs containing cardioglycosides (test no. 1)
Identification assays

Chromatographic proof
Colorimetric determination
5. Drugs containing the anthracene derivatives
Identification assays
Chromatographic proof of anthraquinone derivatives
Quantification of hypericin
6. Drugs containing flavonoid glycosides
Identification assays
Colorimetric quantification of flavonoids
Chromatographic proof
7. Drugs containing saponins (test no. 2)
Identification assays
Determination of hemolytic activity using blood agar
Determination of foaming power according to Kofler
Quantification of glycyrrhizinic acid
8. Drugs containing tannins
Identification assays color, precipitation
Chromatographic proof
Quantification of tannins in drug quantification of total phenolics
9. Drugs containing essential oils
Identification assays
Chromatographic proof
Quantification of essential oils
10. Drugs containing alkaloids I. (test no. 3)
Precipitation and color reaction of alkaloids
Quantification of tropane alkaloids using titration
11. Drugs containing alkaloids II.
Precipitation and color reaction of alkaloids
Gravimetric quantification of purine alkaloids
Thin layer chromatography of opium alkaloids
12. Drugs containing bitter substances
Identification assays
Determination of number of bitterness
13. Drugs containing thioglycosides of Brassicaceae
Identification assays and purity
14. Drugs containing coumarins, anthocyanins (test no. 4)
Chromatographic proof

Literatura

doporučená literatura

HEINRICH, Michael, Joanne BARNES, José M. PRIETO GARCIA, Simon GIBBONS a Elizabeth M. WILLIAMSON. *Fundamentals of pharmacognosy and phytotherapy*. Edited by A. Douglas Kinghorn - Mark Blumenthal. Fourth edition. [London]: Elsevier, 2024, x, 272. ISBN 9780323834346.

Pharmacognosy : fundamentals, applications, and strategies. Edited by Simone Badal McCreath - Yuri N. Clement. Second edition. London: Elsevier, 2024, xxv, 819. ISBN 9780443186578.

From herbs to healing : pharmacognosy - phytochemistry - phytotherapy - biotechnology. Edited by Éva Szöke - Ágnes Kéry - Éva Lemberkovics. Cham: Springer, 2023, xvii, 570. ISBN 9783031173004.

Samuelsson G., Bohlin L. *Drugs of Natural Origin. A Treatise of Pharmacognosy. 7th revised edition.*. 2015.

FaF:aFAFG2_12 **Pharmacognosy II**

Předmět není v aktuálních obdobích! 7 kreditů, ukončení zk, garant předmětu prof. PharmDr. Karel Šmejkal, Ph.D.

Vyučující

doc. PharmDr. Renata Kubínová, Ph.D. (přednášející)
prof. PharmDr. Karel Šmejkal, Ph.D. (přednášející)
PharmDr. Ivana Daňková, Ph.D. (cvičící)
PharmDr. Dagmar Jankovská, Ph.D. (cvičící)
doc. PharmDr. Renata Kubínová, Ph.D. (cvičící)
PharmDr. Milan Malaník, Ph.D. (cvičící)
PharmDr. Lenka Molčanová, Ph.D. (cvičící)
Mgr. Ing. Jiří Václavík, Ph.D. (cvičící)

Cíle předmětu

Objectives of Pharmacognosy are to impart knowledges of those drugs of biological origin and their constituents that are of value for their therapeutic, profylactic and diagnostic use in the human and veterinary medicine. Its scope includes the study of the physical, chemical, biochemical and biological properties of drugs, drug substances, or potential drugs or drug substances of natural origin as well as the search for new drugs from natural sources. Research problems in pharmacognosy include studies in the areas of phytochemistry, microbial chemistry, biosynthesis, biotransformation, chemotaxonomy, and other biological and chemical sciences.
Pharmacognosy represents a highly interdisciplinary science which is one of five major areas of pharmaceutical

education.

Výukové metody

Lectures Practical excersises Discussion with teachers and brainstorming

Metody hodnocení

Absolvování praktických cvičení, splnění testů na minimálně 60% (1 řádný a 2 opravné pokusy). Praktická zkouška - poznávání vybraných drog, znalost obsahových látek a použití. Ústní zkouška.

Primární způsob výuky

Žádné informace.

Výstupy z učení

The student must be able to microscopically and macroscopically identify selected drugs, know their main content substances, use, basic biosynthetic reactions, basal classes of secondary metabolites. Know the main plants used in the pharmacy. Chemical characteristics of secondary metabolites, basic knowledge of structure-activity relationships, basic knowledge of adverse effects and interactions.

Osnova

Syllabus of lectures" Drugs affecting the central and peripheral nervous system
" Drugs affecting vegetative nervous system
" Drugs affecting the cardiovascular system
" Drugs affecting hemocoagulation, fibrinolysis and used as the substitution of blood plasma
" Drugs affecting water balance of the organism
" Drugs affecting the respiratory system
" Drugs affecting the digestive system
" Uterotonics, antiuratics, antiphlogistics
" Dietetics, roborants, geriatrics, sources of vitamins, supporting therapy of diabetes mellitus
" Hormones, enzymes
" Anti-infectious and anti-invasive drugs
" Drugs used for their local anesthetic activity
" Biogenic additives
" Natural substances inspirational for synthesis
SYLABUS OF PRACTICAL CLASSES FROM PHARMACOGNOSY II
1. Drugs containing carbohydrates
Identification assays
Purity assays
2. Drugs containing polysaccharides and mucilages
Identification assays
Determination of number of swelling
3. Drugs containing phenolics glycosides
Identification assays
Chromatographic proof of hydroquinones and arbutin
Determination of arbutin content by titration
4. Drugs containing cardioglycosides (test no. 1)
Identification assays
Chromatographic proof
Colorimetric determination
5. Drugs containing the anthracene derivatives
Identification assays
Chromatographic proof of anthraquinone derivatives
Quantification of hypericin
6. Drugs containing flavonoid glycosides
Identification assays
Colorimetric quantification of flavonoids
Chromatographic proof
7. Drugs containing saponins (test no. 2)
Identification assays
Determination of hemolytic activity using blood agar
Determination of foaming power according to Kofler
Quantification of glycyrrhizinic acid
8. Drugs containing tannins
Identification assays color, precipitation
Chromatographic proof
Quantification of tannins in drug quantification of total phenolics
9. Drugs containing essential oils
Identification assays
Chromatographic proof
Quantification of essential oils
10. Drugs containing alkaloids I. (test no. 3)
Precipitation and color reaction of alkaloids
Quantification of tropane alkaloids using titration
11. Drugs containing alkaloids II.
Precipitation and color reaction of alkaloids
Gravimetric quantification of purine alkaloids
Thin layer chromatography of opium alkaloids

12. Drugs containing bitter substances
Identification assays
Determination of number of bitterness
13. Drugs containing thioglycosides of Brassicaceae
Identification assays and purity
14. Drugs containing coumarins, anthocyanins (test no. 4)
Chromatographic proof

Literatura

doporučená literatura

HEINRICH, Michael, Joanne BARNES, José M. PRIETO GARCIA, Simon GIBBONS a Elizabeth M. WILLIAMSON. *Fundamentals of pharmacognosy and phytotherapy*. Edited by A. Douglas Kinghorn - Mark Blumenthal. Fourth edition. [London]: Elsevier, 2024, x, 272. ISBN 9780323834346.

Pharmacognosy : fundamentals, applications, and strategies. Edited by Simone Badal McCreath - Yuri N. Clement. Second edition. London: Elsevier, 2024, xxv, 819. ISBN 9780443186578.

From herbs to healing : pharmacognosy - phytochemistry - phytotherapy - biotechnology. Edited by Éva Szöke - Ágnes Kéry - Éva Lemberkovics. Cham: Springer, 2023, xvii, 570. ISBN 9783031173004.

Samuelsson G., Bohlin L. *Drugs of Natural Origin. A Treatise of Pharmacognosy. 7th revised edition.*. 2015.

FaF:aFAFK1_14 **Pharmacology I**

Předmět není v aktuálních obdobích! 3 kredity, ukončení z, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Jan Juřica, Ph.D. (přednášející)
PharmDr. Tereza Kauerová, Ph.D. (přednášející)
doc. PharmDr. Peter Kollár, Ph.D. (přednášející)

Cíle předmětu

Pharmacology is a science that studies interactions of medical substances and organisms on various morphological and physiological levels. It focuses on mechanisms and time progress of medicines in organisms (pharmacokinetics), and on medicines impact mechanisms on an organism (pharmacodynamics). Certain toxicology sections (science on toxins) constitute a part of the pharmacology in the area of undesirable effects as well.

Výukové metody

lectures

Metody hodnocení

Written final test

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course the student is able to clarify the basic general rules regarding the fate of the drug in the body and the mechanisms of the drug's effect on the human body. Student can also define and characterize the properties of specific drugs - mechanisms of action, pharmacological effects, pharmacokinetic properties, side effects and interactions. The student will be able to apply the acquired knowledge about the properties of drugs in a safe and effective pharmacotherapy.

Osnova

- Introduction into the pharmacology
- Preclinical and clinical drug testing
- Pharmacokinetic processes
- Pharmacokinetic parameters and their clinical significance
- Receptor theory. Types of receptors
- Mechanisms of transmembrane transport of drugs, transport of drugs across organ barriers
- Routes of drug administration
- Basic pharmacodynamic processes (Dose-drug relationship. - Intercellular signaling. Drug-receptor interaction)
- General principles of poisoning therapy. Drug addictions (classification, mechanisms of origin, possibilities of therapy)
- Factors influencing the effect of a drug

Literatura

povinná literatura

RITTER, James, R. J. FLOWER, Graeme HENDERSON, Yoon Kong LOKE, David J. MACEWAN, Emma S. J. ROBINSON a James FULLERTON. *Rang & Dale's pharmacology / James M. Ritter, Rod Flower, Graeme Henderson, Yoon Kong Loke, David MacEvan, Emma Robinson, James Fullerton*. Tenth edition. London: Elsevier, 2024, xvii, 850. ISBN 9780323873963.

doporučená literatura

Whalen K. *Lippincott Illustrated Reviews: Pharmacology, 7th edition*. Lippincott Williams & Wilkins, USA, 2018.

ISBN 978-1496384133.

Trevor A, Katzung B, Masters S., Knuidering-Hall M. *Katzung & Trevor's Pharmacology Examination and Board Review*. McGraw-Hill Medical, 2012. ISBN 0071789235.

Katzung BG. *Basic and Clinical Pharmacology*. McGraw-Hill Medical, 2011. ISBN 978-0071764018.

FaF:aFAFK2_14 **Pharmacology II**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení z, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Jan Juřica, Ph.D. (přednášející)
PharmDr. Tereza Kauerová, Ph.D. (přednášející)
doc. PharmDr. Peter Kollár, Ph.D. (přednášející)
MVDr. Renata Blechová, Ph.D. (cvičící)
PharmDr. Tereza Kauerová, Ph.D. (cvičící)
doc. PharmDr. Peter Kollár, Ph.D. (cvičící)
PharmDr. Bc. Hana Kotolová, Ph.D. (cvičící)
PharmDr. Zuzana Široká, Ph.D. (cvičící)

Cíle předmětu

Pharmacology is a science that studies interactions of medical substances and organisms on various morphological and physiological levels. It focuses on mechanisms and time progress of medicines in organisms (pharmacokinetics), and on medicines impact mechanisms on an organism (pharmacodynamics). Certain toxicology sections (science on toxins) constitute a part of the pharmacology in the area of undesirable effects as well.

Výukové metody

lectures, seminars

Metody hodnocení

Continuous and final written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course the student is able to clarify the basic general rules regarding the fate of the drug in the body and the mechanisms of the drug's effect on the human body. Student can also define and characterize the properties of specific drugs - mechanisms of action, pharmacological effects, pharmacokinetic properties, side effects and interactions. The student will be able to apply the acquired knowledge about the properties of drugs in a safe and effective pharmacotherapy.

Osnova

- Pharmacology of the autonomic nervous system
- Medicines used in pain therapy (opioid and non-opioid analgesics)
- Introduction to CNS pharmacology (CNS neurotransmitters. Classification of psychotropic drugs)
- Pharmacology of the CNS
- Antiepileptic drugs
- Antiparkinson drugs
- Muscle relaxants
- Spasmolytics
- GIT pharmacology
- Medicines affecting the urogenital system (Urinary incontinence, benign prostatic hyperplasia, erectile dysfunction)
- Ophthalmologicals
- Dermatologyicals
- Nonsteroidal antiphlogistics. Antirheumatic drug. Antiuratics
- Analgesics-antipyretics
- Analgesics-anodynes
- General anesthetics
- Local anesthetics

Literatura

povinná literatura

RITTER, James, R. J. FLOWER, Graeme HENDERSON, Yoon Kong LOKE, David J. MACEWAN, Emma S. J. ROBINSON a James FULLERTON. *Rang & Dale's pharmacology / James M. Ritter, Rod Flower, Graeme Henderson, Yoon Kong Loke, David MacEvan, Emma Robinson, James Fullerton*. Tenth edition. London: Elsevier, 2024, xvii, 850. ISBN 9780323873963.

doporučená literatura

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Trevor A, Katzung B, Masters S., Knuidering-Hall M. *Katzung & Trevor's Pharmacology Examination and Board Review*. McGraw-Hill Medical, 2012. ISBN 0071789235.

Katzung BG. *Basic and Clinical Pharmacology*. McGraw-Hill Medical, 2011. ISBN 978-0071764018.

FaF:aFAFK3_14 **Pharmacology III**

Předmět není v aktuálních obdobích! 6 kreditů, ukončení zk, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Jan Juřica, Ph.D. (přednášející)
PharmDr. Tereza Kauerová, Ph.D. (přednášející)
doc. PharmDr. Peter Kollár, Ph.D. (přednášející)
MVDr. Renata Blechová, Ph.D. (cvičící)
MUDr. Marta Chalupová, Ph.D. (cvičící)
PharmDr. Tereza Kauerová, Ph.D. (cvičící)
PharmDr. Bc. Hana Kotolová, Ph.D. (cvičící)
PharmDr. Zuzana Široká, Ph.D. (cvičící)

Cíle předmětu

Pharmacology is a science that studies interactions of medical substances and organisms on various morphological and physiological levels. It focuses on mechanisms and time progress of medicines in organisms (pharmacokinetics), and on medicines impact mechanisms on an organism (pharmacodynamics). Certain toxicology sections (science on toxins) constitute a part of the pharmacology in the area of undesirable effects as well.

Výukové metody

lectures, seminars

Metody hodnocení

Continusous and final written test, oral examination

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course the student is able to clarify the basic general rules regarding the fate of the drug in the body and the mechanisms of the drug's effect on the human body. Student can also define and characterize the properties of specific drugs - mechanisms of action, pharmacological effects, pharmacokinetic properties, side effects and interactions. The student will be able to apply the acquired knowledge about the properties of drugs in a safe and effective pharmacotherapy.

Osnova

- General principles of antimicrobial treatment, mechanisms of resistance to ATB treatment, beta-lactam ATB
- Antimicrobial drugs (pharmacological groups of antibacterial drugs)
- Antivirals, antifungals
- Anti-infective drugs. Antiparasitic, antiprotozoic, antituberculotic, antileprotic drugs
- Pharmacology of the heart (antiarrhythmics, positive inotropes and treatment of acute and chronic heart failure)
- Pharmacology of essential hypertension
- Vascular pharmacology (vasoconstrictors, vasodilators, venotonics)
- Blood pharmacology (anemia, influencing blood clotting - anticoagulants, fibrinolytics, hemostatics, antifibrinolytics, antiaggregants, antithrombotics)
- Pharmacology of the respiratory system (Antiasthmatics, pharmacotherapy of chronic obstructive pulmonary disease. Cough-antitussive therapy, expectorants)
- H1 antihistamines. Antiemetics, prokinetics. Antivertiginosis, drugs used in the therapy of Ménière's disease and tinnitus
- Peripheral hormones and mediators (autacoids) and their pharmacological significance (histamine and antihistamines, serotonin, prostaglandins, NO, bradykinin
- Medicines affecting the thyroid gland. Pharmacotherapy of osteoporosis and other bone diseases
- Medicines used in DM type 1 therapy - Insulin and its analogs. The endocrine pancreas and glycemic control. Insulin therapy, application forms, regimens, acute care, complications
- Medicines used in DM type 2 therapy
- Hypolipidemics, antiobesitics (Lipid spectrum disorder, Atherosclerotic cardiovascular disease, cardiorenal syndrome)
- Pharmacology of female and male sex hormones (agonists, antagonists, contraceptives, hormone replacement therapy)
- Mineralocorticoids, glucocorticoids
- Immunopharmaceuticals (Immunosuppressants, immunomodulation)
- Cytostatics (drugs used in cancer therapy)
- Biological treatment and principles of targeted therapy

Literatura

povinná literatura

RITTER, James, R. J. FLOWER, Graeme HENDERSON, Yoon Kong LOKE, David J. MACEWAN a H. P. RANG.

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FaF:aFAFT1_13 **Pharmaceutical Technology I**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu prof. PharmDr. Mgr. David Vetchý, Ph.D.

Vyučující

PharmDr. Jan Elbl, Ph.D. (přednášející)
doc. PharmDr. Jan Gajdziok, Ph.D. (přednášející)
prof. PharmDr. Mgr. David Vetchý, Ph.D. (přednášející)
PharmDr. Jan Elbl, Ph.D. (cvičící)
doc. Mgr. Jan Muselík, Ph.D. (cvičící)
Mgr. Sylvie Pavloková, Ph.D. (cvičící)
PharmDr. Jiří Zeman, Ph.D. (cvičící)

Cíle předmětu

The aim of the course is to acquaint students with the basics and principles of drug formulation, methods and processes used in the design and development of dosage forms and stability studies.

Výukové metody

lectures

Metody hodnocení

oral exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

— identify and classify the dosage form into one of the three generations according to the nature of the drug release;

— describe procedures leading to increased bioavailability of drugs;

— describe the production and evaluation of mucoadhesive systems, ion exchangers and biological dosage forms;

— describe the principles of 3D printing for the preparation of dosage forms;

— describe in vitro — in vivo models in drug development.

Osnova

Introduction to the field of pharmaceutical technology. Drug (active substance), dosage forms, medicine. The importance of biopharmacy and pharmacokinetics in the formulation and development of pharmaceuticals. Generation of dosage forms. Dosage forms of the first generation.

Dosage forms of the second and the third generation.

Physico-chemical factors influencing the effect of the drug.

Biological factors influencing the effect of the drug.

Preformulation studies, drug formulation, drug validation.

Increasing bioavailability of poorly water soluble drugs by their modification.

Increasing bioavailability of poorly water soluble drugs by technological methods facilitating drug dissolution.

Lipophilic formulations for increasing bioavailability of poorly water-soluble drugs.

Liquid-solid systems and their application in pharmacy. Dosage forms based on these systems.

Mucoadhesive systems and their application in pharmacy. Dosage forms based on these systems.

3D printing and its application in pharmacy. Dosage forms based on this technology.

Ion exchangers and their application in pharmacy. Dosage forms based on ion exchangers. Production of biological dosage forms.

In vitro — in vivo models in drug development.

Literatura

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3D & 4D printing methods for pharmaceutical manufacturing and personalised drug delivery : opportunities and challenges. Edited by Dimitrios Lamprou. Cham: Springer, 2023, xiii, 321. ISBN 9783031341182.

Drug delivery : principles and applications. Edited by Binghe Wang - Longqin Hu - Teruna Siahaan. Second edition. Hoboken, New Jersey: Wiley, 2016, 1 online. ISBN 9781118833230. http://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,uid&db=nlebk&AN=1202091&lang=

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FaF:aFAFT2_13 **Pharmceutical Technology II**

Předmět není v aktuálních obdobích! 7 kreditů, ukončení z, garant předmětu doc. PharmDr. Kateřina Kubová, Ph.D.

Vyučující

doc. PharmDr. Aleš Franc, Ph.D. (přednášející)
doc. PharmDr. Jan Gajdziok, Ph.D. (přednášející)
doc. PharmDr. Kateřina Kubová, Ph.D. (přednášející)
doc. PharmDr. Ruta Masteiková, CSc. (přednášející)
PharmDr. Kateřina Brückner, Ph.D. (cvičící)
PharmDr. Hana Hořavová (cvičící)
PharmDr. Miroslava Pavelková, Ph.D. (cvičící)
PharmDr. Jakub Vysloužil, Ph.D. (cvičící)
PharmDr. Jiří Zeman, Ph.D. (cvičící)

Cíle předmětu

Pharmaceutical technology is a fundamental discipline within the pharmaceutical field. The course aims to introduce students to compounding, industrial production, and quality control of medications, including excipients, technological procedures, equipment, and appropriate analytical devices. Additionally, it covers the impact of the drug's application form on its bioavailability within the organism.

Výukové metody

Lectures

Lab training

Homework

Metody hodnocení

Intermediate tests in laboratory classes (3 tests, two retakes are possible)

Systematic observation of the student during laboratory classes, preparation of reports following the teacher's instructions

Credit test (credit test has two parts, part 1 - pharmaceutical calculations (limit for passing 75%), part 2 - test - closed and open questions (especially opened) from knowledge from lectures and laboratory classes (limit for passing - 60%).

Practical testing is conducted to evaluate students' skills as part of the credit assessment. (preparation of the medicinal product - detection of incompatibilities, control of dosage, selection of the correct procedure, selection of appropriate packaging, correct labelling of the product - shelf life, storage conditions).

Primární způsob výuky

Žádné informace.

Výstupy z učení

Upon successful completion of the course, students will be able to: - theoretically know the classification, requirements, excipients, technological procedure of preparation and production of liquid dosage forms and their evaluation (solutions, emulsions, suspensions)
- theoretically know the classification, requirements, excipients, and technological procedure for the preparation and manufacture of ophthalmic, nasal, and ear preparations and their evaluation
- theoretically know the classification, requirements, excipients, and technological procedure for the preparation and manufacture of parenteral preparations and their evaluation
- theoretically know the classification, requirements, excipients, and technological procedure for the preparation and manufacture of semi-solid dosage forms and their evaluation (ointments, pastes, creams, gels)
- to determine the basic aspects of dosage forms in relation to the bioavailability of the drug
- to perform essential calculations (concentrations, doses, mixing equations, ratios, etc.)
- to check the doses of a drug in a medicinal product according to the prescription of the product according to Pharmacopoeia
- to prepare both pharmacopoeial and non-pharmacopoeial solutions, syrups, aromatic waters, suspensions, emulsions, eye drops, nasal drops, and ear drops skillfully
- to detect fundamental incompatibilities in the composition of individually formulated medicinal products
- to determine the shelf life of individually formulated medicinal products
- to select suitable packaging options for individually formulated medicinal products
- to estimate the optimal storage conditions required for individually formulated medicinal products

Osnova

SYLLABUS OF LECTURES1. Introduction into Medical Forms and Biopharmacy. Solutions: basic methods of preparation, quality evaluation.
2. Public holiday
3. Sterilization techniques. Requirements for the preparation of sterile medications.br>4. Ophthalmic preparations - definition, classification, preparation, quality evaluation, the bioavailability of drugs from ophthalmic products.
5. Preparations intended for nasal and ear application.

6. Pharmaceutical emulsions - definition, classification, preparation, quality evaluation. Physical aspects of emulsions.
7.Pharmaceutical suspensions - definition, classification, preparation, quality evaluation.
8. Incompatibilities in liquid dosage forms.
9.Excipients for preparation of liquid dosage forms (solutions). Water for pharmaceutical purposes.
10. Herbal drug preparations - definition, classification, preparation and production, quality assessment.
11. Parenteral dosage forms.
12. Topical semisolid preparations: definition, classification, properties, excipients.
13. Topical semisolid preparations: preparation and quality evaluation.

SEMINARS, PRACTICAL TRAINING
1. Introduction to the practical training. Pharmaceutical calculations.
2. Medicinal solutions: preparation at room and higher temperature, evaluation.
3. Medicinal solutions: preparation by solubilization and chemical reaction, evaluation. Test - Pharmaceutical calculations.
4. Aromatic waters and spirits. Syrups. Infusions and decoctions. Mucilagines. Preparation and evaluation.
5. Eye drops. Preparation and evaluation.
6. Nasal and ear drops. Preparation and evaluation.
7. Consultation exercise on liquid dosage forms.
8.Emulsions. Preparation and evaluation. Test - calculations for eye and nasal medicinal products.
9. Suspensions. Preparation and evaluation. Test - emulsifiers.
10. Preparation of liquid dosage forms according to prescriptions.
11. Alternative training.
12. Credit test and testing of laboratory skills.
13. Awarding credits.

Literatura

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Advances and challenges in pharmaceutical technology : materials, process development and drug delivery strategies. Edited by Amit Kumar Nayak - Kunal Pal - Indranil Banerjee - Samarendra Maji - U. London: Academic Press, 2021, 1 online. ISBN 9780128203002. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=2372034

Drug delivery : principles and applications. Edited by Binghe Wang - Longqin Hu - Teruna Siahaan. Second edition. Hoboken, New Jersey: Wiley, 2016, 1 online. ISBN 9781118833230. http://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,uid&db=nlebk&AN=1202091&lang=cs&site=eds-live&scope=site&ebv=EB&ppid=pp_C1

FaF:aFAFT3_13 **Pharmaceutical Technology III**

Předmět není v aktuálních obdobích! 8 kreditů, ukončení zk, garant předmětu doc. PharmDr. Kateřina Kubová, Ph.D.

Vyučující

doc. PharmDr. Aleš Franc, Ph.D. (přednášející)
doc. PharmDr. Jan Gajdziok, Ph.D. (přednášející)
doc. PharmDr. Kateřina Kubová, Ph.D. (přednášející)
doc. PharmDr. Ruta Masteiková, CSc. (přednášející)
PharmDr. Miroslava Pavelková, Ph.D. (přednášející)
PharmDr. Kateřina Brückner, Ph.D. (cvičící)
doc. PharmDr. Aleš Franc, Ph.D. (cvičící)
doc. PharmDr. Jan Gajdziok, Ph.D. (cvičící)
PharmDr. Hana Hořavová (cvičící)
doc. PharmDr. Kateřina Kubová, Ph.D. (cvičící)
PharmDr. Miroslava Pavelková, Ph.D. (cvičící)
PharmDr. Jakub Vysloužil, Ph.D. (cvičící)
PharmDr. Jiří Zeman, Ph.D. (cvičící)

Cíle předmětu

One of the main obligatory pharmaceutical disciplines dealing with preparation, manufacturing and quality control of medicaments including technological procedures, equiment, excipients and appropriate analytical devices. It covers the influence of the application form on drug bioavailability.

Výukové metody

1.Lectures. 2.Lab training
3.Homework

Metody hodnocení

Continuous written tests; oral examination

Primární způsob výuky

Žádné informace.

Výstupy z učení

Upon completion of the course, the student will: -describe the classification, requirements, excipients, and technological procedures for the preparation and production of solid dosage forms including their evaluation;
-theoretically describe the classification, requirements, excipients, and technological procedures of preparation/production, and evaluation of controlled release dosage forms including their evaluation;
- identify the basic aspects of solid dosage forms relating to drug bioavailability;
- prepare practically semi-solid and solid dosage forms under pharmacy conditions;
- identifies basic incompatibilities in the preparation of liquid and semi-solid dosage forms;
- explain the basic principles of GMP

Osnova

SYLLABUS OF LECTURES1. Rectal dosage forms - definition, classification, properties. Suppositories, excipients, preparation, quality evaluation.
2. Vaginal dosage forms - definition, classification, properties, excipients, quality evaluation.
3. Granules, basic granulation techniques and equipment. Quality evaluation of powders and granules.
4. Powders, classification, particle size and effect on drug bioavailability; preparation, use and quality evaluation.
5. Incompatibilities in semisolid and solid dosage forms.
6. Tablets - classification, basic compression techniques. Excipients for tablets. Quality evaluation and use.
7. Coated products - classification, basic coating techniques, quality evaluation and use.
8. Pharmaceutical packaging.
9. Drug microforms. Definition, classification, characteristics, production technology, quality assessment
10. Transdermal preparations. Basic types of transdermal therapeutic systems. Excipients for transdermal preparations. Quality evaluation and use.
11. Aerodispersions - definition, classification, properties. Basic types of inhalation systems. Excipients for aerodispersions. Quality evaluation and use.
12. Capsules - classification, production, excipients, quality evaluation and use.
13. Controlled-release oral dosage forms
14.The principles of good manufacturing practice.

SEMINARS, PRACTICAL TRAINING
1. Ointments. Preparation and evaluation.
2. Creams. Preparation and evaluation.
3. Pastes and gels. Preparation and evaluation.
4. Rectal suppositories. Determination of calibration coefficient, preparation of suppositories with known base replacement coefficient.
5. Rectal suppositories. Preparation of suppositories with unknown base replacement coefficient. Preparation of vaginal globules.
6. Non-divided and divided powders. Preparation and evaluation. Suppositories ans vaginal globules - test.
7. Technological procedures in preparation of complicated prescriptions of semisolid dosage forms, powders and suppositories.
8. Solving of incompatibilities in prescriptions on semisolid and solid dosage forms, powders and suppositories, preparations according to prescriptions.
9. Alternative training.
10. Production of tablets by direct compression/Granulation techniques.
11. Granulation techniques/Production of tablets by direct compression.
12. Fluid bed granulation technique/Evaluation of solid dosage forms.
13. Evaluation of solid dosage forms/Fluid bed granulation technique.
14. Test. Prastical skills testing.

Literatura

doporučená literatura

Evropský lékopis - platné vydání a doplňky

Advances and challenges in pharmaceutical technology : materials, process development and drug delivery strategies. Edited by Amit Kumar Nayak - Kunal Pal - Indranil Banerjee - Samarendra Maji - U. London: Academic Press, 2021, 1 online. ISBN 9780128203002. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=2372034

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FaF:aFACH1_15 **Medicinal Chemistry I**

Předmět není v aktuálních obdobích! 4 kredity, ukončení z, garant předmětu doc. PharmDr. Oldřich Farsa, Ph.D.

Vyučující

prof. RNDr. Jozef Csöllei, CSc. (přednášející)
doc. PharmDr. Oldřich Farsa, Ph.D. (přednášející)

doc. PharmDr. Oldřich Farsa, Ph.D. (cvičící)
PharmDr. Tomáš Goněc, Ph.D. (cvičící)
Mgr. Aleš Kroutil, Ph.D. (cvičící)

Cíle předmětu

Medicinal Chemistry (MC) is a discipline dealing mainly with relationships between chemical structure and therapeutic activity of medicines which are mostly organic but also inorganic molecules. That is why it observes the impact of physico-chemical properties, space arrangement and further structure features on the activity of a drug. It concerns in detail with mechanisms of drug intearactions with target structures such as receptors´ or enzyme active sites. As a scientific discipline, MC participates importantly in the drug design and development process. As a specific discipline of the pharmacetical study, MC is one of five stem subjects in which students do the state final exam. Here, MC can be divided into general and special parts. General MC presents general aspects of structure-activity relationships, both qulitative and quantitative, as well as common principles of derivation and proposal of structures of new medicines (analogy, homology, isomerism, isosterism...). Systematic MC deals then with the particular therapeutic groups of drugs respecting the system used in pharmacology. Here, it brings a comprehensive overwiev of fundamental structural types and tries to grasp main structure-activity relationships within each group. It also reports syntheses and methabolic pathways of some representatives of these groups. Simply said, MC builds some type of bridge between fundamental chemical disciplines, represented mainly by organic chemistry, and pharmacology.

Výukové metody

Lectures, seminars

Metody hodnocení

The credit is given for at least 60 % of the credit test points.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After passing the subject, students will have to know, explain, present or draw as follows: -main principles of general Medicinal Chemistry -therapeutic groups presented in seminars, ie. INN names and structures of main representatives, fundamental structure-activity relationships (SAR), brief mechanism of action
-basics of metabolism and synthesis in therateutic groups, for which this was presented in seminars
-an interpretation of NMR and IR spektra of a drug or other simple organic molecule, including its standardized listing, as required for practical classes in Medicinal Chemistry II in the following semester

Osnova

Medicinal Chemistry is one of five profile disciplines of pharmaceutical education. It is also a part of the final state examination. Medicinal Chemistry I. covers the nomenclature of drugs, their syntheses, structure-activity relationships, biotransformation and some selected approaches of drug design. It deals with a drug, prepared using synthetic approaches with defined structure and properties, related with its therapeutical usage in the treatment of pathological states and defined diseases.Topics of lectures (lecturers: doc. PharmDr. Oldřich Farsa, PhD., PharmDr. Tomáš Goněc, Mgr. Aleš Kroutil)
Medicinal Chemistry: Definition and history. Drug nomenclature.(Farsa)
Drugs research and development. Drug patents. Approvals of drug preparations. Good laboratory, manufacturing and clinical practices (GLP, GMP, GCP). (Kroutil)
Structure modifications: homology, analogy, isomerism, isosterism etc. (Goněc)
Physico-chemical descriptors and biological activity. Structure-activity relationships. Structure optimization. Quantitative structure-activity relationships (QSAR).(Farsa)
Structural factors influencing drug action. (Farsa)
Drugs biotransformation. Prodrugs.
Weak analgesics and non-steroidal antiinflammatory drugs (NSAIDs). Anti-osteoporotic agents.(Farsa)
General and local anesthetics. Myorelaxants. (Farsa)
Strong analgesics - anodyns. Morphine and its derivatives. Encephalins, endorphins, opioid receptors antagonists. (Farsa)
CNS agents: antidepressants, stimulants, cognitive enhancers, psychotomimetics - hallucinogens.(dr. Farsa)
CNS agents: antipsychotics, antineurotics.(Farsa)
Sedatives, hypnotics. Anticonvulsans, antiepileptics. Emetics, antivomitics, antikinetics. (Farsa)
Adrenergic receptor agonists directly and indirectly acting. Appetite suppressants and other antiobesics. (Goněc)
Adrenergic receptor antagonists. (Goněc)

Literatura

doporučená literatura

V. Alagarsamy: Textbook of medicinal chemistry. / Volume II. Elsevier, 2012, ISBN: 978-81-312-2190-7, dostupné zdarma přes Z-Library

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The practice of medicinal chemistry. Edited by Camille Georges Wermuth - David Aldous - Pierre Raboisson - Didier Rog. Fourth edition. Amsterdam: Elsevier, 2015, 1 online. ISBN 9780124172135. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=596616

FaF:aFACH2_15 **Medicinal Chemistry II**

Předmět není v aktuálních obdobích! 8 kreditů, ukončení zk, garant předmětu doc. PharmDr. Oldřich Farsa, Ph.D.

Vyučující

prof. RNDr. Jozef Csöllei, CSc. (přednášející)
doc. PharmDr. Oldřich Farsa, Ph.D. (přednášející)
Mgr. Aleš Kroutil, Ph.D. (přednášející)
doc. PharmDr. Oldřich Farsa, Ph.D. (cvičící)
PharmDr. Tomáš Goněc, Ph.D. (cvičící)
RNDr. Eva Havránková, Ph.D. (cvičící)
Mgr. Petr Mokrý, Ph.D. (cvičící)
Mgr. Veronika Murgašová (cvičící)
PharmDr. Jan Otevřel, Ph.D. (cvičící)

Cíle předmětu

Medicinal Chemistry (MC) is a discipline dealing mainly with relationships between chemical structure and therapeutic activity of medicines which are mostly organic but also inorganic molecules. That is why it observes the impact of physicochemical properties, space arrangement, and further structure features on the activity of a drug. It concerns in detail with mechanisms of drug interactions with target structures such as receptors´ or enzyme active sites. As a scientific discipline, MC participates importantly in the drug design and development process. As a specific discipline of the pharmaceutical study, MC is one of five stem subjects in which students do the state final exam. Here, MC can be divided into general and special parts. General MC presents general aspects of structure-activity relationships, both qualitative and quantitative, as well as common principles of derivation and proposal of structures of new medicines (analogy, homology, isomerism, isosterism...). Systematic MC deals then with the particular therapeutic groups of drugs respecting the system used in pharmacology. Here, it brings a comprehensive overview of fundamental structural types and tries to grasp the main structure-activity relationships within each group. It also reports the syntheses and metabolic pathways of some representatives of these groups. Simply said, MC builds some type of bridge between fundamental chemical disciplines, represented mainly by organic chemistry, and pharmacology.

Výukové metody

Lectures, practical lessons.

Metody hodnocení

Successfull passing of practical lessons based on full attandance, goving of products, reports and a success in final test; oral exam from the topics of lectures.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Every student will, after passing the subject, be capable to characterize the main groups of drugs; their main common structural characteristics if they exist; structure-activity relationships (SAR) inside narrower structural groups; their acido-basic and lipo-hydrophilic properties based on the structure; their general mechanisms of activity; particular examples of drugs in use or development from every structural group together with the exact structure or at least with main structure features in more complex molecules.

Osnova

Medicinal Chemistry II - autumn semester of the 3rd year of studySyllabi identical with topics of particular lectures:
Lecture No. Topic Name of the lecturer)
1.Antibacterial chemotherapeutics: sulphonamides, quinolones, nitrofurans, tetracyclines. (Farsa)
2.Antibacterial chemotherapeutics continued: beta-lactam antibiotics: penicillins and cephalosporins, (poly)peptide antibiotics, aminoglycoside antibiotics, macrolide antibiotics, antibiotics of various other structures. (Farsa)
3.Tuberculostatics, leprostatics. (Farsa)
4.Antiviral agents, liver protectants. (Farsa)
5.Disinfectants, antiseptics, antiparasitics: antiprotozoal and vermicide agents, insecticides. (Farsa)
6.Diuretics, cholagogues, cholelitholytics, laxatives, antidiarrheals. (Farsa)
7.Drugs that control blood clotting. Antihyperlipidemics. (Csöllei)
8.Cardiotonics, coronary vascular dilators. Drugs improving heart perfusion. (Csöllei)
9.Anti-arrhytmics, antihypertensive agents, drugs for the treatment of erectile dysfunction. (Csöllei).
10.Drugs affecting respiratory tract: acids, antacids, anti ulcerative agents: antisecretory agents, histamine H2-receptors antagonists, H+/K+-ATPase inhibitors, gastric cytoprotectants, drugs fighting *Helicobacter pylori*. (Csöllei)
11.Antineoplastics. (Farsa)
12.Insulin and its analogs, synthetic antidiabetics. Hormones derived from one amino acid, thyreostatics, peptide hormones, steroid hormones, anabolic agents.

13.Biologic therapeutic agents (biologics: therapeutic monoclonal antibodies, therapeutic enzymes, antisense oligonucleotides, etc.) (Farsa)
Syllabi of practical courses
1.A short recommendation of principles of work safety and fire prevention. Sulfacetamide: synthesis, identity, confirmation by 1H-NMR.
2.Lidocaine: synthesis, identity and purity confirmation by melting point, NMR or IR spectroscopy and TLC.
3.Parabens (methyl-, ethyl-, propyl-, isopropyl- or isobutylparaben): synthesis, identity and purity confirmation by melting point and 1H-NMR spectroscopy.
4.Acetylsalicylic acid: synthesis, identity, and purity confirmation by melting point and TLC, purity by HPLC.
5.Phenytoin: synthesis, identity, and purity confirmation by melting point and/or NMR spectroscopy. Alternative: Methylthiouracil: synthesis, TLC.
6.Determination of the acid dissociation constant of nitrofurantoin or phenytoin by means of UV-VIS spectrophotometry. Final test.
7.An eventual substitute course and/or a repeated final test.
Continuous checking of study: attendance, observing of reports, and entering tests are possible.
Requirements to allow to do the exam: 100% attendance, handing-over of reports, and prepared compounds including their characterization data (melting points, chromatograms, spectra interpretaions), at least 60% success in tests.

Literatura

doporučená literatura

V. Alagarsamy: Textbook of medicinal chemistry. / Volume I. Elsevier, 2010, ISBN 978-81-312-2189-1, dostupné zdarma přes https://z-lib.org/ ; též obecné kapitoly

V. Alagarsamy: Textbook of medicinal chemistry. / Volume II. Elsevier, 2012, ISBN: 978-81-312-2190-7, dostupné zdarma přes https://z-lib.org/

J. J. Li: Medicinal Chemistry for Practitioners. John Wiley & Sons Inc, 2021, ISBN 9781119607304, dostupné zdarma přes https://z-lib.org/

ROCHE, Victoria F., S. William ZITO, Thomas L. LEMKE a David A. WILLIAMS. *Foye's principles of medicinal chemistry*. 8th edition. Philadelphia: Wolters Kluwer, 2020, xix, 1626. ISBN 9781496385024.

Small molecule medicinal chemistry : strategies and technologies. Edited by Werngard Czechtizky - Peter Hamley. Hoboken, New Jersey: Wiley, 2016, 1 online. ISBN 9781118771723. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1070595

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FaF:aFAKF1_14 **Clinical Pharmacy and Pharmacotherapy**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Jan Juřica, Ph.D. (přednášející)
doc. PharmDr. Peter Kollár, Ph.D. (přednášející)
PharmDr. Bc. Hana Kotolová, Ph.D. (přednášející)
prof. MUDr. Bc. Libor Ustohal, Ph.D. (přednášející)
prof. MUDr. Jiří Vítovec, CSc. (přednášející)

Cíle předmětu

The aim of the course is to acquaint students with the basic principles and rules of rational pharmacotherapy and to acquire basic knowledge about the management of pharmacotherapy and the role of the pharmacist in this process.

Výukové metody

Lectures

Metody hodnocení

Continuous knowledge assessment - written test. Final examination - written and oral part.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- apply the principles of rational pharmacotherapy during the pharmacist's advisory and consulting activities in clinical practice;

- participate in the detection, assessment and resolution of drug realted problems;

- cooperate in a multidisciplinary healthcare team in designing, individualizing and monitoring the outputs of the pharmacotherapeutic interventions.

Osnova

- Introduction to the subject of study, clinical pharmacy; the role of the pharmacist in the pharmacotherapy process at different types of workplaces. General principles of rational pharmacotherapy.
- Clinical manifestations of adverse drug effects, pharmacovigilance in clinical practice
- Drug intoxications, drug addiction
- Basic biochemical values investigated in clinical practice
- Drug interactions - pharmacodynamics, pharmacokinetics
- Therapeutic drug monitoring
- Medicines potentially inappropriate in elderly, drug-related problems in geriatrics
- Pharmacotherapy in pregnancy and lactation; specifics of pharmacotherapy in pediatrics
- Pharmacotherapy of selected CNS diseases
- Pharmacotherapy of obstructive airway diseases, bronchial asthma and allergic conditions
- Pharmacotherapy of depression, anxiety, insomnia, psychotic diseases
- Pharmacotherapy in gastroenterology
- Pharmacotherapy of metabolic syndrome, obesity, lipid disorders
- Pharmacotherapy of diabetes mellitus, late complications of DM
- Pharmacotherapy of cardiovascular diseases
- Pharmacotherapy of selected infectious diseases

Literatura

doporučená literatura

Pharmacotherapy : principles & practice. Edited by Marie A. Chisholm-Burns - Terry L. Schwinghammer - Patrick M. Malone -. Sixth edition. New York: McGraw-Hill, 2022, xxxvii, 17. ISBN 9781260460278.

BROWN, M. J., Pankaj SHARMA, Fraz A. MIR a P. N. BENNETT. *Clinical pharmacology*. Twelfth edition. Edinburgh: Elsevier, 2019, 1 online. ISBN 9780702073304. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1742282

FaF:aFAKL1_15 **Quality Control of Pharmaceuticals**

Předmět není v aktuálních obdobích! 6 kreditů, ukončení zk, garant předmětu doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA

Vyučující

doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA (přednášející)
doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA (cvičící)
Mgr. Hana Pížová, Ph.D. (cvičící)
Mgr. David Švestka (cvičící)

Cíle předmětu

The course aims to teach students to work methods and procedures used in the control practices for providing efficient, reliable and safe medicines.The subject is the interpretation of the principles of analysis - chemical and physico-chemical methods used in assessing individual indicators of quality (identity, purity, content, stability) of single chemically active substances, excipients and medicinal products.

Výukové metody

lectures practical laboratory practice

Metody hodnocení

written tests in laboratory, oral examination

Primární způsob výuky

Žádné informace.

Výstupy z učení

Learning outcomes of the course are theoretical knowledge and practical experience of students of methods used for comprehensive evaluation of drugs and medicinal products in accordance with applicable regulations in the Czech Republic and the EU. The content of the course is based on the requirements of the European Pharmacopoeia as a supranational legal norm. The graduate of the course Drug Analysis is to master the basic procedures and methods of pharmacopoeial evaluation of drugs. Evidence of drugs based on physical constants, using instrumental-analytical methods and chemical reactions. To control group and selective reactions of structural types of drugs within pharmacotherapeutic groups. He has mastered the technique of limit tests for the purity of drugs, volumetric and gravimetric determination of drugs and pharmaceutical excipients. He should be able to perform analytical evaluation of drugs and medicinal products using chromatographic, spectral and electroanalytical methods. He should be able to perform experimental studies of medicinal products, evaluation of relevant physical and chemical parameters, including detection and quantification of degradation products, according to the given procedure.

Osnova

LECTURESBasic: Pharmacopeia
Purity and stability of drugs
Pharmacopoeial detection of impurities with the use of chemical reactions by means of physicochemical methods
Drug Identification
* Detection of drugs by means of chemical reactions

* Group and selective reactions of pharmacotherapeutic groups
* Detection of drugs on the basis of physical constants (melting point, distillation range, density, refractive index, optical rotation)
* Use of physicochemical methods for the detection of drugs (spectral, separational, electrochemical methods)
Drug Assay
* Volumetric methods used in drugs anaysis
* Acid-base titrations of drugs (acidimetry, alkalimetry in aqueous and nonaqueous media)
* Oxidoreduction titrations of drugs (iodometry, bromatometry, manganometry, cerimetry)
* Complexometric titrations of drugs (chelatometry, mercurimetry)
* Determination of drugs by means of precipitation titrations
Spectrophotometric determination of drugs
Polarimetric determination of drugs
Determination of drugs with the use of electroanalytical methods
Determination of drugs by chromatographic and electrophoretic methods
Stability of drugs, processes of decomposition, factors influencing stability

PRACTICAL TRAINING
- Control-analytical evaluation of drugs according to the Pharmacopoeia
- Test for purity of drugs (chemical detection of impurities)
- Test for purity of drugs (detection of impurities, or degradation products by chromatographic and spectral methods)
- Identification of drugs by means of chemical reactions, physical constants, physicochemical methods
- Determination of drug content (pharmacopoeial methods of quantitative evaluation of drugs)
- Control-analytical evaluation of pharmaceutical preparations
- Control of extemporaneously prepared pharmaceutical preparations according to the pharamacopoeia and control-analytical procedures used in drug control laboratories
- Control of mass-produced pharmaceutical preparations according to factory standards
- Instrumental methods (use of UV spectrometry in drug control, control, analysis of drugs on the basis of specific optical rotation, analysis of drugs by means of chromatography)

Literatura

doporučená literatura

European Pharmacopoeia

WATSON, David G. a Bhavik A. PATEL. *Pharmaceutical analysis : a textbook for pharmacy students and pharmaceutical chemists*. Fifth edition. Edinburgh: Elsevier, 2021, vi, 462. ISBN 978070208088.

FaF:aFASF1_11 **Social Pharmacy I**

Předmět není v aktuálních obdobích! 3 kredity, ukončení z, garant předmětu doc. RNDr. Jozef Kolář, CSc.

Vyučující

doc. RNDr. Jozef Kolář, CSc. (přednášející)
Mgr. Bc. Michal Koščík, Ph.D. (přednášející)
PharmDr. Lenka Smejkalová, Ph.D. (přednášející)
PharmDr. Dominik Grega, Ph.D. (cvičící)
Mgr. Bc. Michal Koščík, Ph.D. (cvičící)
PharmDr. Lenka Smejkalová, Ph.D. (cvičící)
PharmDr. Martina Šutorová (cvičící)

Cíle předmětu

Social Pharmacy deals with the role of medicines in the society. The aim of the course is to give to students relevant knowledge and scientific background for evaluation of the role of pharmacist and medicines in context of the society and healthcare system. The aim of the study subject is to provide students with a basic overview of legal regulations and ethical principles and standards relating to the handling of medicines, the performance of the profession of health workers and the provision of health services. It therefore strives both for a broader theoretical grounding of the legal awareness and moral profile of the students, and for a specific targeting of the practical aspects of pharmacy and clinical-pharmaceutical care as well as other pharmaceutical branches.

Výukové metody

Monologic (reading, lecture, briefing) Dialogic (discussion, interview, brainstorming)
Workshops

Metody hodnocení

Test Project

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- describe the basic legal aspects associated with the performance of the profession of a healthcare worker;
- analyze the ethical principles associated with the provision of medicines, pharmacy and clinical-pharmaceutical care;
- describe the basic legal aspects associated with pharmacy in a wider context;
- orient in the relevant databases of Czech and EU legal regulations and actively use them.

Osnova

Topics of lectures and seminars:
- Sources and basic principles of professional health ethics and health law
- Ethics in the profession of pharmacist, ethical principles, standards, codes
- Legal regulation of the handling of medicinal products - manufacturing and wholesaling of medicinal products
- Legal regulation of the handling of medicinal products - prescription of medicinal products
- Legal regulation of the provision of veterinary care
- Legal regulation of medical devices
- Legislation in the area of addictive substances and precursors
- Basic legal regulations in relation to dietary supplements
- Basic legal regulations in relation to cosmetic products
- Legal regulation of the provision of health services with a focus on pharmacy and clinical-pharmaceutical care
- Legal regulation of public health protection
- Legal regulation of public health insurance
- Legal responsibility in healthcare
- Specific health services; biomedical research - regulation and ethics
- Protection of personal data in healthcare, medical documentation
- Legal specifics of pediatric patients and patients with limited autonomy
- Legal regulation of advertising in the healthcare sector
- Protection of intellectual property
- Basics of labor, contract and commercial law

Literatura

doporučená literatura

HOLČAPEK, Tomáš, Petr ŠUSTEK a Martin ŠOLC. *Czech health law*. 1st edition. Praha: Wolters Kluwer, 2023, ix, 240. ISBN 9788076765443.

Introduction to public health in pharmacy. Edited by Bruce Lubotsky Levin - Ardis Hanson - Peter D. Hurd. Second edition. Oxford: Oxford University Press, 2018, 1 online. ISBN 9780190238339. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1712428

Medical ethics, law, and communication at a glance. Edited by Patrick Davey - Anna Rathmell - Michael Dunn - Charles Foster - Helen. Chichester: Wiley Blackwell, 2017, 1 online. ISBN 9781119266174. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1373001

COGGON, John, Keith SYRETT a A. M. VIENS. *Public health law : ethics, governance and regulation*. First published. London: Routledge, 2017, x, 196. ISBN 9781138790780.

FaF:aFASF2_11 **Social Pharmacy II**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu doc. RNDr. Jozef Kolář, CSc.

Vyučující

PharmDr. Tünde Ambrus, Ph.D. (přednášející)
doc. RNDr. Jozef Kolář, CSc. (přednášející)
PharmDr. Tünde Ambrus, Ph.D. (cvičící)
PharmDr. Dominik Grega, Ph.D. (cvičící)
doc. RNDr. Jozef Kolář, CSc. (cvičící)

Cíle předmětu

Social Pharmacy deals with the role of medicines in the society. The aim of the course is to give to students relevant knowledge and scientific background for evaluation of the role of pharmacist and medicines in context of the society and healthcare system.

Výukové metody

lectures, class discussion, individual work, presentations

Metody hodnocení

1) Requirements before the exam: attendance at all seminars; continuous fulfillment of assignments.
2) Exam - oral exam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the course, the student will be able:
- to characterize the role of pharmacy and pharmacist in society;
- to identify and summarize the importance of medicines for society;
- to characterize the role of pharmacy in the healthcare system;
- to describe the necessary regulatory mechanisms in pharmacy, enforced at national and international level;
- to look up and analyze the essential statistical data on the utilization of medicines in the society.

Osnova

Topics of lectures and seminars:
- Social Pharmacy - theoretical basics and methodological aspects
- The importance of medicines in healthcare and society
- Theoretical basics of healthcare
- Statistics in pharmacy and healthcare
- Pharmacist and the public health, basics of epidemiology for pharmacists
- Healthcare systems and healthcare financing
- Provision of health services
- Health policy
- Medicines policy
- MArketing authorisation of medicinal products
- Social risks associated with the use of medicines (counterfeiting and abuse of medicines) and their prevention
- Pharmacoeconomics and the basics of health technology assessment
- Pharmacoepidemiology
- Pharmacovigilance
- Utilization of medicines in the population
- International cooperation in the field of pharmacy and healthcare

Literatura

doporučená literatura

HOLČAPEK, Tomáš, Petr ŠUSTEK a Martin ŠOLC. *Czech health law*. 1st edition. Praha: Wolters Kluwer, 2023, ix, 240. ISBN 9788076765443.

Pharmacoepidemiology. Edited by Brian L. Strom - Stephen E. Kimmel - Sean Hennessy. Sixth edition. Hoboken, NJ: Wiley Blackwell, 2020, 1 online. ISBN 9781119413370. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=2278702

Introduction to public health in pharmacy. Edited by Bruce Lubotsky Levin - Ardis Hanson - Peter D. Hurd. Second edition. Oxford: Oxford University Press, 2018, 1 online. ISBN 9780190238339. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1712428

KELLY, William N. *Pharmacy : what it is and how it works*. Fourth edition. Boca Raton, FL: CRC Press, 2018, xxi, 397. ISBN 9781138038332.

WALLER, Patrick a Mira HARRISON-WOOLRYCH. *An introduction to pharmacovigilance*. Second edition. Chichester: Wiley Blackwell, 2017, 1 online. ISBN 9781119289784. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1470327

Medical ethics, law, and communication at a glance. Edited by Patrick Davey - Anna Rathmell - Michael Dunn - Charles Foster - Helen. Chichester: Wiley Blackwell, 2017, 1 online. ISBN 9781119266174. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1373001

COGGON, John, Keith SYRETT a A. M. VIENS. *Public health law : ethics, governance and regulation*. First published. London: Routledge, 2017, x, 196. ISBN 9781138790780.

2.2 Předměty profilujícího základu (P)

Jedná se o povinný nebo povinně volitelný předmět, jehož absolvováním student získává znalosti nebo dovednosti podstatné pro dosažení výstupů z učení studijního programu — obsah těchto předmětů je zahrnut ve státní závěrečné zkoušce.

FaF:aFAAC1_15 **General and Inorganic Chemistry**

Předmět není v aktuálních obdobích! 6 kreditů, ukončení zk, garant předmětu PharmDr. Tomáš Goněc, Ph.D.

Vyučující

PharmDr. Tomáš Goněc, Ph.D. (přednášející)
Mgr. Aleš Kroutil, Ph.D. (přednášející)
PharmDr. Tomáš Goněc, Ph.D. (cvičící)
Mgr. Aleš Kroutil, Ph.D. (cvičící)
Mgr. Veronika Murgašová (cvičící)
Mgr. David Švestka (cvičící)

Cíle předmětu

The students will be acquainted with the subject of chemistry including the basic branches of chemistry and the importance of chemistry for pharmacists. The course will focus on the following items: fundamental chemical terms and laws, equations for calculating the quantity of substance and concentration, atomic structure,

radioactivity, basic equations used in spectral analysis, models of atomic orbitals, chemical bond including hybridization, physical states of matter, the periodic law and the classification of elements including forms and the division of the periodic system into groups, and the properties of individual elements in the periodic table. Seminars will concentrate on problems such as calculating the amount of substance, composition of solutions, diluting and mixing solutions, formation of chemical formulas and balancing equations for stoichiometric calculations, and the calculation of the pH. During practical exercises, the students will be acquainted with the basics of laboratory work and will also prepare some inorganic compounds according to calculated equations. The students will elaborate protocols containing the description of the principle of the method and all calculations including the calculation of theoretical yield which will be compared with the practical yield obtained.

Výukové metody

Lectures, laboratory classes

Metody hodnocení

To obtain credits, it is necessary to meet the following conditions: compulsory participation in laboratory classes, the obligation to prepare protocols from all practical tasks. Success in continuous tests in nomenclature and calculations at least 60%. Completion of the written part of the exam in nomenclature and calculations to at least 60%. Completion of an oral exam in general chemistry and an oral exam in inorganic chemistry.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course student will:

-know basic chemical glassware,equipment and apparatus;

-be able to perform basic laboratory operations independently;

-know inorganic compound nomenclature and basic chemical clculations;

-understand the basic principles of general chemistry;

-know basic chemistry of elements

Osnova

Lectures: General Chemistry.

Role of the chemistry in the spectrum of naturae sciences. History of chemistry. Milestone discoveries in chemical history. Mass, discreetness of particles. Elements, symbols, periodic table, molecule, chemical formula, chemical equation. Structure and electron formula, octet rule, hypervalence, resonance, oxidation state, formal charge. Electronegativity. Definition of element, nuclide, isotope. Atomic number, atomic mass, molecular mass, amount of mass, mol. Atom, nucleus, elemental particles of mass. Moseley rule. Radioactivity, natural and artificial radionuclides, nuclear reactions, decay families.

Quantum and wave theory, wave and particle, interference and difraction. Schrödinger equation. Planetar atom model, electron shell, Bohr model of hydrogen atom, line and continual spectra, therms, hydrogen spectrum. Structure of electron shell, quantum nombers, Pauli rule, Hund rule, stable valence shell configuration, excited state, electron configuration writing. Mendelejev periodic rule. Ionization potential, electron affinity, electronegativity. Atomic orbitals.

Chemical bond, forms of bonding, bonding energy. Covalent bond. Valence bonding theory, simple and multiple bonds. VSEPR. Hybridization.

Molecule orbitals theory (MO) - linear combination of atomic orbitals (LCAO), energetic diagram. MO for: H2, N2, O2 and O3. Delocalized bonds, polarised bond. System of bonds in ethene, ethyne, benzene and allene.

Hydrogen bonds, other weak interactions. Ionization, basic ion properties, ionic bond. Crystals. Metalic bond. Electron conductivity. Donor-acceptor bond, ions of transition metals, coordinational reactions, sorts of ligands and their properties. Coordination bonding theory. Structure, magnetic properties.

Chemical ballance, basic thermodynamical and thermochemical laws, state equations. Entalpy, entropy, free energy, spontaneousness of processes. Floating ballance principle. Basics of chemical kinetics. Speed and order of reaction. Activation energy. Arrhenius equation. Catalysis. Radical reactions. Photochemical reactions. State definitions. State of matter, dispersion systems. Solubility, solutions, concentration, diffusion, osmosis.

Base and acid theories, protolytic reactions, neutralisation, salts, strenght of acid and base, pH, indicators, salts hydrolysis, buffers. Lewis theory, electrophiles and nucleophiles. Coagulation. Factor of solubility. Reduction-oxidation reactions. Ballancing of red-ox equations. Electrode processes. Electrochemical potential.

Inorganic chemistry.

Chemistry of hydrogen, water. Alkalic metals, metals of alkaline earths.

P elements, Halogens, Noble gases. Transition elements.

Inorganic compounds important in biosystems and pharmacy.

Practical class

- Introduction to laboratory work
- Distillation and extraction
- Synthesis of trihydrogen boric acid.
- Synthesis of disodium tetrahydroxo pentaoxoborate.
- Synthesis of lead iodide.
- Benzoic acid purification
- Preparation od copper and ferrous sulphate pentahydrate.
- Preparation of ferric oxide
- Coordination compounds, hydroxides - test tube reactions

Literatura

doporučená literatura

PFAFF, Gerhard. *Inorganic pigments*. 2nd, revised and extended ed. Berlin: De Gruyter, 2023, xi, 379. ISBN 9783110743913.

TIMBERLAKE, Karen C. *Chemistry : an introduction to general, organic, and biological chemistry*. Global edition. New York: Pearson, 2019, 716 stran. ISBN 9781292228860.

HOUSECROFT, Catherine E. a A. G. SHARPE. *Inorganic chemistry*. 4th ed. Harlow: Pearson, 2012, xl, 1213. ISBN 9780273742753.

Greenwood N.N., Earnshaw A. *Chemistry of the Elements*. Amsterdam, Elsevier, 2010. ISBN 9780750633659.

FaF:aFAAI1_15 **Analytical Chemistry for Pharmacists I**

Předmět není v aktuálních obdobích! 4 kredity, ukončení z, garant předmětu doc. RNDr. Bc. Jiří Pazourek, Ph.D.

Vyučující

doc. RNDr. Bc. Jiří Pazourek, Ph.D. (přednášející)
Mgr. Tomáš Crha (cvičící)
Mgr. Michaela Kuchynka, Ph.D. (cvičící)
Ing. Klára Odehnalová, Ph.D. (cvičící)
doc. RNDr. Bc. Jiří Pazourek, Ph.D. (cvičící)
Mgr. Hana Pížová, Ph.D. (cvičící)

Cíle předmětu

Objectives: To provide the theoretical and practical knowledge for qualitatively performing chemical and instrumental analysis of inorganic and organic substances including pharmaceuticals, emphasizing the importance of methods e.g. in drug analysis and in studying structural and physico-chemical properties of substances related to their biological effect. Emphasis is placed on shaping the logical thought processes of a pharmacist important for his future professional use. Practical exercises are required to master working habits and students' independent approach to solving analytical problems.

Výukové metody

Monologic (reading, lecture, demonstration) Laboratory work

Metody hodnocení

written grade test; 51% of correct answers is needed to pass

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- understand the meaning and principles of classical and modern analytical chemistry
- have an overview of methods of qualitative analytical chemistry
- practically perform basic laboratory tests of qualitative analytical chemistry

Osnova

Content of the lectures 1.-2. Analytical chemistry. The goal and basic terms of the science, methods. Analytical reactions. Protolytic, redox, precipitation and complexation reactions. Buffers.

3.-6. Qualitative analysis of inorganic compounds. Group reactions of cations and anions. Selective and specific reactions of common ions.

7.-8. Qualitative analysis of organic compounds - Identification of organic compounds. Elemental analysis. Classical confirmations and identification of functional groups. Preliminary test. Determination of basic physical constants. Classes of solubility.

9. Qualitative analysis of organic compounds. Instrumental methods of structure analysis: UV-VIS, interpretation of the spectra, examples.

10. Qualitative analysis of organic compounds. Instrumental methods of structure analysis: IR, interpretation of the spectra, examples.

11. Qualitative analysis of organic compounds. Instrumental methods of structure analysis: NMR, interpretation of the spectra, examples.

12. Qualitative analysis of organic compounds. Instrumental methods of structure analysis: MS, interpretation of the spectra, examples.

MOODLE grade test (60 min). Content of the laboratory exercises 1.+2. Organization of the exercises. Safety rules for a chemical laboratory. Basic operations in the analytical laboratory. Good laboratory practice (GLP). Group reactions of cations - group reagent: HCl, H2SO4, (COOH)2, (NH4)2S, NaOH, NH3, KI, CH3COONa. Analysis of an unknown sample.

3.+4. Preliminary test. Group reactions of anions, group reagents: BaCl2, AgNO3, KMnO4, I2, KI. Analysis of an unknown sample. 5.+6. Preliminary test. Analysis of organic compounds, preliminary tests, elemental analysis, determination of the class of solubility. Analysis of two unknown samples.

7.+8. Preliminary test. Physical properties of compounds: measurement of melting point, refractive index, pH. Calculation of analytical concentration of a weak acid from a pH measurement. 9.+10. Preliminary test. Identification of organic compounds from UV-vis spectra. Influence of pH on the absorption spectrum of an acid-base indicator.

11.+12. Preliminary test. Identification of compounds by Infrared spectrometry (IR). Comparison of KBr-tablet technique (transmission mode) and Attenuated total reflection (ATR) technique. Analysis of an unknown sample.

Literatura

doporučená literatura

European Pharmacopoeia

WATSON, David G. a Bhavik A. PATEL. *Pharmaceutical analysis : a textbook for pharmacy students and pharmaceutical chemists*. Fifth edition. Edinburgh: Elsevier, 2021, vi, 462. ISBN 978070208088.

HAM, Bryan M. a Aihui MAHAM. *Analytical chemistry : a chemist and laboratory technician's toolkit*. Hoboken, New Jersey: John Wiley & Sons, 2016, xxiv, 652. ISBN 9781118714843.

CHRISTIAN, Gary D., Purnendu K. DASGUPTA a Kevin SCHUG. *Analytical chemistry*. 7th ed. Hoboken, N.J.: Wiley, 2014, xxii, 826. ISBN 9780470887578.

FaF:aFAAI2_15 **Analytical Chemistry for Pharmacists II**

Předmět není v aktuálních obdobích! 6 kreditů, ukončení zk, garant předmětu doc. RNDr. Bc. Jiří Pazourek, Ph.D.

Vyučující

doc. RNDr. Bc. Jiří Pazourek, Ph.D. (přednášející)
Mgr. Tomáš Crha (cvičící)
Mgr. Michaela Kuchynka, Ph.D. (cvičící)
Ing. Klára Odehnalová, Ph.D. (cvičící)
doc. RNDr. Bc. Jiří Pazourek, Ph.D. (cvičící)

Cíle předmětu

Objectives: To provide the theoretical and practical knowledge for qualitatively performing chemical and instrumental analysis of inorganic and organic substances including pharmaceuticals, emphasizing the importance of methods e.g. in drug analysis and in studying structural and physico-chemical properties of substances related to their biological effect. Emphasis is placed on shaping the logical thought processes of a pharmacist important for his future professional use. Practical exercises are required to master working habits and students' independent approach to solving analytical problems.

Výukové metody

oral lessons laboratory exercises

Metody hodnocení

written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course the student will be able to:

- understand the meaning and principles of classical and modern quantitative analytical chemistry

- have an overview of methods and practically perform gravimetry, volumetry, photometry, potentiometric titration, HPLC and capillary electrophoresis

Osnova

Lessons: 1.-2. Quantitative analysis: basic concepts and methods of quantitative analysis. Sample preparation, dissolution of samples. Solutions, expressing their composition, the measurement of volume. Gravimetry, calculations in gravimetry, gravimetric factor, analytical scales and weighing.

3.- 5. Introduction to volumetric analysis: definition. Standard solutions, primary standards, finding the exact concentration of standard solutions. Types of titrations, titration curve, indications of equivalence point. Acid-base, precipitation, complexometric, redox titrations.
6.-8. The basics of optical methods. Properties of the electromagnetic radiation: interaction of mass and radiation. The emission, absorption of radiation, fluorimetry, AAS, AES, ICP-AES, change of the direction and speed, optical rotation. ORD. Circular dichroism (CD).
9.-10. Basic concepts and principles of electroanalytical methods. Direct and indirect methods (titrations). The methods used in pharmaceutical analysis: conductometry, high-frequency conductometry, potentiometry, amperometry (Clark cell), coulometry, voltammetry, polarography, diferential pulse polarography, striping voltammetry.
11.-13. Introduction to separation methods: Classification, basic principles, examples of applications. Extraction liquid-liquid, SPE. Chromatographic methods (IEC, GC, HPLC, TLC). Typical applications of HPLC
14. Electromigration methods (CZE, cIEF, cITP, MEKC). Instrumentation, typical applications.
Laboratory exercise
1. Gravimetric Determination of iron or a Ferric Salt in the Form of Ferric Oxide
2. Volumetric determination of an Insoluble Carbonate by Back Titration
3. Complexometric Determination of Bismuth and Zinc by Stepwise Titration
4. Spectrophotometric determination of copper with Complexon III / Determination of antipyrine with Fe(3+)
5. Argentometric determination of halides mixture with potentiometric end-point indication / Alkalimetric determination of phosphoric acid with potentiometric end-point indication
6. Determination of caffeine in tablets of Acifein by high-performance liquid chromatography (HPLC)
7. Determination of acetylsalicylic acid (ASA) in tablets of Acifein by capillary zone electrophoresis (CZE)

Literatura

doporučená literatura

WATSON, David G. a Bhavik A. PATEL. *Pharmaceutical analysis : a textbook for pharmacy students and pharmaceutical chemists*. Fifth edition. Edinburgh: Elsevier, 2021, vi, 462. ISBN 978070208088.

SKOOG, Douglas A., F. James HOLLER a Stanley R. CROUCH. *Principles of instrumental analysis*. Seventh edition. Boston: Cengage Learning, 2018, xx, 959. ISBN 9781305577213.

HAM, Bryan M. a Aihui MAHAM. *Analytical chemistry : a chemist and laboratory technician's toolkit*. Hoboken, New Jersey: John Wiley & Sons, 2016, xxiv, 652. ISBN 9781118714843.

CHRISTIAN, Gary D., Purnendu K. DASGUPTA a Kevin SCHUG. *Analytical chemistry*. 7th ed. Hoboken, N.J.: Wiley, 2014, xxii, 826. ISBN 9780470887578.

FaF:aFABB1_16 **Cell Biology for Pharmacists**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu doc. RNDr. Jan Hošek, Ph.D.

Vyučující

MVDr. Jana Hložková, Ph.D. (přednášející)
doc. RNDr. Jan Hošek, Ph.D. (přednášející)
doc. RNDr. Jan Hošek, Ph.D. (cvičící)
Ing. Marcela Nejezchlebová (cvičící)
Mgr. Bc. Daniela Nykodýmová (cvičící)

Cíle předmětu

The aim of the study is to expand secondary school knowledge of biology so that students gain the necessary basis in terms of content and conceptual area of these disciplines, on the basis of which they could continue to study applied biological disciplines taught at the Faculty of Pharmacy. The study focuses on general, molecular and cellular aspects of biology, evolutionary biology and the basics of genetics. Due to the existence of the compulsory subject Molecular Biology in the 2nd year, this topic is not dealt with more broadly in the subject.

Výukové metody

Lectures Discussion, Consultation Demonstration Practical laboratory activities

Metody hodnocení

Full participation in exercises is obligatory.Submission of all protocols is required. This subject will be terminated by written test. In the case of failure the test students complete the subject by oral examination.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Students will gain extended knowledge of basic topics of general and cell biology. Emphasis is placed on the terminology of individual topics, which will allow you to orient and build on them in other related disciplines. The topic of the last lecture opens to students the opportunity to gain insight into the use of biological disciplines in practice. The aim of practical training is to acquire basic manual skills in microscopy and work with biological material.

Osnova

Biology introduction to the subject, definition of the field, history, fields of biology, taxonomy, cell types Possibilities of imaging and imaging techniques in biology Membranes membrane structure (general features + viruses, prokaryotes, eukaryotes), transport across membranes diffusion, osmosis, transport proteins, ion channels and membrane potential, clinically important membranes Organelles, ER, GA, endosomes, lysosomes, peroxisomes, mechanisms of protein transfer into organelles, clinically important organelopathy General principles of intercellular communication in unicellular and multicellular organisms, signaling molecules, receptors associated with ion channels, G-proteins, enzymes, diseases of intercellular communication disorders Cell division - cell cycle (G1, S, G2, M), mitosis (prophase, prometaphase, metaphase, anaphase, telophase, cytokinesis), meiosis, cell cycle regulation Reproduction of organisms asexual reproduction (binary division, gemiparia, fisiparia, vegetative reproduction), sexual reproduction (spermiogenesis, oogenesis, fertilization), gametopathy Introduction to genetics gene, genome, genotype, phenotype, Mendelian genetics, non-Mendelian genetics, epigenetics, transcription, translation, prokaryotic genome, eukaryotic genome, genetic diagnostic tests in medicine (present history) Biology of the immune system (IS) - phylo and ontogenesis of IS, nonspecific and specific immunity, antigen, antibody, opsonization, MHC system, medically important immune disorders, transplant immunity, Interactions of living systems symbiosis, commensalism, infections (prions, viruses, bacteria, parasites) and the environment (ecotoxicology, environmental stress, GMO) Current topics in biomedical fields Credit procedure Practical excercises I. Microscopic technique 1. Work safety. 2. Organization of teaching, keeping protocols, conditions for granting credits 3. Working with a light microscope 4. Prokaryotic and eukaryotic cell structure. 5. Plant and animal cell structure. II. Prokaryota and protozoa 1. Prokaryota 2. Bacterial smear, Gram staining 3.Sacharomyces smear, staining. 4. Protozoa hay infusion, native preparation 5. Types of movements ciliary, amoeboid, flagellar 6. Staining and morphology of lactic acid bacteria, fixed preparation III. Mitosis 1. Preparation of mitotic preparation, staining 2. Mitotic index 3. Chromosomes of karyotype assembly IV. Meiosis 1. Spermatogenesis 2.Histology of seed-forming epithelium 3. Sperm morphology species differences 4. Oogenesis 5. Ovarian histology 6. Sex chromosomes 7. Detection of Bar's body, preparation of the specimen, staining V. Body structure of mammals 1. Anatomical body structure of a rodent autopsy, video 2. Histological structure of tissues and organs VI. Credit procedure 1. Substitute exercises. 2. Checking protocols. 3. Granting of credits.B iology introduction to the subject, definition of the field, history, fields of biology, taxonomy, cell types Possibilities of imaging and imaging techniques in biology Membranes membrane structure (general features + viruses,

prokaryotes, eukaryotes), transport across membranes diffusion, osmosis, transport proteins, ion channels and membrane potential, clinically important membranes Organelles, ER, GA, endosomes, lysosomes, peroxisomes, mechanisms of protein transfer into organelles, clinically important organelopathy General principles of intercellular communication in unicellular and multicellular organisms, signaling molecules, receptors associated with ion channels, G-proteins, enzymes, diseases of intercellular communication disorders Cell division - cell cycle (G1, S, G2, M), mitosis (prophase, prometaphase, metaphase, anaphase, telophase, cytokinesis), meiosis, cell cycle regulation Reproduction of organisms asexual reproduction (binary division, gemiparia, fisiparia, vegetative reproduction), sexual reproduction (spermiogenesis, oogenesis, fertilization), gametopathy Introduction to genetics gene, genome, genotype, phenotype, Mendelian genetics, non-Mendelian genetics, epigenetics, transcription, translation, prokaryotic genome, eukaryotic genome, genetic diagnostic tests in medicine (present history) Biology of the immune system (IS) - phylo and ontogenesis of IS, nonspecific and specific immunity, antigen, antibody, opsonization, MHC system, medically important immune disorders, transplant immunity, Interactions of living systems symbiosis, commensalism, infections (prions, viruses, bacteria, parasites) and the environment (ecotoxicology, environmental stress, GMO) Current topics in biomedical fields Credit granting Practical excercises I. Microscopic technique 1. Work safety. 2. Organization of teaching, keeping protocols, conditions for granting credits 3. Working with a light microscope 4. Prokaryotic and eukaryotic cell structure. 5. Plant and animal cell structure. II. Prokaryota and protozoa 1. Prokaryota 2. Bacterial smear, Gram staining 3.Sacharomyces smear, staining. 4. Protozoa hay infusion, native preparation 5. Types of movements ciliary, amoeboid, flagellar 6. Staining and morphology of lactic acid bacteria, fixed preparation III. Mitosis 1. Preparation of mitotic preparation, staining 2. Mitotic index 3. Chromosomes of karyotype assembly IV. Meiosis 1. Spermatogenesis 2.Histology of seed-forming epithelium 3. Sperm morphology species differences 4. Oogenesis 5. Ovarian histology 6. Sex chromosomes 7. Detection of Bar's body, preparation of the specimen, staining V. Body structure of mammals 1. Anatomical body structure of a rodent autopsy, video 2. Histological structure of tissues and organs VI. Credit procedure 1. Substitute exercises. 2. Checking protocols. 3. Granting of credits.

Literatura

doporučená literatura

POLLARD, Thomas D., William C. EARNSHAW, Jennifer LIPPINCOTT-SCHWARTZ a Graham T. JOHNSON. *Cell biology*. Third edition. Philadelphia, PA: Elsevier, 2017, 1 online. ISBN 9780323400022. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1410217

Gartner LP, Hiatt JL. *Cell biology and histology 7th*. London, 2011. ISBN 978-1-4511-8951-3.

FaF:aFABC1_16 **Biochemistry for Pharmacists**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu PharmDr. Jakub Treml, Ph.D.

Vyučující

Mgr. Marie Brázdová, Ph.D. (přednášející)
PharmDr. Jakub Treml, Ph.D. (přednášející)
Mgr. Marie Brázdová, Ph.D. (cvičící)
Mgr. Petra Herczogová (cvičící)
Mgr. Bc. Daniela Nykodýmová (cvičící)

Cíle předmětu

Biochemistry is the study of the chemical processes (changes) which condition and accompany life in its most varied forms and manifestations, and attemps to explain its essence on a molecular level. Medical biochemistry is biochemistry in use, applied quite specifically in veterinary medicine (for example, the peculiarities of the metabolism of nutrients in invidual species of livestock). Further, in teaching of biochemistry, it is necessary to concentrate on detailed interpretation of selected chapters, that are most significant for the formation of the European profile of a graduate of veterinary university. Practical (laboratory) work where verbal information is confirmed by practical experience is also an integral component of the biochemistry teaching.

Výukové metody

lectures, class discussion, laboratory work, homework,

Metody hodnocení

Successful completion of the course with a written and oral exam. The grade depends mainly on the written part, which consists of a test with 40 questions, 150 points. To pass the course successfully, you must pass the test at 60%. The prerequisite for passing the exam is passing all practical exercises, passing the test from the exercises with 80%, adequate knowledge of biochemical issues and correct preparation of all exercise protocols. At the same time, a short task readiness test will be conducted before each exercise. During the course of study, it is mandatory to complete 4 tests from basic biochemical pathways. Furthermore, the group task of developing 2 chapters of seminars on Biochemistry (Josef Tomandl, Eva Táborská and the team. Biochemistry I : seminars. Brno, 2012. ISBN 978-80-210-5740-1). The written examination test is prepared on the basis of lectures and questions from Biochemistry I-seminar 2012 - see recommended literature. He will then make up the teaching at the time and in the manner determined by the relevant teacher.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Basic knowledge of biochemistry forming the basis for follow-up subjects of Pharmacy study.

Osnova

Syllabus Biochemistry 1. Biochemistry: introduction Fundamentals of biochemistry, living systems, prokaryotic/ eukaryotic cell, animal/plant cell, organelles, chemical reactions, weak interactions, water medium of life, pH,

pKa, buffer systems, osmotic pressure, inorganic substances in organism 2. Structure and function of proteins Amino acids, peptides, structure and function of proteins, hemoglobin and myoglobin 3. Enzymes Properties of enzymes, classification of enzymes, cofactors, catalysis, kinetics of enzyme reactions, enzymes in therapy 4. Biological membranes and membrane transport Membranes - composition, properties, types of membrane transport 5. Bioenergetics and metabolism of saccharides General characteristics, mono, di, polysaccharides, glycosaminoglycans, proteoglycans, lectins, metabolism, macroergic compounds, glucose transport, glucose metabolism glycolysis, pyruvate conversions, gluconeogenesis, glycogen synthesis and degradation, glycogenosis, pentosophosphate pathway, fructose metabolism, galactose, ascorbic acid 6. Metabolism of amino acids Protein degradation, protein sources, amino acid catabolism, synthesis of non-essential amino acids, transformations of the carbon skeleton of amino acids 7. Lipids and lipid metabolism Lipid types and metabolism in general, transport of lipids, fatty acids, metabolism of fatty acids (ß-oxidation and synthesis), ketone bodies, synthesis of triacylglycerols, phospholipids, sphingolipids, lipid peroxidation 8. Cholesterol metabolism and icosanoids Synthesis, transport and excretion of cholesterol, steroid division, icosanoids (characteristics and synthesis) 9. Aerobic metabolism Citrate cycle: acetyl CoA, pyruvate decarboxylation, citrate cycle reaction, citrate regulation. cycle, anaplerotic reactions 10. Respiratory chain, reactive oxygen species: energy transformation, aerobic phosphorylation, NADH + H+, FADH2, transport mechanisms (shuttles), respiratory chain cofactors, respiratory chain enzyme complexes, ATP synthesis, reactive oxygen species, antioxidants 11. Nucleic acids Basic characteristics, structure, DNA/RNA differences, biosynthesis and degradation of purine and pyrimidine nucleotides, disorders of purine metabolism, replication, transcription, translation, genetic code, mutation, glycosylation of proteins, regulation of gene expression 12. Biochemistry of extracellular and intracellular communication Regulation of metabolism, nerve cell, interorgan relationships, biotransformation

Literatura

doporučená literatura

BERG, Jeremy M., John L. TYMOCZKO, Gregory J. GATTO a Lubert STRYER. *Biochemistry*. Ninth edition. New York: Macmillan International, 2019, xlii, 1096. ISBN 9781319114657.

TYMOCZKO, John L., Jeremy M. BERG, Gregory J. GATTO a Lubert STRYER. *Biochemistry : a short course*. Fourth edition. New York: W. H. Freeman, 2019, xxxii, 851. ISBN 9781319248086.

FERRIER, Denise R. *Biochemistry*. Seventh edition. Philadelphia: Wolters Kluwer, 2017, viii, 567. ISBN 9781496363541.

MURRAY,R.K., GRANNER,D.K.,RODWELL,V.W. *Harper´s Illustrated Biochemistry.*. Appleton & Lange, 2006. ISBN 07-147885-X.

FaF:aFABF1_13 **Biophysics for Pharmacists**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. Mgr. Jan Muselík, Ph.D.

Vyučující

doc. Mgr. Jan Muselík, Ph.D. (přednášející)
PharmDr. Jakub Vysloužil, Ph.D. (přednášející)

Cíle předmětu

Biophysical principles of function of living systems. Interaction of electromagnetic radiation with living systems. Molecular biophysics. Bioenergetics and interactions of living organisms with the environment. Electrical phenomena. Physical fundamentals of diagnostic methods in medicine. Physical fundamentals of instrumental methods. The statistical methods used in biophysics

Výukové metody

lectures

Metody hodnocení

written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing this course, the student will be able to:

- understand the most important biophysical principles and laws;
- correctly evaluate the results obtained by basic biophysical methods;
- understand the basic knowledge of physiological and molecular biophysics;
- understand the importance of biophysical processes for physiology;
- understand the principles of some therapeutic and diagnostic medical devices;

Osnova

1. Introduction, structure of lectures and exercises. Basic statistical concepts and terms. 2. The statistical methods and their applications.
3. Structure of the matter. Interaction of matter and electromagnetic radiation. Reactive oxygen species.
4. Ionizing radiation. types, interaction with matter. Methods of detection. Interaction of ionizing radiation with living matter, its use in medicine.
5. Non-ionizing electromagnetic radiation. Properties of radiation. Radiation sources and detectors. The influence of visible light, UV radiation and IF radiation to organism.
6. Molecular biophysics, water and its properties, surface tension, colligative properties, phase interfaces, colloids.

7. Optical system of the eye. Optics. Optical geometrical devices - microscope, fiber optics - endoscopy.
8. The properties of gases and liquids, fluid mechanics. Blood flow in the bloodstream. The solubility of gases in liquids, biophysics of breathing.
9. Biocybernetics.
10. Acoustics, Ultrasound and its use in pharmacy and medicine.
11. Biomechanics, physics of bones joints and muscles, mechanical work of the heart.
12. The cell membrane, electrical phenomena on the membrane, action potentials. Transport phenomena. Use of electric current in medicine.
13. Magnetism, diagnostic and therapeutic use of magnetic fields. Thermic, temperature regulation of organisms.

Literatura

doporučená literatura

GLASER, Roland. *Biophysics : an introduction*. 2nd ed. Heidelberg: Springer, 2012, xx, 407. ISBN 9783642252112.

HRAZDIRA, Ivo, Aleš BOUREK a Jiřina ŠKORPÍKOVÁ. *Fundamentals of biophysics and medical technology*. Edited by Vojtěch Mornstein. 2nd revised edition. Brno: Masaryk University, 2012, 325 stran. ISBN 9788021057586.

FaF:aFABO1_12 **Pharmaceutical Botany I**

Předmět není v aktuálních obdobích! 4 kredity, ukončení z, garant předmětu prof. PharmDr. Petr Babula, Ph.D.

Vyučující

prof. PharmDr. Petr Babula, Ph.D. (přednášející)
PharmDr. Margita Dvorská, Ph.D. (cvičící)
doc. PharmDr. Renata Kubínová, Ph.D. (cvičící)
Ing. Marcela Nejezchlebová (cvičící)
RNDr. Veronika Vaverková, Ph.D. (cvičící)

Cíle předmětu

The subject provides education for first class Master program of Pharmacy. The basic course covers the areas of plant anatomy, morphology, and physiology as well as systematics of lower and higher medicinal plants. The favor is mainly focused on selected genera with important secondary metabolites. An integral part of teaching is a practice exercise of anatomy, systematics, and field excursions.

Výukové metody

Přednášení Demonstrace
Laborování

Metody hodnocení

Didaktický test

Primární způsob výuky

Žádné informace.

Výstupy z učení

Knowledge of pharmaceutical botany within the range of syllabus.

Osnova

Lectures1. Structure of the plant cell I. Specificity of plant cell structure and function. Cell wall - structure, chemical composition. Interaction of cell wall components. Role of the cell wall in interactions between the pathogen and the host. Storage function of the cell wall and specific features associated with it.
2. Plant of the plant cell II. Plastids - leukoplasts, chromoplasts. Chloroplasts and their importance in plant biotechnology.
3. Vacuoles. Cell inclusions and their forms - oxalates, silicates, sulphates, malates, and others. The importance of cell inclusions in the identification of plant species (plant drugs).
4. Histology. Basic principles of plant body structure and overview of plant tissues (cell wall character, cell dividing activity, function). Meristematic plant tissues as a ”source of cells” and their classification. Plant cell cell cycle specificity and cell differentiation. Apical meristems of stems (shoots) and roots. Control of the activity of (sub)apical meristems.
5. Classification of plant tissues according to function I. System of basic tissues. Secretory tissues and structures. Dermal tissues. Special signs of dermal tissues in some groups of plants.
6. Classification of plant tissues according to function II. Vascular and mechanical plant tissues and their evolution. Stelar system of plants. Differences in the anatomy of vascular tissues in individual groups of plants.
7. Anatomical structure of the root. Primary and secondary growth state. Anomalous root secondary growth. Metamorphoses of the roots and their significance. Relationship between anatomical root structure and biotic and abiotic environmental factors.
8. Anatomical stem structure. Primary and secondary growth state. Anomalous stem secondary growth. Stem metamorphoses and their significance. Relationship between anatomical structure of stems and biotic and abiotic environmental factors. Anatomical structure of leaves. Leaf morphology. Leaves of xerophyte plants. Leave metamorphoses.
9. Generative plant organs - flowers, inflorescences, fruits and seeds and their pharmaceutical significance.
10. Introduction to plant physiology. Overview of primary plant metabolism. Primary plant metabolites and their significance. Secondary metabolism of plants, association of primary and secondary metabolism of plants. Secondary metabolites of plants and their physiological function.

11. Photosynthesis, primary and secondary events. RUBISCO. C4 plants and CAM plants as a variant of C4 plants. Photosynthetic pigments. The importance of photosynthesis in new technologies, artificial photosynthesis.
12. Stress Plant Physiology I - Stress and mechanisms of stress response of plants. Resistance, tolerance, sensitivity, acclimation, adaptation.
13. Stress Plant Physiology II - Effects of Biotic and Biotic Stress Factors on Plants - Local and Systemic Reactions. Mechanical factors affecting plants. Plants as bioindicators.

Literatura

doporučená literatura

Plant biology. Edited by Alison M. Smith. New York: Garland Science, 2010, xv, 664. ISBN 9780815340256.

TAIZ, Lincoln a Eduardo ZEIGER. *Plant physiology*. 5th ed. Sunderland, Mass.: Sinauer Associates, 2010, xxxiv, 782. ISBN 9780878938667.

FaF:aFABO2_12 **Pharmaceutical Botany II**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu prof. PharmDr. Petr Babula, Ph.D.

Vyučující

prof. PharmDr. Petr Babula, Ph.D. (přednášející)
PharmDr. Margita Dvorská, Ph.D. (cvičící)
doc. PharmDr. Renata Kubínová, Ph.D. (cvičící)
Ing. Marcela Nejezchlebová (cvičící)
RNDr. Veronika Vaverková, Ph.D. (cvičící)

Cíle předmětu

The subject Biology of plants provides education for first class Master programme of Pharmacy. Basic course cover the areas of plant anatomy, morphology and physiology as well as systematics of lower and higher medicinal plants. The favour is mainly focused on selected genera with important secondary metabolities. An integral part of teaching are practice exercises of anatomy, systematics and field excursions.

Výukové metody

Lecture Demonstration
Projection (static, dynamic)
Laboratory work - practicals

Metody hodnocení

Mark Oral exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

Knowledge of pharmaceutical botany within the range of syllabus.

Osnova

Lectures1. Introduction to systematic botany. Nomenclature rules and principles, chemotaxonomy. Classification of organisms and their evolution with special attention to autotrophic organisms and mechanisms of symbiotic processes. Cyanobacteria - characteristics, systematics, ecology and their significance. Cyanotoxins. The pharmaceutical significance of cyanobacteria. Autotrophic representatives of Excavata, Rhizaria, and Chromalveolata - characteristics, systematics, ecology and their pharmaceutical importance. Characteristic secondary metabolites.
2. Archaeplastida - Biliphytae, Glaucophyta, Rhodophyta. Viridiplantae. Chlorophytae. Chlorophyta. Streptophytae. Charophytae and Charophyta. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
3. Bryophytae - Anthocerophyta, Marchantiophyta, Hepatophyta. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites. Tracheophytae - Lycopodiophyta, Pteridophyta. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
4. Spermatophyta - Pinophyta, Cycadophyta, Ginkgophyta, Gnetophyta. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
5. Magnoliophyta. Amborellales, Nymphaeales, Austrobayleyalles, Chloranthales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
6. Magnoliids. Canellales, Laurales, Magnoliales, Piperales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
7. Monocots I. Acorales, Alismatales, Asparagales, Dioscoreales, Liliales, Pandanales, Petrosaviales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
8. Monocots plants II. Arecales, Commelinales, Poales, Zingiberales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
9. Eudicots. Basal orders - Ranunculales, Proteales, Trochodendrales, Buxales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
10. Core eudicots. Gunnerales, Dilleniales, Saxifragales, Santalales, and Caryophyllales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
11. Rosides, Eurosids I (Fabids). Vitales, Zygophyllales, Celastrales, Oxalidales, Malpighiales, Cucurbitales, Fagales, Fabales, Rosales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.

12. Eurosids II (Malvids). Geraniales, Myrtales, Brassicales, Malvales, Sapindales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
13. Asterids. Cornales, Ericales. Lamiids. Boraginales, Gentianales, Lamiales, Solanales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.
14. Campanulids. Aquifoliales, Asterales, Dipsacales, Apiales. Characteristic, pharmaceutically and toxicologically important representatives. Characteristic secondary metabolites.

Literatura

doporučená literatura

Plant biology. Edited by Alison M. Smith. New York: Garland Science, 2010, xv, 664. ISBN 9780815340256.

TAIZ, Lincoln a Eduardo ZEIGER. *Plant physiology*. 5th ed. Sunderland, Mass.: Sinauer Associates, 2010, xxxiv, 782. ISBN 9780878938667.

FaF:aFABT1_16 **Pharmaceutical Biotechnology**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu doc. RNDr. Jan Hošek, Ph.D.

Vyučující

doc. RNDr. Jan Hošek, Ph.D. (přednášející)
doc. RNDr. Jan Hošek, Ph.D. (cvičící)
Ing. Marcela Nejezchlebová (cvičící)
PharmDr. Jakub Treml, Ph.D. (cvičící)

Cíle předmětu

This subject is mainly focused on cytology, molecular biology and microbiology principles, which are used in recombinant therapeutics preparation.Students will be familiarized with recombinant techniques, gene and protein engineering, and gene therapy as well.
Attention will be also paid to industrial biotechnology and production of significant products, such as antibiotics, vitamins, organic acids, amino-acids and alkaloids.

Výukové metody

lectures, class discussion, practical classes

Metody hodnocení

Written exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

Basic knowledge from cytology, genetic engineering, and industrial microbiology which are used in preparation of recombinant pharmaceuticals. Overview of biotechnology production of antibiotics, vitamins, organic acids, amino acids and alkaloids.

Osnova

1) Introduction to pharmaceutical biotechnology, definition, milestones2) The cell as a tool of biotechnology, function of endoplasmic reticulum, Golgi komplex, posttranslational processes, chaperones
3) The basics of gene engineering I - the principles, how to prepare recombinant gene, vectors
4) The basics of gene engineering II - preparation of genes for cloning, host cells, transformation, selection and transformants identification
5) Expression of recombinant proteins in prokaryotic cells and yeasts
6) Expression of recombinant proteins in eukaryotic cells - insect cells and baculoviruses, mammalian cells and adenoviruses
7) The classical biotechnological processes in pharmacology
8) The process of biotechnology - definition, the phases of biotechnological process, basic materials, fermentors and bioreactors, methods of biotechnological products purification
9) Examples of classical and recombinant biotechnology products in pharmacy, cytokines, hormones, enzymes, antibodies and their derivates
10) Gene engineering of plants - structure of plant genome, vectors, expression cassettes
11) Plant biotechnology - methods of transformation and transgene identification, molecular pharming
12) Application of gene engineering and plant biotechnology in pharmacy, medicine, and food industry, rules for genetically modified organisms manipulation
13) Gene and cell therapy, tissue engineering, genomics and proteomics in pharmacy
14) New trends in biopharmaceutical products development

Literatura

doporučená literatura

Pharmaceutical biotechnology : fundamentals and applications. Edited by Daan Crommelin - Robert D. Sindelar - Bernd Meibohm. Fifth edition. Cham: Springer, 2019, xxiii, 653. ISBN 9783030007096.

FaF:aFACV1_15 **Chemical Calculations**

Předmět není v aktuálních obdobích! 2 kredity, ukončení z, garant předmětu Mgr. Aleš Kroutil, Ph.D.

Vyučující

Mgr. Aleš Kroutil, Ph.D. (cvičící)
PharmDr. Pavlína Marvanová, Ph.D. (cvičící)
Mgr. Petr Mokrý, Ph.D. (cvičící)

Cíle předmětu

The course is dedicated for first year students. The seminars are focused mostly to calculation procedures, which are necessary for successful passing all the chemical courses, particularly the General and Inorganic Chemistry. It includes stoichiometry, chemical equations based calculations, calculations regarding solutions concentrations, etc. We put the accent on understanding the principles of these calculations. Attention will be also given to nomenclature of inorganic compounds and electron structural formulas.

Výukové metody

- class discussions - homework
- calculations

Metody hodnocení

- attendance on seminars is compulsory
- two written tests, 60% of the available points is needed to passs

Primární způsob výuky

Žádné informace.

Výstupy z učení

Student after the course will be able to:

- Calculate composition of solutions (nass percents, molarity);
- Calculate mass composition of compounds based on their stoichiometric formulas;
- Use the chemical equations for apropriate calculations;
- Calculate basic tasks with solubility product;
- Calculate pH of acids and bases solutions based on their characteristics (pKa, concentration, dissociation rate, etc)

Osnova

- solution composition - calculations of mass fraction, mass percents, molarity and relationships between them
- setting-up and balancing chemical equations
- stoichiometry - elemental analysis, calculations based on chemical equations
- balancing of redox equations
- The solubility product - basic calculations
- pH, pKa, acidobasics equilibria, hydrolysis of salts, buffers

Literatura

doporučená literatura

TIMBERLAKE, Karen C. *Chemistry : an introduction to general, organic, and biological chemistry*. Global edition. New York: Pearson, 2019, 716 stran. ISBN 9781292228860.

HOUSECROFT, Catherine E. a A. G. SHARPE. *Inorganic chemistry*. 4th ed. Harlow: Pearson, 2012, xl, 1213. ISBN 9780273742753.

FaF:aFADP1_FaF **Diploma Thesis I**

Předmět není v aktuálních obdobích! 2 kredity, ukončení z, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Peter Kollár, Ph.D. (cvičící)

Cíle předmětu

The aim of the subject is to systematically guide students in the preparation of their diploma theses, to help them orientate themselves in the solved problem, to deepen their ability to work with professional literature, to create literary research, to master the basic methods of scientific work in the chosen field, to apply the principles of ethics of scientific and publishing activities and to present correctly the results of own scientific work.

Výukové metody

Theoretical study, consultation, individual work

Metody hodnocení

Credit will be awarded on the basis of an individual assessment of the completion of partial tasks and goals related to the preparation of the diploma thesis by the thesis supervisor.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the subject the student will be able to:

- search relevant professional literature sources;
- prepare a literature search;
- apply the learned scientific research methods to obtain data;
- process and analyze the obtained data;
- work out a comprehensive professional text and adequately present the results of own work.

Osnova

- Research and study of the recommended literature.
- Defining the aims of the thesis.
- Choosing the relevant working methods.

- Testing the methods. A pilot study and obtaining results.
- Processing the results.
- Discussion of the results.
- Conclusions and recommendations.

Literatura

doporučená literatura

Relevantní literatura a databáze v souladu se zaměřením tématu diplomové práce (Relevant literature and databases in accordance with the thesis topic)

FaF:aFADP2_FaF **Diploma Thesis II**

Předmět není v aktuálních obdobích! 4 kredity, ukončení z, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Peter Kollár, Ph.D. (cvičící)

Cíle předmětu

The aim of the subject is to systematically guide students in the preparation of their diploma theses, to help them orientate themselves in the solved problem, to deepen their ability to work with professional literature, to create literary research, to master the basic methods of scientific work in the chosen field, to apply the principles of ethics of scientific and publishing activities and to present correctly the results of own scientific work.

Výukové metody

Theoretical study, consultation, individual work

Metody hodnocení

Credit will be awarded on the basis of an individual assessment of the completion of partial tasks and goals related to the preparation of the diploma thesis by the thesis supervisor.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the subject the student will be able to:

- search relevant professional literature sources;
- prepare a literature search;
- apply the learned scientific research methods to obtain data;
- process and analyze the obtained data;
- work out a comprehensive professional text and adequately present the results of own work.

Osnova

- Research and study of the recommended literature.
- Defining the aims of the thesis.
- Choosing the relevant working methods.
- Testing the methods. A pilot study and obtaining results.
- Processing the results.
- Discussion of the results.
- Conclusions and recommendations.

Literatura

doporučená literatura

Relevantní literatura a databáze v souladu se zaměřením tématu diplomové práce (Relevant literature and databases in accordance with the thesis topic)

FaF:aFADP3_FaF **Diploma Thesis III**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení z, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Peter Kollár, Ph.D. (cvičící)

Cíle předmětu

The aim of the subject is to systematically guide students in the preparation of their diploma theses, to help them orientate themselves in the solved problem, to deepen their ability to work with professional literature, to create literary research, to master the basic methods of scientific work in the chosen field, to apply the principles of ethics of scientific and publishing activities and to present correctly the results of own scientific work.

Výukové metody

Theoretical study, consultation, individual work

Metody hodnocení

Credit will be awarded on the basis of an individual assessment of the completion of partial tasks and goals related to the preparation of the diploma thesis by the thesis supervisor.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the subject the student will be able to:
- search relevant professional literature sources;
- prepare a literature search;
- apply the learned scientific research methods to obtain data;
- process and analyze the obtained data;
- work out a comprehensive professional text and adequately present the results of own work.

Osnova

- Research and study of the recommended literature.
- Defining the aims of the thesis.
- Choosing the relevant working methods.
- Testing the methods. A pilot study and obtaining results.
- Processing the results.
- Discussion of the results.
- Conclusions and recommendations.

Literatura

doporučená literatura

Relevantní literatura a databáze v souladu se zaměřením tématu diplomové práce (Relevant literature and databases in accordance with the thesis topic)

FaF:aFADP4_FaF **Diploma Thesis IV**

Předmět není v aktuálních obdobích! 15 kreditů, ukončení z, garant předmětu doc. PharmDr. Peter Kollár, Ph.D.

Vyučující

doc. PharmDr. Peter Kollár, Ph.D. (cvičící)

Cíle předmětu

The aim of the subject is to systematically guide students in the preparation of their diploma theses, to help them orientate themselves in the solved problem, to deepen their ability to work with professional literature, to create literary research, to master the basic methods of scientific work in the chosen field, to apply the principles of ethics of scientific and publishing activities and to present correctly the results of own scientific work.

Výukové metody

Theoretical study, consultation, individual work

Metody hodnocení

Credit will be awarded on the basis of an individual assessment of the completion of partial tasks and goals related to the preparation of the diploma thesis by the thesis supervisor.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the subject the student will be able to:
- search relevant professional literature sources;
- prepare a literature search;
- apply the learned scientific research methods to obtain data;
- process and analyze the obtained data;
- work out a comprehensive professional text and adequately present the results of own work.

Osnova

- Research and study of the recommended literature.
- Defining the aims of the thesis.
- Choosing the relevant working methods.
- Testing the methods. A pilot study and obtaining results.
- Processing the results.
- Discussion of the results.
- Conclusions and recommendations.

Literatura

doporučená literatura

Relevantní literatura a databáze v souladu se zaměřením tématu diplomové práce (Relevant literature and databases in accordance with the thesis topic)

FaF:aFAFC1_14 **Human Physiology and Pathophysiology I**

Předmět není v aktuálních obdobích! 3 kredity, ukončení z, garant předmětu MUDr. Tomáš Parák, Ph.D.

Vyučující

MUDr. Marta Chalupová, Ph.D. (přednášející)
MUDr. Tomáš Parák, Ph.D. (přednášející)
doc. MVDr. Pavel Suchý, Ph.D. (přednášející)
prof. MUDr. Jiří Vítovec, CSc. (přednášející)
MVDr. Jana Hložková, Ph.D. (cvičící)
MUDr. Tomáš Parák, Ph.D. (cvičící)
MVDr. Peter Scheer, Ph.D. (cvičící)

Cíle předmětu

Human physiology is defined as a science of the functions of healthy organism at the level of cell, tissue, organ and organ systems. Pathophysiology is focused on etiopathogenesis - the mechanisms which lead from the primary cause via individual malfunctions to subsequent development of clinical symptoms of disease. Knowledge of these mechanisms serves to develop a suitable and efficient therapy and prevent resultant damage.

Výukové metody

Lectures, seminars, exercises, exercises in selected examination techniques, consultations

Metody hodnocení

To gain credits: Data analysis, eventualyy seminar papers on given topics, written test or an oral exam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- describe the physiology and pathophysiology of the main organs
- recognize subjective and objective symptoms of diseases
- examine the main physiological functions
- interpret examination results

Osnova

PHYSIOLOGY AND PATHOPHYSIOLOGY I - LECTURES: 1. Introduction into pathophysiology, symptoms of diseases and their diagnosing. Disease development. Genetic factors in pathogenesis.
2. General physiological principles. Cell physiology. Function of cell membrane and intracellular structures. Basic principles of physiological regulation.
3. Nonspecific defence mechanisms. Inflammation. Stress. Damage of organism (physical, chemical and biological)
4. Specific defensive mechanisms and their disorders. Cell-mediated and antibody immunity. White blood cells, functions and disorders.
5. Physiology of the locomotive apparatus. Most common diseases of bones, muscles and joints. Inflammatory and degenerative rheumatic diseases.
6. Physiology of digestion and absorption, metabolism of sacharides, fats and proteins. Nutritional disorders, obesity and starving. Metabolic syndrome.
7. Vitamins, mineral substances and trace elements. Hyper and hypovitaminoses. Diseases of deficiency and excess of mineral substances and trace elements.
8. Physiology of blood formation. Differential diagnosing of anaemia.
9. Hemostasis and hemocoagulation. Coagulation cascade and its disorders. Hemorrhagic and hypercoagulable states.
10. Physiology of the circulatory system. Formation and development of atherosclerosis. Ischemic heart disease.
11. Formation and transmission of excitement and its disorders. Inherited and acquired heart disorders.
12. Basic principles of the blood pressure regulation. Hypertensive disease. Hypotension. Circulation failure (shock).
13. Theory of the formation of malignant growth. Tumours and their classification. Overview of clinically most common cancers.

Syllabus of exercises:
I. Basic physiological functions and their watching
1. Anamnesis, interview
2. Objective and subjective anamnesis
3. Basic checkup (examinations)
II. Cardiovascular system
1. Auscultation of heart sounds
2. Measurement of blood pressure
3. Electrocardiography
III. Respiratory system
1. Auscultation of lungs
2. Spirometry, Pulse oxymetry
3. Basal metabolism
IV. Nervous system
1. Hearing tests
2. Eye tests
3. Optical illusions
4. EEG
V. Urogenital tract, diabetes mellitus
1. Semi-quantitative urinalysis
2. Specific weight of urine
3. Kidney functions
4. Menstrual cycle, ovulation, gravidity
VI. Blood, Good laboratory practice
1. Red blood cells
2. Blood count
3. Haematocrit
4. Erythrocyte sedimentation

5. Differential leukocytes count

VII. Obtaining credits

Literatura

doporučená literatura

GRANT, Allison. *Ross & Wilson pathophysiology*. [London]: Elsevier, 2024, vii, 408. ISBN 9780702077715.

SILBERNAGL, Stefan a Florian LANG. *Color atlas of pathophysiology*. 3rd edition. Stuttgart: Thieme, 2016, x, 438. ISBN 9783131165534.

MCCANCE, Kathryn L. a Sue E. HUETHER. *Pathophysiology : the biologic basis for disease in adults and children*. Edited by Valentina L. Brashers - Neal S. Rote. Seventh edition. St. Louis: Elsevier, 2014, xxvi, 1810. ISBN 9780323088541.

FaF:aFAFC2_14 **Human Physiology and Pathophysiology II**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu MUDr. Tomáš Parák, Ph.D.

Vyučující

MVDr. Jana Hložková, Ph.D. (přednášející)
MUDr. Tomáš Parák, Ph.D. (přednášející)
doc. MVDr. Pavel Suchý, Ph.D. (přednášející)
prof. MUDr. Jiří Vítovec, CSc. (přednášející)
MVDr. Jana Hložková, Ph.D. (cvičící)
MUDr. Tomáš Parák, Ph.D. (cvičící)
PharmDr. Lenka Paráková, Ph.D. (cvičící)
MVDr. Peter Scheer, Ph.D. (cvičící)

Cíle předmětu

Human physiology is defined as a science of the functions of healthy organism at the level of cell, tissue, organ and organ systems. Pathophysiology is focused on etiopathogenesis - the mechanisms which lead from the primary cause via individual malfunctions to subsequent development of clinical symptoms of disease. Knowledge of these mechanisms serves to develop a suitable and efficient therapy and prevent resultant damage.

Výukové metody

In person form lectures, seminars, exercises, exercises in selected examination techniques, acquired data analysis, consultations.

Metody hodnocení

For the admission to the exam is necessary 100% participation in the exercises and fulfillment of the assignment of the exercise. Each teacher decides the fulfillment of the obligations arising from the exercises they teach. A seminar thesis on given topics, written test or an interview can be assigned. Completion of the course - oral exam. Students randomly choose three questions from three areas. It is necessary to answer all three questions.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- describe the physiology and pathophysiology of the main organs
- recognize subjective and objective symptoms of diseases
- examine the main physiological functions
- interpret examination results

Osnova

1. Acute and chronic health failure. Cardiac asthma, pulmonary heart disease.2. Gastrointestinal tract and its functions. Pathophysiology of liver and pancreas.
3. Respiratory system, its functions. Obstructive and degenerative pulmonary processes
4. Pulmonary hypertension syndrome. Pulmonary TBC. Respiratory insufficiency.
5. Physiology of kidneys and lower urinary tract. Kidney failure.
6. Basic mechanisms of endocrine regulation, most common disorders. Diabetes mellitus, complications.
7. Physiology of sex hormones and reproductive system.
8. Physiology of excitable tissue, excitement transmission.
9. CNS pathophysiology, pain, brain arterial network disorders, consciousness
10. Physiology and pathophysiology of vegetative nervous system
11. Physiology of the locomotive apparatus.Inflammatory and degenerative diseases.
12. Skin and skin derivatives, functions and malfunctions. Autoimmune diseases
13. Contaginous and parasitic diseases, anthropozoonoses. Temoerature.
14. Final consultations
Seminars:

1. Organization of lessons, work safety, ethical aspects of work with laboratory animals, experimental project, approval process
2. Collection of biologic. materialand its examination. Laboratory animals - propedeutics. Anesthesia
3. Imaging techniques in examination, endoscopy. Practical examination methods.
4. Hormonal processes in the reproductive system. Prenatal diagnostic tests.
5. Laboratory examination methods - basics of the good laboratory practice, interpretation of results
6. Laboratory examination methods - microbiological and immunological examination, stress tests, interpreting
7. Molecular diagnostics and paternity testing
8. Cytogetetics, chromosomal aberations
9. Internal environment, acid-base balance. Regulation of blood pressure
10. Electrophysiological examination methods
11. Diseases of the circulatory apparatus and the manifestations demonstrated on an experimental model
12. Visiting Museum of Pathology
13. Visiting laboratories, experimental models
14. Course credit approval

Literatura

doporučená literatura

GRANT, Allison. *Ross & Wilson pathophysiology*. [London]: Elsevier, 2024, vii, 408. ISBN 9780702077715.

SILBERNAGL, Stefan a Florian LANG. *Color atlas of pathophysiology*. 3rd edition. Stuttgart: Thieme, 2016, x, 438. ISBN 9783131165534.

MCCANCE, Kathryn L. a Sue E. HUETHER. *Pathophysiology : the biologic basis for disease in adults and children*. Edited by Valentina L. Brashers - Neal S. Rote. Seventh edition. St. Louis: Elsevier, 2014, xxvi, 1810. ISBN 9780323088541.

FaF:aFAFO1_12 **Phytochemistry**

Předmět není v aktuálních obdobích! 3 kredity, ukončení z, garant předmětu prof. PharmDr. Karel Šmejkal, Ph.D.

Vyučující

prof. PharmDr. Karel Šmejkal, Ph.D. (přednášející)
Ing. Ondřej Jurček, Ph.D. et Ph.D. (cvičící)
prof. PharmDr. Karel Šmejkal, Ph.D. (cvičící)

Cíle předmětu

The course examines the relationships between primary and secondary metabolism of plants and focuses on the study of secondary metabolites, their biosynthesis, properties, chemical structure, and methods of isolation from plant material. In this course, students will get acquainted with the methods of phytochemical analysis

Výukové metody

lectures, laboratory exercises

Metody hodnocení

written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

Basic knowledge of secondary metabolites and methods for their analysis.

Osnova

1 Phytochemistry as the field of science, primary and secondary metabolism.2 Principles of separation and isolation of natural substances.
3 Systems for classification of natural compounds, secondary metabolites.
4 Chromatography I.
5 Chromatography II.
6 Identification of Natural Products
7 High-performance liquid chromatography, gas chromatography
8 Spectral methods for identifying natural compounds (UV, IR).
9 Spectral methods for identifying natural compounds (MS).
Laboratory of phytochemistry
1 Introduction, safety, theoretical basics of methods for obtaining content substances from plants
2 Isolation of Natural Products - Floral pigment of Urticae herba extraction (Soxhlet), caffeine microsublimation, Species urologicae compounds extraction (maceration), hydrodistillation of essential oils
3 Separation of natural substances - Thin layer chromatography of floral pigments of Urticae herba extract and phenolic glycosides from the extract of Species urologicae
4 Separation of Natural Products II - Column chromatography of floral pigments
5 Separation and identification of natural substances
Determination of carotenoid pigments by spectrophotometry, measuring of the melting point of crystalline natural substances, SFE demonstration, IR spectrometry demonstration.
6 Identification of Natural Products
High-performance liquid chromatography (HPLC), gas chromatography-mass spectrometry (GC-MS), HPLC / MS,
7 Final test

Literatura

doporučená literatura

From herbs to healing : pharmacognosy - phytochemistry - phytotherapy - biotechnology. Edited by Éva Szöke - Ágnes Kéry - Éva Lemberkovics. Cham: Springer, 2023, xvii, 570. ISBN 9783031173004.

Assessment of medicinal plants for human health : phytochemistry, disease management, and novel applications. Edited by Megh Raj Goyal - Durgesh Nandini Chauhan. Burlington, ON: Apple Academic Press, 2021, xxiii, 261. ISBN 9781771888578.

FaF:aFAFP1_11 **Pharmaceutical Care I**

Předmět není v aktuálních obdobích! 4 kredity, ukončení k, garant předmětu PharmDr. Bc. Dana Mazánková, Ph.D.

Vyučující

PharmDr. Marek Lžičař (cvičící)
PharmDr. Bc. Dana Mazánková, Ph.D. (cvičící)
PharmDr. Martin Šimíček (cvičící)
PharmDr. Karel Vašut, Ph.D. (cvičící)
PharmDr. MVDr. Vilma Vranová, Ph.D. (cvičící)

Cíle předmětu

Pharmaceutical care represents the direct, responsible provision of care related to pharmacotherapy in order to achieve results that improve the patient's quality of life. The aim of the subject is to prepare students for the practical provision of care related to pharmacotherapy.

Výukové metody

Seminars - seminar works and their presentations, discussions and brainstorming about patient case studies.

Metody hodnocení

Continuous evaluation of the outputs of seminars (patient case studies). Evaluation of presented seminar works. Final evaluation - colloqium.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- Understand the principle of pharmaceutical care and its provision to patients;
- Classify the patient's drug related problems and work with it;
- Communicate properly with patients in the pharmacy.

Osnova

- Introduction to pharmaceutical care, role in the healthcare, definitions of terms, legal regulations - Communication with the patient, psychology of the patient
- Possibilities of identifying drug related problems in practice
- Drug abuse, addiction, smoking, smoking cessation support - pharmacist options
- Care of pregnant and lactating patients - possibilities of a pharmacist
- Care of pediatric patients, communication with parents
- Specifics of care for the elderly, communication, detection of drug related problems
- Pharmaceutical care for gastrointestinal problems
- Pharmaceutical care for respiratory diseases
- Pharmaceutical care for selected infectious diseases
- Pharmaceutical care for the most common dermatological disorders
- Pharmaceutical care for pain and injuries
- Pharmaceutical care for cardio-metabolic disorders I.
- Pharmaceutical care for cardio-metabolic disorders II.
- Pharmaceutical care for selected CNS diseases
- Pharmaceutical care for selected uro-gynecological problems

Literatura

doporučená literatura

Pharmacotherapy : principles & practice. Edited by Marie A. Chisholm-Burns - Terry L. Schwinghammer - Patrick M. Malone -. Sixth edition. New York: McGraw-Hill, 2022, xxxvii, 17. ISBN 9781260460278.

LLOYD, Margaret A., Robert BOR a Lorraine NOBLE. *Clinical communication skills for medicine*. Edited by Zack Eleftheriadou. 4th edition. Edinburgh: Elsevier, 2019, viii, 170. ISBN 9780702072130.

FaF:aFAFP2_LF **Pharmaceutical Care II**

Předmět není v aktuálních obdobích! 3 kredity, ukončení k, garant předmětu doc. MUDr. Regina Demlová, Ph.D.

Vyučující

doc. MUDr. Regina Demlová, Ph.D. (cvičící)
PharmDr. Jitka Rychlíčková, Ph.D. (cvičící)
PharmDr. Lenka Součková, Ph.D. (cvičící)

Cíle předmětu

The aim of the course is to understand the basic principles of individualization of pharmacotherapy, guaranteeing its safety and efficacy, including adjustments of drug dosages in the insufficiency of elimination organs. The course also focuses on the applied and clinical pharmacology of selected drug groups, with emphasis on working with drug information, reasonable prescribing, applied kinetics, and drug interaction management. The course is delivered as interactive seminars in which virtual patients will be discussed. Active knowledge of general and special pharmacology, including mechanisms of action of the essential drug groups, is a prerequisite. This course is a follow-up to Pharmacology. The teaching is provided together with the students of SP General Medicine at the Faculty of Medicine MU.

Výukové metody

Pre-class reading in the form of corresponding chapters (see Literature) and listening to complementary lectures. Seminars are conducted as interactive team-based learning (TBL) sessions and virtual patients, facilitator-led discussions, and comments from a content expert.

Metody hodnocení

Compulsory attendance at seminars. Colloquium - case study.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Upon completion of the course, the student will be able to:

- reasonably assess prescribing drugs and their combinations, be able to recommend the appropriate drug for a particular patient in the correct dose, correct regimen, including route of administration, correct indication and also with regard to possible side effects with special emphasis on the safety;

- understand and be able to explain the mechanisms of action of the most commonly prescribed drugs, explain clinically significant differences between drugs in a given group;

- evaluate current pharmacotherapy, optimize it and propose modification; calculate the correct doses of drugs for patients with elimination organ disorders or other comorbidities;

- involve the patient in co-decision-making regarding his/her pharmacotherapy;

- provide appropriate guidance and information on pharmacotherapy to the patient; educate the patient;

- design a method and regimen for monitoring the efficacy and safety of therapy;

- detect and report adverse drug reactions;

- work with and critically evaluate sources of information on drugs;

- apply the principles of physician-pharmacist interprofessional communication and work in multidisciplinary teams.

Osnova

Interactive seminars using virtual patients and team-based learning (TBL).

- Clinical pharmacology of analgesics, pain management and Drug policy, reasonable prescribing
- Applied pharmacokinetics of antibiotics and Drug interactions
- Clinical pharmacology of antihypertensives; drug-induced hypertension; hemodynamics and pharmacokinetics and Clinical pharmacology of diuretics, therapy of mineral dysbalances
- Applied pharmacology of antithrombotics and Clinical trial interpretation, EBM, and critical thinking
- Clinical pharmacology of antipsychotics and Dose adjustment in renal insufficiency, nephrotoxicity of drugs
- Clinical pharmacology of antiepileptics and Principles of drug dosing in patients with hepatic insufficiency
- Clinical pharmacology of targeted therapy in oncology and Therapy of symptoms associated with cancer treatment
- Perioperative drug management

Literatura

doporučená literatura

Clinical pharmacology. Brown M.J., Sharma P., et al. 12th ed. London: Elsevier, 2019. 706 p. ISBN 978-0-7020-7328-1.

Pharmacotherapy : principles & practice. Edited by Marie A. Chisholm-Burns - Terry L. Schwinghammer - Patrick M. Malone -. Sixth edition. New York: McGraw-Hill, 2022, xxxvii, 17. ISBN 9781260460278.

FaF:aFAFP3_14 **Pharmaceutical Care III**

Předmět není v aktuálních obdobích! 4 kredity, ukončení k, garant předmětu PharmDr. Bc. Hana Kotolová, Ph.D.

Vyučující

PharmDr. Bc. Hana Kotolová, Ph.D. (cvičící)

Cíle předmětu

Pharmaceutical care represents the direct, responsible provision of care related to pharmacotherapy in order to achieve results that improve the patient's quality of life. The aim of the subject is to reflect on the students' practical experience with the provision of pharmaceutical care based on the completed practical trainig in pharmacies.

Výukové metody

Seminars - workshop, class discussion, case studies

Metody hodnocení

Final colloquium - case studies

Primární způsob výuky
Žádné informace.

Výstupy z učení
After completing the course, the student will be able to:
- Apply the principles of pharmaceutical care in pharmacy practice and provide it to the patient;
- Identify the drug problems of the patient, work with them and offer options for solving them;
- Communicate correctly with the patient;
- Orientate in the professional role of a pharmacist within the provision of healthcare.

Osnova
- Pharmaceutical care in highly specialized conditions - oncological care, palliative care. - Polymorbid patient. - Case reports from clinical practice. - Reflection of professional experience from the practical training. - Current pharmacotherapeutic recommendations. - Current changes in the assortment of medicinal products. - Preparation for the final state exam.

Literatura
doporučená literatura
Pharmacotherapy : principles & practice. Edited by Marie A. Chisholm-Burns - Terry L. Schwinghammer - Patrick M. Malone -. Sixth edition. New York: McGraw-Hill, 2022, xxxvii, 17. ISBN 9781260460278.

LLOYD, Margaret A., Robert BOR a Lorraine NOBLE. *Clinical communication skills for medicine*. Edited by Zack Eleftheriadou. 4th edition. Edinburgh: Elsevier, 2019, viii, 170. ISBN 9780702072130.

BROWN, M. J., Pankaj SHARMA, Fraz A. MIR a P. N. BENNETT. *Clinical pharmacology*. Twelfth edition. Edinburgh: Elsevier, 2019, 1 online. ISBN 9780702073304. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1742282

FaF:aFAFY1_13 **Physical Pharmacy**
Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu prof. PharmDr. Mgr. David Vetchý, Ph.D.

Vyučující
doc. Mgr. Jan Muselík, Ph.D. (přednášející)
prof. PharmDr. Mgr. David Vetchý, Ph.D. (přednášející)
doc. Mgr. Jan Muselík, Ph.D. (cvičící)
Mgr. Sylvie Pavloková, Ph.D. (cvičící)
PharmDr. Jiří Zeman, Ph.D. (cvičící)

Cíle předmětu
The aim of the course is to make students familiar with basic knowledge of the physical chemistry, which constitutes part of the theoretical basis, necessary for understanding of processes delivered within disciplines in further stages of the study. Lectures are divided according to basic part of physical and colloid chemistry such as thermodynamics, kinetics of chemical reactions, behaviour of solutions, electrochemistry, phase equilibria, behaviour of phase interfaces, rheology, and colloidal systems. In laboratory exercises, students will learn the experimental techniques of physical chemistry. In seminars, students will get acquainted with physicochemical calculations, which are integral part of the knowledge required in the discipline.

Výukové metody
lectures, practical classes (calculations, laboratory exercises)

Metody hodnocení
intermediate written tests and a final written exam

Primární způsob výuky
Žádné informace.

Výstupy z učení
After completing the course, the student will be able to:
— describe the thermodynamic nature of a number of pharmaceutical processes;
— describe the factors that influence the solubility and dissolution of substances;
— determine and describe kinetic parameters in pharmaceutical processes;
— identify and summarize important features of electrochemical and phase phenomena;
— apply rheological principles to a practical problem;
— identify and summarize important characteristics of colloidal systems.

Osnova
LECTURES:
Thermodynamics.
Solubility: solubility gas/liquid, liquid/liquid, solid/liquid, solubility of salts, poor soluble electrolytes, weak electrolytes and their salts.
Electrochemistry.
Phase equilibria.
Phase interfaces.
Diffusion, dissolution and their importance in drug development.

Kinetics: rates and orders of reactions. Influence of temperature and other factors on reaction rates. The importance of kinetics in formulation and development of pharmaceuticals.

Rheology: Newtonian systems, non-Newtonian systems, thixotropy, determination of rheologic properties, viscoelasticity, application in pharmacy.

Colloids.

SEMINARS:

States of matter and thermodynamics — calculations.

Phase equilibria, chemical kinetics and electrochemistry — calculations.

Written test — calculations.

LABORATORY EXERCISES:

Density determination by pycnometric method.

Partitioning of succinic acid in the system butanol-water.

Determination of upper critical dissolution temperature of the mixture phenol-water.

Writtent test — theory from laboratory exercises.

Literatura

doporučená literatura

HAMMES, Gordon G. a Sharon HAMMES-SCHIFFER. *Physical chemistry for the biological sciences*. Second edition. Hoboken, NJ: Wiley, 2015, 1 online. ISBN 9781118859148. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=985075

Martin's physical pharmacy and pharmaceutical sciences : physical chemical and biopharmaceutical principles in the pharmaceutical sciences. Edited by Patrick J. Sinko - Yashveer Singh. Sixth edition. Philadelphia: Wolters Kluwer, 2011, viii, 659. ISBN 9781609134020.

FaF:aFAHF1_11 **History of Pharmacy**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Tünde Ambrus, Ph.D.

Vyučující

PharmDr. Tünde Ambrus, Ph.D. (přednášející)

Cíle předmětu

The aim of the subject is to familiarize students with individual aspects of university studies, with basic concepts and relations in pharmacy and healthcare, to characterize the theoretical and practical side of pharmacy and its position and function in the health care system from the perspective of historical development, to explain changes in the social status of pharmacy and medicines, in the perception of health and illness in different times and cultures, to contribute to the formation of professional ethical opinions of the students.

Výukové metody

Lectures

Metody hodnocení

combined examination (written and oral part)

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the course the student will be able:

- to characterize development and current state of higher education in Europe and the Czech Repubic;
- to caracterize and use correctly the basic terms used in Pharmacy;
- to characterize the main periods of development of Pharmacy;
- to identify and summarize the most important events in development of the European and Czech Pharmacy.

Osnova

- Higher education system, universities - intorduction to study. History of universities in Czech Republic and Brno.
- Pharmacy and its position within the healthcare system.
- History of Pharmacy as a scientific discipline.
- Periodization of pharmacy history.
- Healing in the prehistoric and ancient times.
- Pharmacy as a relatively independent profession. Pharmacy in the Middle Ages.
- Pharmacy in the modern time.
- Differentiation of pharmaceutical functions. Development of pharmaceutical sciences.
- Development of pharmaceutical branches I (pharmaceutical industry, wholesaling).
- Development of pharmaceutical branches II (pharmacy practice, pharmacy control).
- Development of pharmaceutical branches III (pharmacy education, research).
- Professional pharmaceutical literature. Development of pharmacopoeias.
- Pharmaceutical professional and scientific organizations. Development of the international cooperation in pharmacy.

Literatura

doporučená literatura

KELLY, William N. *Pharmacy : what it is and how it works*. Fourth edition. Boca Raton, FL: CRC Press, 2018, xxi, 397. ISBN 9781138038332.

ZEBROSKI, Bob. *A brief history of pharmacy : humanity's search for wellness*. New York: Routledge, 2016, 1 online. ISBN 9781315685830. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1055306

HELMSTÄDTER, Axel, Jutta HERMANN a Evemarie WOLF. *Leitfaden der Pharmaziegeschichte*. 2., überarbeitete Auflage. Eschborn: Govi, 2011, 196 stran. ISBN 9783774111691.

Anderson, S. (ed). *Making Medicines: A Brief History of Pharmacy and Pharmaceuticals*. London, 2005.

FaF:aFALK1_11 **Pharmacy Practice I**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu PharmDr. Lenka Smejkalová, Ph.D.

Vyučující

PharmDr. Tünde Ambrus, Ph.D. (přednášející)
doc. RNDr. Jozef Kolář, CSc. (přednášející)
PharmDr. Lenka Smejkalová, Ph.D. (přednášející)
PharmDr. Martin Šimíček (přednášející)
PharmDr. Dominik Grega, Ph.D. (cvičící)
doc. RNDr. Jozef Kolář, CSc. (cvičící)
PharmDr. Lenka Smejkalová, Ph.D. (cvičící)
PharmDr. Martina Šutorová (cvičící)

Cíle předmětu

The course aims for a detailed practical familiarization with implementing rules of specific pharmacy practice activities. Mainly the activity of dispensing, information and consultation, control, supply, storage, and administrative. No less important are the areas related to the preparation of medicines and the scope of work with information systems, both for processing operational data and when searching for professional information for pharmacotherapeutic consultations and health support. Another area of interest in pharmacy will touch on management, marketing, and pharmacy management.

Výukové metody

Monologic (reading, lecture, briefing) Dialogic (discussion, interview, brainstorming)
Workshops

Metody hodnocení

1. continuous evaluation and feedback within the teaching;
2. successful completion of continuous control tests and individual tasks;
3. project;

The subject is completed by a combined exam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

By completing the course, the student will be able to:

describe the principles of price setting of medicinal products, medical devices and apply these principles in practice;

describe the principles of individual activities of pharmacy practice (dispensing, administrative, quality control, audits, preparing of medicinal products);

search for information on medicinal products and medical devices in professional databases;

to apply basic methods of communication in pharmacy practice;

actively work in pharmacy administrative systems.

Osnova

Topics of lectures and seminars

- Good Pharmacy Practice - dispensing, information and consultation activities
- Good Pharmacy Practice - compounding of medicinal products
- Good Pharmacy Practice — quality management of pharmacy care, inspection of pharmacies
- Good Pharmacy Practice — logistic activity; the relationship between pharmacies and pharmaceutical wholesalers
- Documentation and administrative standards and procedures in relation to the provision of health care
- Pricing of pharmacy assortment
- Management, marketing, pharmacy economics and management models
- Cross-border healthcare and pharmacies
- Professional pharmaceutical activities in hospitals, status of hospital pharmacies
- Pharmacy and support of public health, participation of pharmacies in educational activities, media communication

- Information in healthcare and pharmacy, informatics in pharmacy, overview of relevant professional freely available and licensed information sources
- Pharmacy operational administration systems
- Current developments and expected future challenges of pharmacy

Literatura

doporučená literatura

European Pharmacopoeia

GILLIGAN, Colin, Robin LOWE a Peter CATTEE. *Marketing and retail pharmacy*. London: Routledge, 2021, 1 online. ISBN 9781315348858. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=3058640

Introduction to public health in pharmacy. Edited by Bruce Lubotsky Levin - Ardis Hanson - Peter D. Hurd. Second edition. Oxford: Oxford University Press, 2018, 1 online. ISBN 9780190238339. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1712428

KELLY, William N. *Pharmacy : what it is and how it works*. Fourth edition. Boca Raton, FL: CRC Press, 2018, xxi, 397. ISBN 9781138038332.

Pharmaceutical practice. Edited by Judith A. Rees - Ian Smith - Jennie Watson. 5th ed. Edinburgh: Churchill Livingstone Elsevier, 2014, xvii, 552. ISBN 9780702051432.

FaF:aFALK2_11 **Pharmacy Practice II**

Předmět není v aktuálních obdobích! 4 kredity, ukončení k, garant předmětu PharmDr. Lenka Smejkalová, Ph.D.

Vyučující

PharmDr. Lenka Smejkalová, Ph.D. (cvičící)
PharmDr. Martina Šutorová (cvičící)

Cíle předmětu

The aim of the subject is to reflect on the students' practical experience in the provision of health (especially pharmacy) care based on completed professional experience.

Výukové metody

Seminars - workshop, discussion, case studies, portfolio assessment, individual and group work

Metody hodnocení

Final colloquium

Primární způsob výuky

Žádné informace.

Výstupy z učení

- Fixation of knowledge and skills in the field of operation, management and marketing of healthcare facilities
- Practical skills in solving case studies
- Orientation in the professional role of a pharmacist within the provision of health care
- Orientation in relevant legal and professional regulations and information sources
- Preparation for the final state exam

Osnova

Solution of case studies focusing on:

- Strategic management and professional administration of healthcare provision in pharmacies
- Establishment and operation of pharmacies - harmony between the provision of health services and business activities
- Ethical dilemmas and legal responsibility in the provision of health care
- Work with currently valid legal regulations
- Work in a multidisciplinary healthcare team
- Psychological aspects of practicing the profession of a pharmacist

Literatura

doporučená literatura

European Pharmacopoeia

GILLIGAN, Colin, Robin LOWE a Peter CATTEE. *Marketing and retail pharmacy*. London: Routledge, 2021, 1 online. ISBN 9781315348858. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=3058640

Introduction to public health in pharmacy. Edited by Bruce Lubotsky Levin - Ardis Hanson - Peter D. Hurd. Second edition. Oxford: Oxford University Press, 2018, 1 online. ISBN 9780190238339. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1712428

KELLY, William N. *Pharmacy : what it is and how it works*. Fourth edition. Boca Raton, FL: CRC Press, 2018, xxi, 397. ISBN 9781138038332.

Pharmaceutical practice. Edited by Judith A. Rees - Ian Smith - Jennie Watson. 5th ed. Edinburgh: Churchill Livingstone Elsevier, 2014, xvii, 552. ISBN 9780702051432.

FaF:aFAMB1_16 **Microbiology for Pharmacists**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu PharmDr. Jakub Treml, Ph.D.

Vyučující

PharmDr. Jakub Treml, Ph.D. (přednášející)
Ing. Marcela Nejezchlebová (cvičící)
Mgr. Bc. Daniela Nykodýmová (cvičící)
PharmDr. Dominik Rotrekl, Ph.D. (cvičící)
PharmDr. Alice Sychrová, Ph.D. (cvičící)
PharmDr. Jakub Treml, Ph.D. (cvičící)

Cíle předmětu

The subject provides an overview of pharmaceutical and medicinal aspects of microbiology, virology, mycology and parasitology. It brings basic information on the structure, function, genetics and taxonomy of medically important bacteria, viruses, fungi, yeast and parasites. The subject informs on Good Laboratory Practice and Good Manufacturing Practice. It focuses on basic methods of prevention, prophylaxis and treatment of infectious diseases and provides information on clinically significant infections in human medicine.

Výukové metody

Lectures and theoretical seminars that prepare for laboratory exercises. The output of the exercise are independently processed protocols.

Metody hodnocení

Written exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

Basic knowledge of microbiology forming the basis for follow-up subjects.

Osnova

Syllabus of the lectures1. Introduction, information for the students. Structure of bacterial cells. Multiplication of bacteria, sporulation, germination.
2. Immunology.
3. Immunology and therapy, vaccination, biological therapy.
4. Bacteriology I.
5. Bacteriology II.
6. Antibacterial agents. Microbial resistance. Basics of rational therapy of infectious diseases.
7. Virology I.
8. Virology II.
9. Antiviral agents.
10. Basics of medical mycology.
11. Basics of medical parasitology.
12. Antiparasitic and antifungal agents.
13. Final test.

Syllabus of the seminaries
1. Safety precautions in microbiological laboratory, laboratory praxis, disinfection, sterilization.
2. Disinfecting and antiseptic substances. Cultivation media. Common microbiota of human body.
3. Diagnostic approaches I.: evaluation of colonies, staining and demonstration of selected bacteria, cultivation of bacteria, bacterial growth, identification and isolation of bacteria.
4. Diagnostic approaches II.: biochemical reactions, MALDI-TOF, McFarland standards for turbidity of bacterial suspensions, CFU-colony forming units, evaluation of bacterial concentration by cultivation, sensitivity testing, MIC, MBC, EUCAST.
5. Antisepsis in drug production, antimicrobial drug control.
6. Resistance and synergy of bacteria. Biofilm.
Practicals:
1. Preparation of cultivation media, evaluation of selected disinfection and antiseptic substances on microorganism of group 1.
2. Evaluation of effectivity of disinfecting substances, evaluation of bacterial colonies, Gram staining, isolation inoculation.
3. Assessment of microbial resistance, microdilution method (MIC), disc diffusion test (microorganism group 1).
4. Evaluation of the disc diffusion test and MIC, establishing of the MBC, establishing of the bacterial concentration in the specimen by cultivation (microorganisms group 1).
5. Evaluation of the MBC, determination of bacterial concentration in unknown specimen.
6. Final classification test.

Literatura

doporučená literatura

MURRAY, Patrick R. *Murray's basic medical microbiology*. Second edition. Philadelphia, PA: Elsevier, 2024, ix, 292. ISBN 9780323878104.

GOERING, Richard V., Mark A. ZUCKERMAN, Hazel M. DOCKRELL a Peter L. CHIODINI. *Mims' medical microbiology and immunology*. Edited by Cedric A. Mims. Sixth edition. Edinburgh: Elsevier, 2019, xv, 552. ISBN 9780702071546.

FaF:aFAMC1_14 **Human Morphology**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu MUDr. Marta Chalupová, Ph.D.

Vyučující

MUDr. Marta Chalupová, Ph.D. (přednášející)
MUDr. Tomáš Parák, Ph.D. (přednášející)
PharmDr. Lenka Paráková, Ph.D. (přednášející)
MVDr. Lada Tlučhořová (přednášející)
MUDr. Marta Chalupová, Ph.D. (cvičící)
MVDr. Lada Tlučhořová (cvičící)

Cíle předmětu

Human Morphology aims to introduce students of the Faculty of Pharmacy to the basic knowledge of human anatomy, histology, and embryology so that they can use it not only in the following subjects of their studies but also in their future practice in pharmacy. Students study the anatomic and microscopical structure of tissues and organs, including human embryonical development. The main emphasis is given to the anatomy of particular organ systems of the human body and their topographical relationships.

Výukové metody

lectures, seminars

Metody hodnocení

final oral examination

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- describe, using the valid anatomical nomenclature, the macroscopic and microscopic structure of tissues and organs;

- characterize the topographic relations of the organs;

- assess the relations between the different organ systems;

- clarify the relations between the structure and function of organs as a necessary basis for understanding the physiological and pathophysiological contexts in related subjects

Osnova

LECTURES 1. Introduction. Human Body Organization
2. Osteology
3. Arthrology. Myology
4. Respiratory System
5. Gastrointestinal System
6. Cardiovascular System
7. Erythropoietic and Lymphatic System, Thymus, Spleen
8. Urogenital System
9. Endocrine System
10. Central and Peripheral Nervous System
11. Autonomic Nervous System
12. Sensory Organs. Skin
13. Consulting lecture

SEMINARS
1. Organisation of the Classes. Embryology
2. Introduction into Histology
3. Locomotory System. Demonstration of the Anatomical Models
4. Topographical Anatomy of the Thorax
5. Topographical Anatomy of the Abdominal Cavity and Retroperitoneum
6. Difficult Chapters in Morphology

Literatura

doporučená literatura

MARIEB, Elaine Nicpon a Suzanne M. KELLER. *Essentials of human anatomy & physiology*. Thirteenth edition. Harlow: Pearson, 2022, 655 stran. ISBN 9781292401942.

NETTER, Frank H. *Atlas of human anatomy*. Seventh edition. Philadelphia, Pa.: Elsevier, 2019, 535 stran. ISBN 9780323393225.

GOSLING, J. A., Philip F. HARRIS, John R. HUMPHERSON, Ian WHITMORE a Peter L. T. WILLAN. *Human anatomy : color atlas and textbook*. Sixth edition. Edinburgh: Elsevier, 2017, 1 online. ISBN 9780723438281.

https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1287592

FaF:aFAMO1_16 **Molecular Biology for Pharmacists**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu PharmDr. Jakub Treml, Ph.D.

Vyučující

Mgr. Marie Brázdová, Ph.D. (přednášející)
doc. RNDr. Jan Hošek, Ph.D. (přednášející)
PharmDr. Jakub Treml, Ph.D. (přednášející)
Mgr. Marie Brázdová, Ph.D. (cvičící)
doc. RNDr. Jan Hošek, Ph.D. (cvičící)
PharmDr. Jakub Treml, Ph.D. (cvičící)

Cíle předmětu

The aim of this subject is to provide students with basic information from molecular biology. The ground of lectures is focused on structure of proteins and nucleic acids and functions and relationships of these informational macromolecules in transition of genetic information. Students will familiarise with structure of prokaryotic and eukaryotic genomes, with mechanisms of replication, transcription, translation and regulation of gene expression. The molecular mechanisms of mutagenesis, recombination and transposition, reparation mechanisms and molecular basis of carcinogenesis are explained. The fundament of molecular evolution and theory of life origin on Earth are illustrated. Part of the lectures is focused on molecular biology methods and on applications of molecular biology principles in microbiology, pharmacology, human genetics, epidemiology and epizootology. Student requirements - achieving at least 60% of points from the written test

Výukové metody

lectures, seminars

Metody hodnocení

Written exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to: - identify and summarize important features on the structure of proteins and nucleic acids and the functions and relationships of information macromolecules in the transmission of genetic information; - describe the structure of prokaryotic and eukaryotic genomes, with mechanisms of replication, transcription, translation and regulation of gene expression; - describe the molecular mechanisms of mutagenesis, recombination and transposition, repair mechanisms and the molecular nature of carcinogenesis

Osnova

1) Molecular biology and its position in biological sciences, milestones, personalities, central dogma of molecular biology2) Information macromolecules, their structure, function and interaction in gene expression, genetic code.
3) Structure of prokaryotic genome, replication and gene expression in prokaryotes.
4) Structure of eukaryotic genome, replication and gene expression in eukaryotes.
5) Regulation of gene expression, molecular signalling.
6) RNA interference
7) Replication, expression of bacterial and animal virus's genes.
8) Mutagenesis, spontaneous and induced mutation and reversion.
9) Molecular basis of recombination, recombinantion in genetics.
10) Transposons, mechanisms of transposition, retroelements, retroviruses.
11) Reparation and excision mechanisms.
12) Molecular basis of cancerogenesis, protooncogenes and oncogenes, suppressor genes, oncoviruses.
13) Cell cycle and apoptosis

Literatura

doporučená literatura

ZLATANOVA, J. a K. E. VAN HOLDE. *Molecular biology : structure and dynamics of genomes and proteomes*. New York: Garland Science, 2016, xix, 624. ISBN 9780815345046.

MCLENNAN, Alexander G., Andy BATES, Phil TURNER a Mike WHITE. *Molecular biology*. Fourth edition. New York: Garland Science, 2013, 1 online. ISBN 9781283860765. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=507454

RUSSELL, P.J. *iGenetics, A molecular Approach.*. Pearson, Benjamin Cummings. New York, U.S.A., 2006.

WATSON, D.J. et al. *Molecular biology of the gene*. Cold Spring Harbor Laboratory Press, Pearson, Be, 2004.

FaF:aFAOC1_15 **Organic Chemistry for Pharmacists I**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu doc. Ing. Pavel Bobáľ, CSc.

Vyučující
doc. Ing. Pavel Bobáľ, CSc. (přednášející)
doc. Ing. Pavel Bobáľ, CSc. (cvičící)
RNDr. Eva Havránková, Ph.D. (cvičící)
Mgr. Petr Mokrý, Ph.D. (cvičící)
Mgr. Hana Pížová, Ph.D. (cvičící)

Cíle předmětu
Organic chemistry gives students information about the fundamentals of organic compounds structure, their reactions, and underling reaction mechanism. Organic chemistry is essential for many other disciplines, such as biochemistry, analytical chemistry, pharmaceutical chemistry, physiology, pharmacology and other health and biological studies. Close attention is paid to the interrelation between organic chemistry and these disciplines.

Výukové metody
Lectures, seminars

Metody hodnocení
Continuous control of knowledge at seminars; written/combined exam

Primární způsob výuky
Žádné informace.

Výstupy z učení
Understanding of fundamentals of organic chemistry, understanding of structure and reactivity of organic compounds, knowledge of the basis of IUPAC nomenclature of organic compounds and principals of stereochemistry.

Osnova
1 Structure and Bonding 2 Polar Covalent Bonds, Acids and Bases
3 Organic Compounds: Alkanes and Their Stereochemistry
4 Organic Compounds: Cycloalkanes and Their Stereochemistry
5 An Overview of Organic Reactions
6 Alkenes: Structure, Reactivity, and reactions
7 Alkynes: An Introduction to Organic Synthesis
8 Stereochemistry at Tetrahedral Centers
9 Organohalides, Reactions of Alkyl Halides: Nucleophilic Substitutions and Eliminations
10 Structure Determination: MS, IR, and NMR
11 Conjugated Compounds and Ultraviolet Spectroscopy
12 Benzene and Aromaticity, Chemistry of Benzene: Electrophilic Aromatic Substitution
13 Alcohols and Phenols
14 Ethers and Epoxides, Thiols and Sulfides
15 Carbonyl Compounds, Aldehydes and Ketones: Nucleophilic Addition Reactions

Literatura

doporučená literatura

VOGEL, Pierre a Kendall N. HOUK. *Organic chemistry : theory, reactivity and mechanisms in modern synthesis*. Edited by Robert H. Grubbs. Weinheim: Wiley-VCH, 2019, xxx, 1352. ISBN 9783527345328.

HART, Harold. *Organic chemistry : a short course*. 12th ed. Boston: Houghton Mifflin Company, 2007, xxiv, 577. ISBN 9780618590735.

MCMURRY, John a Tadhg P. BEGLEY. *The organic chemistry of biological pathways*. Engelwood, Colo.: Roberts and Company Publishers, 2005, xxi, 490. ISBN 0974707716.

FaF:aFAOC2_15 **Organic Chemistry for Pharmacists II**
Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu doc. Ing. Pavel Bobáľ, CSc.

Vyučující
doc. Ing. Pavel Bobáľ, CSc. (přednášející)
doc. Ing. Pavel Bobáľ, CSc. (cvičící)
RNDr. Eva Havránková, Ph.D. (cvičící)
Mgr. Petr Mokrý, Ph.D. (cvičící)
Mgr. Hana Pížová, Ph.D. (cvičící)

Cíle předmětu
Organic chemistry gives students information about the fundamentals of organic compounds structure, their reactions, and underling reaction mechanism. Organic chemistry is essential for many other disciplines, such as biochemistry, analytical chemistry, pharmaceutical chemistry, physiology, pharmacology and other health and biological studies. Close attention is paid to the interrelation between organic chemistry and these disciplines.

Výukové metody
Lectures, seminars

Metody hodnocení
Continuous control of knowledge at seminars; written/combined exam

Primární způsob výuky
Žádné informace.

Výstupy z učení

Understanding of fundamentals of organic chemistry, understanding of structure and reactivity of organic compounds, knowledge of the basis of IUPAC nomenclature of organic compounds and principals of stereochemistry.

Osnova

Program of lectures and seminars 1. Carboxylic acids and nitriles
2. Functional derivatives of carboxylic acids
3. Substitution reaction in the alpha-position of the carbonyl group, aldolization of carbonyl compounds
4. Derivatives of carbonic acid
5. Nitrogen compounds
6. Organometallic compounds
7. Heterocycles: 3-, 4-, 7- and multi-membered
8. Heterocycles: 5- and 6-membered
9. Basics of photochemistry and pericyclic reactions
10. Biomolecules: carbohydrates
11. Biomolecules: amino acids, peptides and proteins
12. Biomolecules: lipids
13. Biomolecules: nucleic acids
14. Synthetic polymers
15. Nomenclature of polyfunctional organic compounds

Literatura

doporučená literatura

VOGEL, Pierre a Kendall N. HOUK. *Organic chemistry : theory, reactivity and mechanisms in modern synthesis*. Edited by Robert H. Grubbs. Weinheim: Wiley-VCH, 2019, xxx, 1352. ISBN 9783527345328.

HART, Harold. *Organic chemistry : a short course*. 12th ed. Boston: Houghton Mifflin Company, 2007, xxiv, 577. ISBN 9780618590735.

MCMURRY, John a Tadhg P. BEGLEY. *The organic chemistry of biological pathways*. Engelwood, Colo.: Roberts and Company Publishers, 2005, xxi, 490. ISBN 0974707716.

FaF:aFAOC3_15 **Organic Chemistry - Practical Classes**

Předmět není v aktuálních obdobích! 3 kredity, ukončení z, garant předmětu doc. Ing. Pavel Bobáľ, CSc.

Vyučující

doc. Ing. Pavel Bobáľ, CSc. (cvičící)
RNDr. Eva Havránková, Ph.D. (cvičící)
PharmDr. Jan Otevřel, Ph.D. (cvičící)
Mgr. Hana Pížová, Ph.D. (cvičící)
Mgr. David Švestka (cvičící)

Cíle předmětu

Organic chemistry gives students information about the fundamentals of organic compounds structure, their reactions, and underling reaction mechanism. Organic chemistry is essential for many other disciplines, such as biochemistry, analytical chemistry, pharmaceutical chemistry, physiology, pharmacology and other health and biological studies. Close attention is paid to the interrelation between organic chemistry and these disciplines.

Výukové metody

Laboratorní cvičení

Metody hodnocení

Průběžná kontrola znalostí na cvičeních, zpětná vazba k protokolům

Primární způsob výuky

Žádné informace.

Výstupy z učení

Understanding of fundamentals of organic chemistry, understanding of structure and reactivity of organic compounds, knowledge of the basis of IUPAC nomenclature of organic compounds and principals of stereochemistry.

Osnova

- Crystallization
- Melting point
- Extraction
- Distillation
- Adsorption chromatography
- Synthesis and characterization of selected organic compounds

Literatura

doporučená literatura

VOGEL, Pierre a Kendall N. HOUK. *Organic chemistry : theory, reactivity and mechanisms in modern synthesis*. Edited by Robert H. Grubbs. Weinheim: Wiley-VCH, 2019, xxx, 1352. ISBN 9783527345328.

ISAC GARCÍA, Joaquín, José Antonio DOBADO JIMÉNEZ, Francisco GARCÍA CALVO-FLORES a Henar MARTÍNEZ-GARCÍA. *Experimental organic chemistry : laboratory manual*. Amsterdam: Elsevier, 2016, 1 online. ISBN 9780128039359. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1089845

FaF:aFAOP1_11 **Pharmacy Internship I (2 weeks)**

Předmět není v aktuálních obdobích! 2 kredity, ukončení z, garant předmětu PharmDr. Lenka Smejkalová, Ph.D.

Vyučující

PharmDr. Lenka Smejkalová, Ph.D. (cvičící)

Cíle předmětu

Main objectives: Applying the theoretical knowledge gained during the previous studies - especially courses Pharmacy practice and other pharmaceutical disciplines - in the real environment of pharmacy practice.
Students participate in all activities in the pharmacy. Students provide practical application and implementation of legislative regulations of individual activities in the pharmacy, finetune their knowledge about principles of the documentation and basic administrative tasks, increase habits for work ”lege artis”.

Výukové metody

Practical training

Metody hodnocení

Interview Monitoring of student’s activities, assesment of given tasks

Primární způsob výuky

Žádné informace.

Výstupy z učení

completing the course the student will be able to orientate in pharmacy practice, will be able to apply theoretical knowledge in practice in the field of dispensing, preparation of medicinal products, supply activities, will be able to create pharmacy documentation, participate in the pricing of modicinal products in pharmacy.

Osnova

Arrangement of the pharmacy settings - workplaces in the pharmacyInternal operating Rules of the Pharmacy, staff, job description
Scope of services offered
Partners of the pharmacy (wholesalers)
Medical prescription. Pharmaceutical calculations. Preparation of medicines in the pharmacy. Pharmacy retail price, reimbursement
Basic sources of information used in the pharmacy practice
Good pharmaceutical practice
Rules of for praparing medicinal products in the pharmacy
Documentation
Quality assurance in the pharmacy
Storing of pharmaceuticals
European Pharmacopeia. Czech Pharmacopoea
Adiministrative systems for pharmacy practice
Marketing and Management

Literatura

doporučená literatura

European Pharmacopoeia

FaF:aFAOP2_11 **Pharmacy Internship II (4 weeks)**

Předmět není v aktuálních obdobích! 4 kredity, ukončení z, garant předmětu PharmDr. Bc. Dana Mazánková, Ph.D.

Vyučující

PharmDr. Bc. Dana Mazánková, Ph.D. (cvičící)

Cíle předmětu

Main objectives: During the practical training the student participates in the everyday work of the pharmacy, such as client service, control and evaluation as well as information about drugs, preparation of extemporaneously prepared drugs. The student is also given an insight into the co-operation between the various staff groups at the pharmacy, and into the organisation and finances pharmacy. Internship can be arranged at community and hospital pharmacies, and also at out-pharmacy establishments (pharmaceutical manufacturers, drug wholesalers, quality control institutions).

Výukové metody

Practical internship in pharmaceutical care facilities

Metody hodnocení

The student is obliged to complete the practice in the pharmacy to the specified extent. The pharmacy must meet technical and personnel requirements, given by the guarantor of the practice. During the course of the course, the student creates the Daily Paper of Pharmacy Practice according to predetermined instructions, which he subsequently submits. Furthermore, the student records his pharmacy activity and its distribution to the Activity Log. The student’s practice in the pharmacy is documented by the confirmation of the pharmacist - advisor in the document Confirmation of completion of the practice and evaluation of the student.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the practice, the student will be able to:

- Know all aspects of pharmacy care provision to patients in the pharmacy;

- Orientate yourself in the assortment of pharmacies — registered pharmaceuticals, food supplements, phyto-pharmaceuticals, medical devices, veterinary medicines, other pharmacy assortment;

- Be able to dispense a prescription drug, provide professional information to it, know all the administrative steps related to its release;

- Be able to advise the patient in the field of self-medication, recommend a suitable preparation;

- Be able to individually prepare the drug;

- Know the professional economy and principles of price creation of the assortment in the pharmacy;

- Know the professional administration and records in the pharmacy

Osnova

The priority areas:Introduction to the philosophy and strategy of pharmaceutical care.
Good pharmaceutical practice.
Legal regulations for pharmacies.
Pharmacopoeia and other literature used in the pharmacy - European Pharmacopoeia, Czech Pharmacopoeia.
The issue of drugs - distribution, storage, recording.
The operation of the pharmacy. Procurement activities, storage of pharmaceuticals, medical devices.
Medical prescription. Pharmaceutical calculations. Preparation of medicines in the pharmacy.
Laboratory work environment. Technical and material requirements for equipment of pharmacies.
Dispensing activities in the pharmacy. Application of dosage forms. Health promotion.
Information and consulting activities in the pharmacy. Focus on the individual patient, physician, other health professionals.
Administration expert evidence and documentation of various activities in the pharmacy.
Economy of pharmacy. Reimbursement of medicines.
Veterinary medicines and veterinary pharmacy.
Hospital pharmacy and its specifics.
Categories of employees in the pharmacy - the professionals and other workers.
Occupational Health and Safety in the pharmacy.

Literatura

doporučená literatura

European Pharmacopoeia

FaF:aFAOP3_11 **Pharmacy Internship III (20 weeks)**

Předmět není v aktuálních obdobích! 20 kreditů, ukončení k, garant předmětu PharmDr. Bc. Dana Mazánková, Ph.D.

Vyučující

PharmDr. Bc. Dana Mazánková, Ph.D. (cvičící)

Cíle předmětu

Main objectives: During the practical training the student participates in the everyday work of the pharmacy, such as client service, control and evaluation as well as information about drugs, preparation of extemporaneously prepared drugs. The student is also given an insight into the co-operation between the various staff groups at the pharmacy, and into the organisation and finances pharmacy. Internship can be arranged at community and hospital pharmacies, and also at out-pharmacy establishments (pharmaceutical manufacturers, drug wholesalers, quality control institutions).

Výukové metody

Practical internship in pharmaceutical care facilities

Metody hodnocení

The student is obliged to complete the practice in the pharmacy to the specified extent. The pharmacy must meet technical and personnel requirements, given by the guarantor of the practice. During the course of the course, the student creates the Daily Paper of Pharmacy Practice according to predetermined instructions, which he subsequently submits. Furthermore, the student records his pharmacy activity and its distribution to the Activity Log. The student's practice in the pharmacy is documented by the confirmation of the pharmacist - advisor in the document Confirmation of completion of the practice and evaluation of the student.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the practice, the student will be able to:

- Know all aspects of pharmacy care provision to patients in the pharmacy;

- Orientate yourself in the assortment of pharmacies — registered pharmaceuticals, food supplements, phyto-pharmaceuticals, medical devices, veterinary medicines, other pharmacy assortment;

- Be able to dispense a prescription drug, provide professional information to it, know all the administrative steps related to its release;

- Be able to advise the patient in the field of self-medication, recommend a suitable preparation;

- Be able to individually prepare the drug;

- Know the professional economy and principles of price creation of the assortment in the pharmacy;
- Know the professional administration and records in the pharmacy

Osnova

The priority areas:Introduction to the philosophy and strategy of pharmaceutical care.
Good pharmaceutical practice.
Legal regulations for pharmacies.
Pharmacopoeia and other literature used in the pharmacy - European Pharmacopoeia, Czech Pharmacopoeia.
The issue of drugs - distribution, storage, recording.
The operation of the pharmacy. Procurement activities, storage of pharmaceuticals, medical devices.
Medical prescription. Pharmaceutical calculations. Preparation of medicines in the pharmacy.
Laboratory work environment. Technical and material requirements for equipment of pharmacies.
Dispensing activities in the pharmacy. Application of dosage forms. Health promotion.
Information and consulting activities in the pharmacy. Focus on the individual patient, physician, other health professionals.
Administration expert evidence and documentation of various activities in the pharmacy.
Economy of pharmacy. Reimbursement of medicines.
Veterinary medicines and veterinary pharmacy.
Hospital pharmacy and its specifics.
Categories of employees in the pharmacy - the professionals and other workers.
Occupational Health and Safety in the pharmacy.

Literatura

doporučená literatura

European Pharmacopoeia

FaF:aFAPF1_13 **Industrial Pharmacy**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Aleš Franc, Ph.D.

Vyučující

doc. PharmDr. Aleš Franc, Ph.D. (přednášející)
PharmDr. Dominik Grega, Ph.D. (přednášející)
doc. RNDr. Jozef Kolář, CSc. (přednášející)
Mgr. Aleš Kroutil, Ph.D. (přednášející)
RNDr. Pavel Slanina (přednášející)

Cíle předmětu

This course aims to provide students with a comprehensive understanding of the pharmaceutical industry, including its organizational structure, key interrelationships, and the specific operations involved in drug production, quality assurance, and regulatory compliance.

Výukové metody

Přednášky

Metody hodnocení

Kombinovaná zkouška

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing this course, the student will be able to:
- Characterize the basic parameters of the contemporary pharmaceutical industry.
- Navigate relevant legal regulations and professional standards governing the pharmaceutical industry.
- Understand the fundamental relationships within the pharmaceutical industry ecosystem and their impact on drug availability and drug policy.
- Know the basic professional activities and their organization within a pharmaceutical manufacturing company.

Osnova

- Vývoj a současnost farmaceutického průmyslu
- Základní funkce farmaceutického průmyslu
- Právní úprava výroby léčiv, odborné a technické normy
- Výzkum a vývoj léčiv
- Transfer technologií
- Ekologické aspekty výroby léčiv
- Ekonomické vztahy ve farmaceutickém průmyslu
- Otázky marketingu, etiky a společenské odpovědnosti ve farmaceutickém průmyslu
- Národní a mezinárodní organizace výrobců a distributorů léčiv

Literatura

doporučená literatura

European Pharmacopoeia

LO, Andrew W. a Shomesh E. CHAUDHURI. *Healthcare finance: modern financial analysis for accelerating biomedical innovation*. Princeton: Princeton University Press, 2023, xxvii, 390. ISBN 9780691183824.

MILLER, Susan, Walter MOOS, Barbara H. MUNK, Stephen MUNK, Charles HART a David SPELLMEYER. *Managing the drug discovery process : insights and advice for students, educators, and practitioners*. Second edition. Cambridge, MA: Elsevier, 2023, xlii, 639. ISBN 9780128243046.

HILL, Ray G. a Duncan B. RICHARDS. *Drug discovery and development : technology in transition*. 3rd edition. [Edinburgh?]: Elsevier, 2022, ix, 373. ISBN 9780702078040.

KELLY, William N. *Pharmacy : what it is and how it works*. Fourth edition. Boca Raton, FL: CRC Press, 2018, xxi, 397. ISBN 9781138038332.

FaF:aFAPM1_15 **Advanced Analytical Methods in Pharmacy and Biomedicine**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu Mgr. Michaela Kuchynka, Ph.D.

Vyučující

Mgr. Michaela Kuchynka, Ph.D. (přednášející)
doc. Mgr. Jan Muselík, Ph.D. (přednášející)

Cíle předmětu

The aim of the subject is to introduce students to current trends in the area of advanced analytical methods applied in pharmaceutical and healthcare research and practice.

Výukové metody

Lectures, excursion

Metody hodnocení

Final exam, during the semester using a mobile application, interactive voluntary tests during the lectures - points earned will be added to the final exam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Orientation in the use of modern analytical methods in pharmacy, biomedical fields and medical practice and at the same time in relevant professional and technical standards. Based on the theoretical and practical skills acquired in the course, propose and explain a suitable analytical method for the determination of the given drug.

Osnova

- Advanced analytical methods in drug research and development
- Analytical and imaging methods in biomedical and translational research
- Analytical methods and equipment in the production and quality control of pharmaceuticals
- Possibilities for detecting counterfeit medicines
- Clinical investigation methods, methods of drug/drug residue analysis in biological samples
- Methods of quality control of medical devices
- Methods of clinical and forensic toxicology
- Excursion - analytical methods in practice

Literatura

doporučená literatura

European Pharmacopoeia

ČULEN, Martin, Jiří DOHNAL a JAMPÍLEK. *Selected Analytical Techniques of Solid State, Structure Identification, and Dissolution Testing in Drug Life Cycle. Analytical Techniques in Drug Life Cycle*. Online. 1., elektronické vyd. Brno: Masarykova univerzita, 2022. ISBN 978-80-280-0193-3. Dostupné z: https://dx.doi.org/10.5817/CZ.MUNI.O280-0193-2022. Čítárna Munispace https://munispace.muni.cz/library/catalog/book/2192

WATSON, David G. a Bhavik A. PATEL. *Pharmaceutical analysis : a textbook for pharmacy students and pharmaceutical chemists*. Fifth edition. Edinburgh: Elsevier, 2021, vi, 462. ISBN 978070208088.

FaF:aFAPP1_LF **Premedical First Aid**

Předmět není v aktuálních obdobích! 3 kredity, ukončení k, garant předmětu prof. MUDr. Petr Štourač, Ph.D., MBA, FESAIC

Vyučující

prof. MUDr. Petr Štourač, Ph.D., MBA, FESAIC (přednášející)
MUDr. Daniel Barvík (cvičící)
PhDr. Kamila Bošáková (cvičící)
Mgr. Jan Dvořáček, DiS. (cvičící)
Mgr. Petra Hájková (cvičící)

Cíle předmětu

Course objectives: Theoretical e-learning familiarization of students with recommended procedures for providing first aid. Teaching practical skills and practising first aid procedures through simulation.

Výukové metody

Detailed and up-to-date information is available under Instructions for Teaching First Aid in e-learning first aid (https://is.muni.cz/auth/do/med/el/prvni_pomoc/index.html). Teaching first aid will follow the principles of simulation. As a part of their home preparation before the practice, students will study the lesson in e-learning first aid. Each e-learning lesson ends with a test. Students must pass the test prior to their coming to the practice otherwise they will not be admitted to the class. During the practice, individual techniques and procedures will be drilled in short simulations, followed by a structured debriefing and further training.

IMPORTANT: The e-learning is focused on students of The Faculty of Medicine. Students of The Faculty of Pharmacy do not fill in a feedback questionnaire nor post test.

Metody hodnocení

Attendance at practices is 100% mandatory. Prior to each practice, students must fill in the entrance test otherwise they will not be admitted to the class. Students choose the best correct answer. To pass the test, it is necessary to have no fewer than 80% of correct answers. The number of repetitions of the admission test is not limited. The course ends with a colloquium consisting of a practical and a theoretical part. Theoretical part will be a test. Students could do this test after 7th practise. In the practical part, students must pass one simulation successfully. Evaluation will follow a standardized checklist.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Student will be able to:

- carry out primary and secondary survay of the patient;
- show 1 minute of basic life support on the model of adult;
- show 1 minute of basic life support on the model of child;
- provide first aid to an unconscious person;
- open airway and evaluate respiration;
- treat massive bleeding;
- apply pressure to the wound;
- load a pressure bandage;
- load the tourniquet;
- perform Rautek's maneuver;
- turn the unconscious from prone to supine position;
- recognize signs of allergic reaction and anaphylaxis;
- use an autoinjector with adrenaline;
- describe the symptoms of a stroke and provide first aid to the patient;
- describe the symptoms and possible causes of seizures and provide the patient first aid;
- describe the rules of conduct at the scene of an accident, sorting the wounded, ensure their safety in the place of the event;
- communicate with the conscious patient.

Osnova

1. Unconsciousness, chain of survival activation
2. Basic Life Support of adults and how to use AED
3. Basic Life Support of children. Airway obstruction, FBAO.
4. Bleeding. Shock. Wounds. Bandages.
5. Fractures, injuries of joints and muscles - Treatment, immobilisation skills, splints, positioning. Manipulation with unconscious. Car accident.
6. Other life-threatening conditions.
7. Consultation.

Literatura

povinná literatura

E-learning první pomoci (https://is.muni.cz/auth/do/med/el/prvni_pomoc/index.html)

doporučená literatura

European Resuscitation Council Guidelines 2021 (https://cprguidelines.eu/assets/guidelines/European-Resuscitation-Council-Guidelines-2021-Ba.pdf https://cprguidelines.eu/assets/guidelines/European-Resuscitation-Council-Guidelines-2021-Fi.pdf)

FaF:aFATO1_14 **Toxicology**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu doc. MVDr. Pavel Suchý, Ph.D.

Vyučující

MUDr. Marta Chalupová, Ph.D. (přednášející)
MUDr. Tomáš Parák, Ph.D. (přednášející)
doc. MVDr. Pavel Suchý, Ph.D. (přednášející)
prof. PharmDr. Karel Šmejkal, Ph.D. (přednášející)
MUDr. Marta Chalupová, Ph.D. (cvičící)
PharmDr. Mgr. Alžběta Kružicová, Ph.D. (cvičící)
doc. MVDr. Pavel Suchý, Ph.D. (cvičící)

Cíle předmětu

The aim of this subject is to provide students basic knowledge in the area of toxicology. Modern toxicology is an interdisciplinary scientific discipline focused on interactions of xenobiotics with living systems, which lead to their damage or death. The subject incorporates with various disciplines, which are taught in previous years (biology, morphology, physiology and human pathophysiology).

Výukové metody

lectures, seminars

Metody hodnocení

Classification test at the end of the semester. The student always chooses one correct answer from the options offered, for which 1 point is added. No points will be deducted for an unfilled or incorrectly answered question. The condition for passing the test is to achieve at least 60% of the maximum possible number of points.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course the student is able to define the course Toxicology and have knowledge of basic toxicological terms. The student is able to describe in general the dangerous characteristics of substances, the mechanisms of their toxic effect and kinetics. The student has a comprehensive overview of the hazards of toxicologically important inorganic, organic and natural substances and a basic overview of the toxicity of selected pesticides, radionuclides and drugs. He orients himself in related legal regulations and has an overview of methods for testing the hazardous properties of substances.

Osnova

Lectures

1. Toxicology, definition and history, general terminology, classification of toxins
2. Relationship between the substance, dose and toxic effect, toxicokinetics
3. Mechanisms of toxic effect, factors influencing the toxic effect
4. Toxicologically important inorganic substances
5. Toxicologically important organic substances (I)
6. Pesticides and their residues in food, ecotoxicology
7. Toxicologically important natural substances I (herbal toxins, toxins in algae and cyanobacteria, mycotoxins)
8. Toxicologically important natural substances II (bacterial toxins and animal toxins)
9. Toxicology of medicinal drugs, most common medicinal drug poisonings
10. Chemical warfare agents, radiotoxicology
11. Drug abuse, toxicological view on newly synthesized drugs
12. Intoxication therapy, general rules

Seminars

1. Introduction into the experimental evaluation of toxicity
2. In silico evaluation of toxicity: The READ Across method, alternative methods for the assessment of toxicity, QSAR Tool Box, constructing valid QSAR models, the use of predictive models
3. In vitro evaluation of toxicity: Toxicity mechanisms on cellular level and their evaluation, tests of cytotoxicity and genotoxicity, determining EC50
4. In vivo evaluation of toxicity: Determining systemic toxicity and toxicity after repeated administering, testing local effect (dermal irritability, sensibilisation, eye irritation, implantation), pyrogenicity tests, carcinogenicity and reproduction toxicity)
5. Ecotoxicology: Circulation of pollutants in the environment, biomonitoring, effect on organisms, degradability, absorption/desorption. Drug residues in the environment.
5. Guided visit of a toxicological laboratory: Good laboratory practice, interpreting results of tests, most common findings, case studies

Literatura

doporučená literatura

CAMPBELL, P. G. C., Peter V. HODSON, Pamela WELBOURN, David A. WRIGHT, Valérie S. LANGLOIS, Christopher J. MARTYNIUK, Christopher D. METCALFE a Louise M. WINN. *Ecotoxicology*. First published. Cambridge: Cambridge University Press, 2022, xviii, 576. ISBN 9781108819732.

Toxicology for the health and pharmaceutical sciences. Edited by Antonio Peña-Fernández - Mark D. Evans - Marcus S. Cooke. First published. Boca Raton: CRC Press, 2022, 1 online. ISBN 9780203730584. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=2932426

Casarett & Doull's essentials of toxicology. Edited by Curtis D. Klaassen - John B. Watkins. Fourth edition. New York: McGraw Hill Medical, 2021, xii, 628. ISBN 9781260452297.

FaF:aFAUF1_11 **Introduction to Pharmaceuticals and Pharmacy**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu PharmDr. Lenka Smejkalová, Ph.D.

Vyučující

PharmDr. Tünde Ambrus, Ph.D. (přednášející)
PharmDr. Lenka Smejkalová, Ph.D. (přednášející)

PharmDr. Tünde Ambrus, Ph.D. (cvičící)
PharmDr. Lenka Smejkalová, Ph.D. (cvičící)
PharmDr. Martina Šutorová (cvičící)

Cíle předmětu

Familiarization with the basic concepts and principles of correct handling of medicines, with the basic functions of pharmacy and its position in the healthcare system, the operation of pharmacies and basic sources of professional information in pharmacy.

Výukové metody

Monologic (reading, lecture, briefing) Dialogic (discussion, interview, brainstorming)
Workshops

Metody hodnocení

continuous study control, projects, combined examination (oral and written part)

Primární způsob výuky

Žádné informace.

Výstupy z učení

Completing the course, the student will be able to:
- characterize the basic functions of pharmacy and the role of the pharmacist;
- characterize the pharmacy as a healthcare facility;
- describe the basic professional activities within the professional handling of medicines;
- apply the ethical principles of practicing the profession of pharmacist;
- perform the basic analysis of a medical prescription;
- perform basic pharmaceutical calculations in relation to the compounding and use of medicines;
- search and synthesize information in the pharmacopoeial literature and other relevant sources.

Osnova

Lectures:
- Introduction to the issue of medicines and pharmacy
- Basic characteristics of the pharmacy network in the Czech Republic
- Pharmacy as a helathcare facility of the 21st century
- Staffing of pharmaceutical professional activities
- Pharmacopoeia and professional literature in pharmacy
- Prescription of medicinal products and medical devices
- Professional and scientific organizations in pharmacy
- Pharmacy in a global context
- The role of the pharmacist in society

Seminars:
- Medicinal products, medical devices, dietary supplements, cosmetic products
- Basic principles of proper handling of medicines
- Nomenclature and classification of medicines
- European Pharmacopoeia and Czech Pharmacopoeia
- Professional information resources in pharmacy
- Prescription of medicinal products and medical devices
- Analysis of a medical prescription
- Compounding of medicinal products in pharmacies - basic procedures and aids
- Basic pharmaceutical calculations I.
- Basic pharmaceutical calculations II.

Literatura

povinná literatura

Pharmacopoea Bohemica MMXXIII. První vydání. Praha: Grada, 2023, 1424 stran. ISBN 9788027150595.

doporučená literatura

KELLY, William N. *Pharmacy : what it is and how it works*. Fourth edition. Boca Raton, FL: CRC Press, 2018, xxi, 397. ISBN 9781138038332.

TEIXEIRA, Maria Glaucia a Joel L. ZATZ. *Pharmaceutical calculations*. Fifth edition. Hoboken, New Jersey: Wiley, 2017, 1 online. ISBN 9781118978535. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1461646

Pharmaceutical practice. Edited by Judith A. Rees - Ian Smith - Jennie Watson. 5th ed. Edinburgh: Churchill Livingstone Elsevier, 2014, xvii, 552. ISBN 9780702051432.

Azzopardi, L.M. *Lecture Notes in Pharmacy Practice*. Pharmaceutical Press, London, 2010. ISBN 978 0 85369 766 4.

Fulcher, R.M., Fulcher, E.M. *Math Calculations for Pharmacy Technicians*. Saunders Elsevier, St. Louis, 2007. ISBN 0 7216 0642 3.

2.3 Ostatní povinné a povinně-volitelné předměty

FaF:aFAAM1_13 **Additive Manufacturing in Pharmaceutical Technology**
Předmět není v aktuálních obdobích! 3 kredity, ukončení k, garant předmětu PharmDr. Jan Elbl, Ph.D.

Vyučující
PharmDr. Jan Elbl, Ph.D. (přednášející)
PharmDr. Jan Elbl, Ph.D. (cvičící)

Cíle předmětu
Additive manufacturing, respectively 3D printing, is gaining attention as the manufacturing tool not only in the engineering industry but also in the field of pharmacy. This subject aims to introduce students to different types of 3D printing technologies (FDM, SLA, SSE) with respect to possible future uses in pharmacy, mainly pharmaceutical technology.

Výukové metody
Lecture Monologic (reading, lecture, briefing) Demonstration Laboratory work

Metody hodnocení
Credits will be granted upon: - 100% attendance - lectures and practices - submitting 5 CAD modeling homeworks - preparing and printing example dosage form using selected printing technology - passing colloquial examination

Primární způsob výuky
kontaktní

Výstupy z učení
Upon absolution students will
- have general overview of existing additive manufacturing methods
- be able to prepare properly formated digital model for 3D printing
- know how to select proper printing technology and excipients for desired drug dosage form
- know the workflow of FDM, SLA and SSE printing in general, including data preparation and process control

Osnova
Basic principles of 3D printing, workflow, input data and software preparation
Practical CAD modeling — Autodesk Inventor or Fusion 360
SSE printing of drug dosage forms
SLA printing of drug dosage forms
FDM printing of drug dosage forms
3D printing in relation to individualized therapy
Complementary 3D printing methods

Literatura
doporučená literatura
Disrupting 3D printing of medicines with machine learning; 10.1016/j.tips.2021.06.002

Translating 3D printed pharmaceuticals: From hype to real-world clinical applications; 10.1016/j.tips.2021.06.002

3D Printing of Pharmaceuticals, Abdul W. Basit, ISBN13 9783319907543

FaF:aFAAO1_12 **Antioxidants and Free Radicals**
Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Renata Kubínová, Ph.D.

Vyučující
PharmDr. Dagmar Jankovská, Ph.D. (přednášející)
Mgr. Ing. Jiří Václavík, Ph.D. (přednášející)
doc. PharmDr. Renata Kubínová, Ph.D. (přednášející)

Cíle předmětu
The aim of this subject is to offer the students with pharmacological aspects oxidative stress, chemistry free radicals, physiology free radicals, oxidative damage biologically important macromolecules, harden off against free radicals, exercise free radicals in choice sick, anti - oxidizing therapy, endogenous antioxidants, anti - oxidizing therapy, pharmaceuticals with anti - oxidizing effects, antioxidants vegetable origin, synthetic antioxidants and methods assesment oxidizing stress.

Výukové metody
Lectures

Metody hodnocení
Written exam

Primární způsob výuky
Žádné informace.

Výstupy z učení
Mastering of methods for testing antioxidant activity, overview of oxidative processes in the body, oxidative stress, and its pathophysiology.

Osnova

- ROS and RNS
- Detection of radicals
- ROS & RNS - the Good, the Bad and the Ugly I
- NO
- ROS & RNS - the Good, the Bad, and the Ugly II
- Pathological states connected with ROS and RNS I
- Pathological states, connected with ROS and RNS II
- Natural Antioxidant Defense Systems I
- Natural Antioxidant Defense Systems II
- In vitro methods for evaluation of antioxidant activity - Nutritional supplements
- Antioxidant defenses of aerobic organisms

Literatura

doporučená literatura

NABAVI, Seyed. *Antioxidants effects in health : the bright and the dark side*. Edited by Ana Sanches Silva. Amsterdam: Elsevier, 2022, xliv, 867. ISBN 9780128190968.

FaF:aFAAS1_15 **Applied Statistics**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu doc. RNDr. Bc. Jiří Pazourek, Ph.D.

Vyučující

doc. RNDr. Bc. Jiří Pazourek, Ph.D. (přednášející)
Mgr. Sylvie Pavloková, Ph.D. (cvičící)
doc. RNDr. Bc. Jiří Pazourek, Ph.D. (cvičící)

Cíle předmětu

Statistical evaluation of results is essential part of all experimental scientific branches. The content of this subject is basic statistics for a graduate student of the study program ”Pharmacy”. Lessons concern mainly descriptive statistics, partially also the probability calculus and mathematical statistics with a direct relationship to real scientific tasks of experimental work (evaluation of experimental data, hypotheses formulation and testing). Practical exercises include introduction to PC´s hardware and software and utilization of spreadsheet programs (MS Excel, Gnumeric).

Výukové metody

Monologic (presentation, lecture, practical classes)

Metody hodnocení

written examination

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- use a spreadsheet calculators (MS Excel)
- perform basic descriptive statistics
- select and perform basic statistical tests for one, two or more samples

Osnova

Content of the lecture Stochastic world. The effects of random on our data - the goal of statistics. Population and samples in statistics. Random experiment - random phenomenon - random variables, types of statistical variables. Observation and data collection. Frequency of random occurrence. Relative frequency of a random variable and probability. Frequency polygons and histograms. Compilation of tables from observations. Graphic presentation of experimental data: histograms, bar graphs, pie charts, xy-graphs (scatter graphs). Quantiles, box-and-whiskers plot_1. Data processing with spreadsheets: interpolation and extrapolation of functions, numerical integration of digital signal - chromatographic peak, determination of chromatographic peak area. Signal noise filtering. Probability and distribution function = DISTRIBUTION. Probability functions. Binomial distribution. Other types of distributions: uniform, Poisson distribution, Student’s t-distribution. Gaussian normal distribution - properties. Empirical and theoretical distribution curve. chi2-distribution. Goodness-of-Fit Test (Pearson’s Chi2-test, Goodness-of-Fit Test). Normality tests: Lilliefors (Kolmogorov-Smirnov) normality test; Q-Q chart. Descriptive statistics, descriptive characteristics of statistical samples. Estimation of basic set parameters - mean values and measures of variability; median, mode. Mean and standard deviation. Rounding. SEM, Confidence interval. Elimination of outliers - outliers. Quartiles, box-and-whiskers plot_2 - inner fence method (Tukey) Grubbs test. Dean-Dixon Q-test. Inferential statistics - basics of statistical tests = distribution and hypotheses: HYPOTHESES in statistics, error of the first and second kind. Which test to use? 1-sample, paired, 2-sample tests. One-sided and two-sided test. Two-sample parametric tests for equality: Sign test. Wilcoxon test. Mann-Whitney U-test. Student’s t-test. + Fisher’s variance equality test. Multi-sample parametric tests: One-factor ANOVA - analysis of variances of multiple samples. Kruskal-Wallis test for multiple samples. Evaluation of the dependence of two quantitative features. Pivot Tables. Pearson’s Chi-independence test. Four-field tables (2x2) - Fisher’s exact test. Correlation and regression. Spearman’s coefficient of order correlation. Linear regression dependence - Pearson correlation coefficient. Residuals. Regression ANOVA. Testing the significance of the regression dependence section. Quantitative analysis calculations: calibration curve method. Factors significantly influencing the experiment - The plan of experiments and its evaluation. Plackett-Burman experimental plan. Survival analysis. Clinical studies. Tests´ overview. Revision of key knowledge Exercise content: 1. Use of personal computers

in scientific work. MS Office. 2. MS Excel spreadsheet. Table editing, basic calculations (formulas), filters. Simple graphs in Excel + line vs. xy-graph. Analytical signal processing - chromatographic peak. Peak integration numerically. Assignment - numerical integration. 3. Descriptive statistics: processing of measurements using basic characteristics of statistical files - use of the mean value. Quantiles (arithmetic mean, median, mode, quartiles). Box chart. Histogram - Excel / Gnumeric.exe. MS Excel module Data analysis. Assignment - deciles/ histogram. 4. descriptive statistics in MS Excel. MS Excel module Data analysis. Mean and standard deviation. Rounding. Elimination of outliers (Grubbs test, Q-test). Internal wall method - modified box graph. Confidence interval for continuous and categorical data. Assignment - confidence interval incl. remoteness test. 5. Inference statistics - H0 and H1. Goodness-of-fit test. Empirical distribution function (EDF). Normality testing: Q-Q graph, Kolmogorov-Smirnov (Lilliefors) test: Gnumeric.exe. Randomness testing - runs test. Assignment - EDF tests. 6. One-sample and two-sample tests. Testing of equality: sign test (paired nonparametric test). Wilcoxon's signed-rank test. Parametric alternatives: F-test (equality of variance), t-test of equality (unpaired and paired). Assignment - MW test. 7. Mann-Whitney U-test. Multiple-sample tests: One-factor ANOVA, Kruskal-Wallis test. Friedman's test. Assignment - ANOVA 8. four-field tables 2x2. (N-1) chi2 test Risk ratio, Fisher's exact test. Correlation analysis: large contingency tables, two-dimensional chi2 test. Assignment - Pivot Table. 9. Spearman's correlation coefficient. Construction of calibration curve by linear regression, regression ANOVA, Assignment - calibration graph, residuals. 10. Linear regression - test of significance of a section (MS Excel, other statistical programs). Assignment - regression with data transformation. 11. Survival analysis: censored data, construction of survival curve, determination of median survival. Revision. 12. Independent work in statistical data processing. Exam (written test)

Literatura

doporučená literatura

ROWE, Philip. *Essential statistics for the pharmaceutical sciences*. Second edition. Chichester: Wiley, 2016, xx, 409. ISBN 9781118913390.

BOLTON, Sanford a Charles BON. *Pharmaceutical statistics : practical and clinical applications*. 5th ed. New York: Informa Healthcare USA, 2010, xv, 656. ISBN 9781420074222.

FaF:aFAAT1_16 **Advanced Therapy Medicinal Products**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Jakub Treml, Ph.D.

Vyučující

PharmDr. Jakub Treml, Ph.D. (přednášející)

Cíle předmětu

Students in this subject will get an overview knowledge about current possibilities in therapies with nucleic acids and also with advanced therapy medicinal products (ATMP), with an emphasis on gene therapy. Special lectures will be dedicated to the legal status of ATMP in EU and USA. Moreover, apart from possible therapies and novel medicinal products, also lectures will touch the topic of their preparation and manufacturing.

Výukové metody

Lecture Monologic (reading, lecture, briefing)

Metody hodnocení

Written exam

Primární způsob výuky

kontaktní

Výstupy z učení

Basic knowledge in novel advanced therapy medicinal products and nucleic acid therapy.

Osnova

- Overview of advanced therapy and therapy with nucleic acids — basic definitions and general principles
- History of advanced therapy
- Oligonucleotides — preparation and therapeutic potential
- RNA interference (miRNA, siRNA) as a tool in gene therapy
- Vectors and gene delivery techniques
- Non-viral nucleic acid delivery
- Examples of tissue engineering and cellular therapy
- Therapeutic options of gene therapy in cancer (e.g. CAR-T)
- Therapeutic options of gene therapy in neurological and muscular diseases
- Therapeutic options of gene therapy in haemophilia and other diseases
- DNA and RNA vaccines
- Methods of genetic engineering (CRISPR-Cas9)

Literatura

doporučená literatura

NÓBREGA, Clévio David Rodrigues, Liliana MENDON\C CA a Carlos A. MATOS. *A handbook of gene and cell therapy*. Cham: Springer, 2020, xi, 188. ISBN 9783030413323.

Advanced textbook on gene transfer, gene therapy and genetic pharmacology : principles, delivery and pharmacological and biomedical applications of nucleotide-based therapies. Edited by Daniel Scherman. Second edition. New Jersey: World Scientific, 2020, xv, 617. ISBN 9781786347053.

GIACCA, Mauro. *Gene therapy*. Dordrecht: Springer, 2010, xxi, 303. ISBN 9788847016422.

FaF:aFACF1_15 **Chemistry of Pharmaceutical Excipients**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Oldřich Farsa, Ph.D.

Vyučující

doc. PharmDr. Oldřich Farsa, Ph.D. (přednášející)

Cíle předmětu

Pharmaceutical excipients are inorganic or organic compounds, which are necessaryfor formulation of medicinal preparations suitable for direct aplication to a patient, although, they are not holders of any pharmacological activity. In the study program of pharmacy in the Czech Republic, such substances are the matter of interest predominantly from the point of view of their use in application forms, and from the point of view of physico-chemical properties related to it. Pharmaceutics, in the middle Europe often called pharmaceutical technology or galenic pharmacy, is the discipline which deals with them applying such approaches. Medicinal chemistry had been marginally interested in structures, syntheses and partially structure-activity relationships of some selected classes of excipients like preservatives, colorants and sweeteners and appropriate chapters in older textbooks of medicinal chemistry had been also devoted to them but increasing number of chemical drugs crowded out stepwisely these topics. Indeed, neither any of these above mentioned nor other discipline offers a comprehensive view to chemical structures, synthetic ways and typical analytical procedures of these compounds. It is in contradiction to the fact that most of modern pharmacopeias have for excipients the same requierements on purity as for active ingredients. Chemistry of pharmaceutical excipients could be a discipline capable to fill out this blank and build a bridge between pharmaceutics on one side and medicinal chemistry together with pharmaceutical analysis on another one. It will also have a small overlap with margins of pharmacognosy in fields of natural sweeteners, dyes and antioxidants.

Výukové metody

Lectures Practical class(es) devoted to a particular group of excipients, or a seminar devoted to a QSAR or similar calculations. Particular dates and times of practical classes will be specified during the semester.

Metody hodnocení

With a mark A written exam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

A student will capable after passing the subject:

-to know main groups of pharmaceutical excipients from the point of view of both function and chemical structure
-to know structures and important propreties of several main representatives of each group
-to distinguish between excipients with a quatifiable activity and without it
-to know and describe quantities which are possible to use for such a activity quantification
-to know and express syntheses and mechanisms of activity of selected excipients

Osnova

The topics of 6 two hours lectures are as follows:1. Circumscription of the concept of pharmaceutical excipients. Their fundamental division from the points of view of their usage and structure. Compounds at the border between drugs and excipients.
2. Compounds enhancing disintegration of tablets. Stabilizers of physico-chemical properties of dispersion systems: viscosity-increasing, emulsifying and suspending agents. Oligo- and polysacharides and their semisynthetic derivatives. (Starch, alkylated starches, cellulose, cellulose ethers and esters, cyclodextrines). Specific methods of their pharmacopeial analysis including applications of NMR spectroscopy. (Determination of substitution grade of hydroxypropylbetadex, i.e. hydroxypropyl- alpha-cyclodextrine according to European and Czech pharmacopeias.
3. Stabilizers of chemical composition of medicinal preparations: antioxidants (inorganic and organic compounds suitable for either hydrophilic or hydrophobic media), antimicrobial and antifungal preservatives (organic compounds containing heavy metals in their molecules, phenolic compounds including a homologic series of parabens (nipagins), carboxylic acids, quarternary ammonium salts, aldehydes and their precursors). Dependence of activity of preservatives on pH. Structure-activity relationships including selected QSAR regression models, syntheses of principal compounds.
4. Selected compounds controling bioavailability of drugs. Transdermal, buccal and gastro-intestinal penetration enhancers. (Percutaneous permeation accelerants, which have been beeing most widely studied, are accentuated.) Overview of basic structural groups, proposed and particularly evidenced mechanisms of their actions, special demands of enhancers used in topical application forms, methods of determination and quantitative expression of

their activity.
5. Compounds triming taste and flavour of medicinal preparations.
Sweeteners of natural origin: carbohydrates, alcoholic sugars, glycosides useful
as sweeteners. Alternate sweeteners: basic structural types, their toxicity,
syntheses of some principal compounds. Quantitative expression of sweetening ability, its relationship to structure.
Volatile compounds of both natural and
synthetic origin suitable as odour regulating agents.
6. Colour corrigentia ? pharmaceutical dyes and colouring agents. Specific methods of analysis of colour substances. Quantitative description of a colour in
CIE L*a*b* system and similar systems according to USP Chapter 1061,
"Color ? instrumental measurement."3) Overview of approved dyes of both
natural and synthetic origin, their toxicity, lipohilicity and spectral properties
(absorption extremes). Structure-colour relationships of anthocyanines.
The topics of two 4-hours sections of laboratory are as follows:
1. Synthesis of an antimicrobial preservative ? paraben with longer and/or branched
alkyl chain. (Alternative: synthesis of an artificial sweetener ? sacharine.)
2. Analysis of pharmaceutical colorants. Quantitative description of a colour in
CIE L*a*b* system and evaluation of purity and
homogenity of colour substances (for better exploitation of time, the work on
both topics overlaps).

Literatura

doporučená literatura

European Pharmacopoeia

Percutaneous penetration enhancers chemical methods in penetration enhancement : drug manipulation strategies and vehicle effects. Edited by Nina Dragicevic - Howard I. Maibach. Berlin: Springer, 2015, 1 online. ISBN 9783662450130. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=975569

KWAN, Yu Heng, Yee Kei TUNG, Jaspreet Singh KOCHHAR, Hairui LI, Ai-Ling POH a Lifeng KANG. *Handbook of cosmeceutical excipients and their safeties*. Amsterdam: Elsevier, 2014, 1 online. ISBN 9781908818713. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=859854

Handbook of pharmaceutical excipients. Edited by Raymond C. Rowe - Paul J. Sheskey - Siân C. Owen. Fifth edition. London: Pharmaceutical Press, 2006, xxi, 918. ISBN 0853696187.

FaF:aFACJ1_cjv **Czech Language I**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PhDr. Renata Prucklová

Vyučující

PhDr. Renata Prucklová (cvičící)

Cíle předmětu

The aim of this course is to become familiar with the basics of Czech which is necessary for pharmaceutical and medical professionals. The course will provide students with basic knowledge of Czech grammar, vocabulary and communication phrases as well as the simple terminology used for the basic patient´s consultancy and handling with medical prescriptions.

Výukové metody

Direct teaching, group work

Metody hodnocení

1. A test including multiple-choice and short answer questions, translation and gap filling tasks. 2. An oral exam in the form of a simple conversation in Czech.

Primární způsob výuky

Žádné informace.

Výstupy z učení

At the end of the course, the students should be able to: - understand and use basic Czech phrases - hold a simple conversation in Czech - understand and apply basic Czech grammar rules

Osnova

1. Czech alphabet, pronunciation, greetings, introductions, basic question words, phrases, verbs to be, to do, to have, numbers 1-10, feminine + masculine forms of nouns. Vocabulary: common pharmaceuticals, drugs. Conversation: "What is it"? "It is a plaster, bandage…"

2. Orientation, "Where is it" - practising dialogues, orientation in the city, my address. The city of Brno, where I study - a short presentation. Verbs of -í- conjugation. Genitive singular (next to the bank, hospital, pharmacy)

3. Verbs to understand, speak, know, see, study. Numbers 1-100. Accusative singular — nouns+ adjectives. The verb to need. Shopping. Conversation: How much does it cost? Dialogue in a pharmacy.

4. Food and drinks, conversation in a restaurant. Vocabulary: healthy, unhealthy diet, dietary supplements. Nominative plural. Verbs to drink, to eat, to take (a drug, a dietary supplement), to like something. Conversation: What do we eat?

5. Collocations with the verb "to like something vs. to like doing something". Numbers 100-1000 (crowns, grams, milligrams, milliliters). Conversation: what do you like/dislike? What do you like/dislike doing?

6. My family. Possessive pronouns. Adjectives expressing characteristics. Conversation: "What's her/his name, what's he/ she like. The dative singular of selected pronouns.

7. "When is it?" expressions of time, days of the week, months. Conversation: "When will we meet?" Verbs: to walk, to go (by).

8. The verbs: to take, to use; modal verbs. Conversation: when do I have to, must... take medicine, how many times a day/night. Conversation in a pharmacy. Prepositions to, on, for.

9. Human body, its main parts (including irregular plural forms), common diseases, health problems and medications. Past tense of regular and irregular verbs. Speaking practice — When were you ill last time, what happened, did you go to the hospital···?

10. Verb to know somebody or something, to know how to···., to be able to/ to have skills. Collocations with prepositions in, at - v, ve , na , u , local singular (in the hospital, in the pharmacy, at the university, at the doctor ´s)

11. Names of EU countries, travelling, staying at a hotel, weather. Verbs of movement, walk, go by, fly, future tense of long and short verbs. Conversation: vacation, weather in the Czech Republic, in my country. Conversation: Common health problems while travelling.

12. My future career. Collocation "be interested in", objective forms of pronouns.

13. Revision.

14. Examination.

Literatura

povinná literatura

HOLÁ, Lída a Pavla BOŘILOVÁ. *Čeština expres 1 : A1/1*. 2., opravené vydání. Praha: Akropolis, 2015, 96 stran. ISBN 9788074700798. http://www.czechstepbystep.cz

doporučená literatura

Mánek, B. *Textová učebnice angličtiny pro farmaceuty. 1994.*. UK v Praze, 2005. ISBN 8024603497.

Hornby, A. S. *Oxford Advanced Learner's Dictionary.*. Oxford, 2001. ISBN 0-19-4431538.

FaF:aFACJ2_cjv **Czech Language II**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PhDr. Renata Prucklová

Vyučující

PhDr. Renata Prucklová (přednášející)

Cíle předmětu

This is a follow-up course for students who attended FACJ1 course and it provides them with the opportunity to continue building up their Czech pharmaceutical and medical terminology. Throughout the semester students will learn post-beginner Czech grammar, vocabulary and phrases. They will study the other more complicated communication phrases as well as the simple pharmaceutical terminology used for pharmacy consultancy and handling with medical prescriptions.

Výukové metody

class discussion, reading, speaking, listening

Metody hodnocení

An online test and an oral exam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Students will learn how to make and correctly use the verb to be in all Czech tenses. Students will become familiar with the basics of the Czech declension system. Students will become familiar with the basics of the Czech conjugation system. Students will get command of basic areas in pharmacy.

Osnova

1st Pharmacy as a discipline, the study of pharmacy. Genitive plural 2nd Drugs, drug dosage forms, routes of administration
3rd Important drug groups. Verbs of the -ova- conjugation. Present participle
4th Prescription drugs, over-the-counter drugs, prescription terminology.
5th Human body, common health problems
6th Revision, conversation in a pharmacy
7th Diseases and their symptoms, physiology. Conditional
8th Medicinal plants and their parts used for medical treatment. Instrumental plural
9th Laboratory, equipment used in the laboratory
10th Pharmacist´s communication skills, counseling
11th Grammar revision, exercises
12th Final semester revision
13th Final semester test

Literatura

doporučená literatura

Parolková, O., Nováková, J. *Czech for Foreigners*.

FaF:aFACP1_15 **Food Chemistry**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA

Vyučující

PharmDr. Marek Lžičař (přednášející)
doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA (přednášející)
PharmDr. MVDr. Vilma Vranová, Ph.D. (přednášející)

Cíle předmětu

The goal of the course is to expand students' knowledge of the composition of our food down to the individual basic components. The content of the subject is to clarify the influence of sugars, fats, proteins, vitamins, minerals, exogenous components, etc. on processes in the body with the possibility of increasing the quality of life and health of the population. The role of nutrition and the resulting composition of food will be explained in the context of the processes taking place during their production, storage and culinary preparation.

Výukové metody

Lectures

Metody hodnocení

Written exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course the student will be able:

- to characterize chemical composition and ingredients of basic food categories;
- to apply basic nutritional recommendations for health promotion in the professional practice;
- to identify problems related to nutrition and malnutrition.

Osnova

1. Introduction to food chemistry and principles of dietetics.
2. Sugars. Chemical composition; nutritional significance.
3. Fats. Chemical composition; nutritional significance.
4. Proteins. Chemical composition; nutritional significance.
5. Vitamins, minerals. Chemical composition; nutritional significance.
6. Exogenous substances - dyes, sweeteners, emulsifiers. Chemical composition; nutritional significance; effect on health.
7. Interaction of foods, drugs, food supplements, teas.
8. Cereals and the effect of selected food technologies on the final food; health effects.
9. Milk and the effect of selected food technologies on the resulting food, health effects.
10. Meat and the effect of selected food technologies on the resulting food, health effects.
11. "Superfoods" vs. "white poisons" - mythson food, impact on health.
12. Fermentation. Fermentation processes, Food preservation. Microbiome, probiotics, prebiotics, health effects.
13. Honey, royal jelly, propolis, effect on health.
14. Nutraceuticals.

Literatura

doporučená literatura

NEWBY, P. K. *Food and nutrition : what everyone needs to know*. New York, NY: Oxford University Press, 2018, xx, 293. ISBN 9780190846633.

Nutraceuticals : efficacy, safety, and toxicity. Edited by Ramesh C. Gupta. Amsterdam: Academic Press, 2016, xvii, 1022. ISBN 9780128021477.

KRAFT, Diane a Ara DERMARDEROSIAN. *The A-Z guide to food as medicine*. Boca Raton: CRC Press, 2016, 1 online. ISBN 9781498735247. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1136142

Preventive nutrition : the comprehensive guide for health professionals. Edited by Adrianne Bendich - Richard J. Deckelbaum. Fifth edition. Cham: Humana Press, 2015, 1 online. ISBN 9783319224312. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1170356

FaF:aFADP5_FaF **Diploma Thesis Submission**

Předmět není v aktuálních obdobích! 1 kredit, ukončení z, garant předmětu PharmDr. Tünde Ambrus, Ph.D.

Vyučující

PharmDr. Tünde Ambrus, Ph.D. (cvičící)

Cíle předmětu

Diploma thesis submission

Výukové metody
Diploma thesis submission

Metody hodnocení
A prerequisite for recording the credit is the completed subject aF1DP4_FaF. Credit is awarded for submitting the complete diploma thesis through the MU Information System (in accordance with the Study and Examination Regulations of MU).

Primární způsob výuky
Žádné informace.

Výstupy z učení
Diploma thesis submission

Osnova
Submission of the complete diploma thesis through the MU Information System (in accordance with the Study and Examination Regulations of MU).

Literatura
Žádné informace.

FaF:aFAEK1_PrF **General Ecology and Ecology of Human Health**
Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu prof. RNDr. Milan Gelnar, CSc.

Vyučující
prof. RNDr. Milan Gelnar, CSc. (přednášející)

Cíle předmětu
General ecology: Lectures include overview of definitions in general ecology, its relationship to other science departments, its link to pharmaceutical education, research and practice.It also involves basic terms and their definitions. Ecology of human health includes basic legislative of ecology, characteristics of factors negatively affecting human health. It involves factors of natural and anthropologic origin, which influence the quality of human health and possible consequences of interference of adverse factors in human health.

Výukové metody
Lectures

Metody hodnocení
Written examination

Primární způsob výuky
Žádné informace.

Výstupy z učení
Knowledge of ecology within syllabus, taking into account the impact of the environment on human health.

Osnova
1st lecture: ECOLOGY - definition, methods. ECOLOGICAL FACTORS. 2. lecture: INDIVIDUAL AND ENVIRONMENT
3. lecture: POPULATION - definition, structure, relationships within the population, population dynamics.
4. lecture: RELATIONS BETWEEN POPULATIONS. FOOD RELATIONS

5. lecture: BIOCENOSIS - characteristics, types, structure, dynamics, classification.
6. lecture: ECOSYSTEM - characteristics, productivity and production, cycles of substances, the stability of ecosystems, types of ecosystems. BIOM. PROTECTION OF POPULATIONS, COMMUNITIES, AND ECOSYSTEMS.
7. lecture: HISTORY OF HUMAN ECOLOGY. HUMANS AND THE ENVIRONMENT
8. lecture: MAN AND BIOTIC FACTORS OF THE ENVIRONMENT. ECOPATOLOGY
9. lecture: HUMAN FUNCTIONS IN ECOSYSTEMS, ENERGY ASPECTS OF HUMAN ECOSYSTEMS.
10. lecture: ECOLOGICAL ASPECTS OF NUTRITION. Toxicity of substances - chemical compounds - chlorinated derivatives, PCBs, organophosphates, carbamates, elements - Hg, Pb, Cd, As, Cr, Be, Mn, Ni, Al, nitrogen compounds - NO2-, NO3-. Radiation risks.
11. lecture: MUTAGENS AND TERATOGENS. HUMAN ECOGENETICS
12. lecture: ECOLOGY OF HUMAN POPULATIONS - size and density, structure, indicators of reproduction, problems of urbanization.

Literatura
doporučená literatura
GIČEV, Jurij Petrovič. *Ecological determinants of common diseases and life expectancy decline*. Translated by Anastasia Kariagina. 3-rd revised and updated edi. Sofia: Ankos, 2023, 120 stran. ISBN 9786199007631.

CAMPBELL, P. G. C., Peter V. HODSON, Pamela WELBOURN, David A. WRIGHT, Valérie S. LANGLOIS, Christopher J. MARTYNIUK, Christopher D. METCALFE a Louise M. WINN. *Ecotoxicology*. First published. Cambridge: Cambridge University Press, 2022, xviii, 576. ISBN 9781108819732.

LANDIS, Wayne G., Ruth M. SOFIELD a Ming-Ho YU. *Introduction to environmental toxicology : molecular substructures to ecological landscapes*. Fifth edition. Boca Raton: CRC Press, 2018, xx, 470. ISBN 9781498750424.

FaF:aFAEX1_13 **Excursion to Pharmaceutical Industry**

Předmět není v aktuálních obdobích! 2 kredity, ukončení z, garant předmětu prof. PharmDr. Mgr. David Vetchý, Ph.D.

Vyučující

prof. PharmDr. Mgr. David Vetchý, Ph.D. (cvičící)

Cíle předmětu

Industrial Pharmacy offers a view into the pharmaceutical industrial company producing the drug substances as well as the medical products. Students can follow the whole process from the drug development and evaluation, the formulation of an appropriate medical form, quality assurance of medical products to clinical studies and the documentation preparation for the registration procedure.

Výukové metody

excursion with theoretical introduction

Metody hodnocení

written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- describe the regulatory principles of pharmaceutical production;
- describe the factors that are important for good practice and quality management in pharmaceutical research and production;
- identify and describe procedures for technological and analytical development and stability testing;
- apply the principles of pharmacovigilance and pharmacoeconomics;
- apply procedures for creating registration dossiers

Osnova

Lectures:1. Regulatory principles.
2. Development and formulation in pharmaceutical technology.
3. Analytical development and stability testing.
4. Clinical trials and the role of clinical department.
5. Pharmacovigilance
6. Good practices and quality assurance in pharmaceutical research and production.
7. Registration documentation.
8. Pharmacoeconomics.
Practice: excursion in pharmaceutical company.

Literatura

Žádné informace.

FaF:aFAFF1_12 **Phytopharmaceuticals and Phytotherapy**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Ivana Daňková, Ph.D.

Vyučující

PharmDr. Ivana Daňková, Ph.D. (přednášející)
PharmDr. Dagmar Jankovská, Ph.D. (přednášející)

Cíle předmětu

Lectures: Include introduction and 14 most commonly used groups of phytopharmaceuticals (acc. to their pharmacological effect). Characteristics of effects of most frequently used drugs in each group. Each group includes subgroup, where the representatives of most common parapharmaceuticals are presented - of similar composition and identical declared effect.

Výukové metody

Lectures, selfstudying

Metody hodnocení

Written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

Knowledge of phytotherapy and phytopreparations and possibilities of their application in practice.

Osnova

1. Phytopharmaceuticals: definition, legislative status, basic terms. The position of phytotherapy in current medicine. The role of a pharmacist in phytotherapy2. Application forms of phytopharmaceuticals, mode of administration. Herbal tea preparations.
3. Preparations used to treat some disorders of respiratory system
4. Preparations used to treat some disorders of central nervous system
5. Preparations used to treat some disorders of cardiovascular system.
6. Preparations used to treat some circulatory disorders, venous diseases.
7. Preparations used to treat some disorders of digestive system I: digestives, cholagogues, carminatives, spasmolytics

8. Preparations used to treat some disorders of digestive system II: gastroprotective agents, laxatives, antidiarrhoeal agents
9. Preparations used to treat diabetes. Hepatoprotective agents.
10. Preparations used to treat some disorders of urinary system.
11. Preparations used to treat some gynaecological disorders, preparations for menopause
12. Preparations convenient for pregnant and lactating women. Preparations that influence body weight.
13. Preparations for external use I: dermatological preparations, disinfectants, astringents, antiinflammatory agents
14. Preparations for external use II: phytopharmaceuticals used to treat joint problems, muscular injuries, contusions

Literatura

doporučená literatura

HEINRICH, Michael, Joanne BARNES, José M. PRIETO GARCIA, Simon GIBBONS a Elizabeth M. WILLIAMSON. *Fundamentals of pharmacognosy and phytotherapy*. Edited by A. Douglas Kinghorn - Mark Blumenthal. Fourth edition. [London]: Elsevier, 2024, x, 272. ISBN 9780323834346.

From herbs to healing : pharmacognosy - phytochemistry - phytotherapy - biotechnology. Edited by Éva Szöke - Ágnes Kéry - Éva Lemberkovics. Cham: Springer, 2023, xvii, 570. ISBN 9783031173004.

BONE, Kerry a Simon MILLS. *Principles and practice of phytotherapy : modern herbal medicine*. Edited by Michael Dixon - Mark Blumenthal. Second edition. Edinburgh: Churchill Livingstone/Elsevier, 2013, xxiv, 1051. ISBN 9780443069925.

FaF:aFAFI1_14 **Pharmacokinetics and Biopharmacy**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Tereza Kauerová, Ph.D.

Vyučující

PharmDr. Tereza Kauerová, Ph.D. (přednášející)
PharmDr. Tereza Kauerová, Ph.D. (cvičící)

Cíle předmětu

Pharmacokinetics course deals with the fundamental principles of absorption, distribution, metabolism, and the elimination of drugs by the human body in time as well as clinical application, including case studies of commonly dosed drugs. Basic aim of education in Pharmacokinetics for students of pharmacy is getting deep knowledge in processes, which take place in relation to time course of drug after administration. Understanding of pharmacokinetics patterns is important for insight into rational drug dosage in clinical practise. Application of the pharmacokinetic theory to clinical problems involved in optimizing and monitoring drug use in patients is important part of pharmacists work.

Výukové metody

Lectures, seminars (discussion, case studies, work with information sources)

Metody hodnocení

Written exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course the student is able to explain the general rules regarding the pharmacokinetic processess and clinical significance and application od pharmacokinetic parameters. Student can also define and characterize different factors affecting the drug kinetics and thus pharmacotherapy. The student will be able to apply the acquired knowledge in a safe and effective pharmacotherapy.

Osnova

- Introduction to pharmacokinetics (pharmacokinetic processes,basic pharmacokinetic principles)
- Description of the pharmacokinetic processes (absorption, distribution, metabolism, and the excretion of drugs)
- Pharmacokinetic parameters (description of pharmacokinetic parameters and their clinical importance)
- Factors of non-genetic origin affecting the drug kinetics
- Factors of genetic origin affecting the drug kinetics
- Pharmacokinetic interactions - description
- Pharmacokinetic interactions - casuistics solution
- Bioequivalence. Pharmacokinetics in the clinical trials
- TDM - Therapeutic Drug Monitoring (Description and general principles, methodic and procedures of TDM in clinical practice)
- Special kinetics: Cytostatics
- Special kinetics: Antibiotics

Literatura

doporučená literatura

Whalen K. *Lippincott Illustrated Reviews: Pharmacology, 7th edition*. Lippincott Williams & Wilkins, USA, 2018. ISBN 978-1496384133.

Humphrey P. Rang, Maureen M. Dale, James M. Ritter and Rod J. Fl. *Rang & Dale's Pharmacology, 8th Edition*. 2016. ISBN 978-0702053627.

Trevor A, Katzung B, Masters S., Knuidering-Hall M. *Katzung & Trevor's Pharmacology Examination and Board Review*. McGraw-Hill Medical, 2012. ISBN 0071789235.

Katzung BG. *Basic and Clinical Pharmacology*. McGraw-Hill Medical, 2011. ISBN 978-0071764018.

FaF:aFAGE1_16 **Applied Genetics**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu prof. MVDr. RNDr. Petr Hořín, CSc.

Vyučující

prof. MVDr. RNDr. Petr Hořín, CSc. (přednášející)
PharmDr. Mgr. Alžběta Kružicová, Ph.D. (přednášející)

Cíle předmětu

Theoretical principles and practical applications of genetics in pharmacy are taught. Special attention is paid to genomics and its importance for new drug development, to genetics of disease, geentics of host and pathogen interactions, genetic variability in reactions to pharmacotherapy. Genetics of laboratory animals represents a special topic of the course.

Výukové metody

Interactive lectures.

Metody hodnocení

Written examinations. Assessment criteria: capability to present an overview of a topic in a structured way, capability to explain its principles and a minimal factographic knowledge neede for complying with the previous criteria.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Students will be able to use the acquired knowledge in related curricular subjects and eventually, they will be able to use it in understanding principles of drug action and in interpreting them for themselves and for their clients.

Osnova

1. Genome and its structure. Microbiome and its importance for pharmacy.Genetic polymorphism: definition, origins, types and practical applications in biomedicine. 2. Gene and methods of its identification. Genetics of qualitative and quantitative traits, methods of their analysis; applications in biomedicine. 3. Application of genetics in pharmacy: pharmacogenetics, important pharmacogenetic polymorphisms and applications in pharmacotherapy. 4. Genomics and its applications in pharmacy: pharmacogenomics, development of new drugs, precision medicine. 5. Mutations and mutagens. Types of mutations, their consequences. Mutagens in the environment. Drugs as potential mutagens. 6. Drugs in pregnancy from the genetic perspective. 7. Inherited disease in humans: Mendelian and non-Mendelian diseases. Human monogeneic diseases: modes of inheritance. 8. Inherited disease in humans: complex diseases and their genetic analysis. 9. Inherited disease in humans: genetic counselling, genetic diagnostics, prenatal and preimplantation diagnostics. 10. Oncogenetics: principles and applications. 11. Genetic susceptibility to disease, importance for precision medicine. 12. Human immunogenetics and its applications. Vaccinomics and genetics of vaccination. 13. Genetics of laboratory animals.

Literatura

doporučená literatura

PIERCE, Benjamin A. *Genetics : a conceptual approach*. Seventh edition. New York: Macmillan international, higher education, 2020, xxviii, 82. ISBN 9781319308315.

FaF:aFAGF1_14 **Geriatric Pharmacotherapy**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu MVDr. Renata Blechová, Ph.D.

Vyučující

MVDr. Renata Blechová, Ph.D. (přednášející)

Cíle předmětu

The aim of this course is to give the students a basic understanding of specific aspects in geriatric pharmacotherapy.Contents:
The population in the Czech Republic is undergoing similar changes like in other states within the European Union. The basic trend is not only the extending of the average lifespan but also the improving quality of life. Therefore it is necessary understand the basic mechanisms of aging and age-related diseases in the individual drug therapy in elderly patients.

Výukové metody

Lectures

Metody hodnocení

Written test

Primární způsob výuky

Žádné informace.

Výstupy z učení
A basic understanding of specific aspects in geriatric pharmacotherapy.

Osnova
1. Demographic situation, aging, basic factors influencing geriatric prescription 2. Imunosenescention, GIT dysfunction, nutrition support, sipping, SET
3. Geriatric giants, the phenomenon of pain in the elderly
4. Sensory disorders in old age, cataract, glaucoma, age-related macular degeneration
5. Affection of movement apparatus, instability, falls, osteoporosis
6. Rheumatoid arthritis, osteoarthritis
7. PADAM syndrome, erectile dysfunction, prostate hyperplasia
8. Incontinence, skin integrity changes, decubite therapy
9. Selected disorders of the circulatory system
10.MET syndrome, lipid control, endocrine diseases
11. Behavioral disorders, depression, dementia, delirium, sleep disorders - insomnia
12. Alzheimer disease as an European priority, Parkinson disease
13. Knowledge TEST
14. Test scores, consultation

Literatura

doporučená literatura

Geriatric practice : a competency based approach to caring for older adults. Edited by Audrey Chun. Cham: Springer, 2020, xv, 580. ISBN 9783030196240.

Gerontology for the health care professional. Edited by Regula H. Robnett - Walter C. Chop - Nancy Brossoie. Fourth edition. Burlington, MA: Jones & Barlett Learning, 2020, xx, 403. ISBN 9781284140569.

An interdisciplinary approach to geriatric medicine. Edited by Jeremy W. Grabbe. Sharjah: Bentham Science Publishers, 2017, 1 online. ISBN 9781681084510. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1521537

Dharmarajan, T.S., Norman, Robert A. *Clinical Geriatrics*. New York, The parthenon Publishing Group, 2003.

FaF:aFAHL1_14 **Preclinical and Clinical Trials of Medicines**

Předmět není v aktuálních obdobích! 2 kredity, ukončení zk, garant předmětu PharmDr. Bc. Kateřina Horská, Ph.D.

Vyučující
PharmDr. Bc. Kateřina Horská, Ph.D. (přednášející)

Cíle předmětu
Research and development of new drugs is a multidisciplinary procedure in which many different disciplines like chemistry, biology, pharmacy, medicine as well as sociology, economy and law play their important role. Pharmacology is crucial both in preclinical and iclinical phases.

The target of the subject ”Preclinical and Clinical Drug Research and Development” gives handy basic information on practical aspects of drug evaluation in the mentioned phases with the aim to enlarge knowledge of pharmacy students so they will be able to start their careers also in R&D departments.

Výukové metody
Monologue (reading, lecture, briefing) Discussion, interview, brainstorming

Metody hodnocení
Completion of the course — oral exam

Primární způsob výuky
Žádné informace.

Výstupy z učení
After completing the course the student will be able to - describe drug development and interpret legal aspects of this process - interpret the main principles of pharmacovigilance and pharmacoeconomics - Participate in preclinical and clinical drug trials

Osnova
Lectures Content1.Biological activity testing, evidence of activity on the target cells, test on organs and whole organism, ethical aspects of preclinical studies - legal status, ethics commitee ,good laboratory practice.
2. Tolerability testing , toxicity tests - acute, subchronical and chronical toxicity, toxicity of reproduction. Data transfer possibility from animals to human- biological similarity. Pharmacokinetic and bioequivalence studies.
3. Clinical trials as a part of clinical research, phases of clinical trials, their organise and specific aspects, primary and secundary objectives, parametres for effects and tolerability evaluation. Metodological aspects of clinical trials, Good Clinical Practice - principes, harmonization, terminology, SOP, monitoring, zacházení s hodnocenými vzorky, důvěrnost údajů, zajišťování kvality, audity, inspection, data clarification. Essential dokuments - protocol, CRF, IS.
4. Principles of statistical analyses used in clinical research - basic terminology, randomization, study design, hypotheses, statistical tests, statistical analyses results interpretation.
5. Legal aspects , fundamental and related acts. Legaly requested activities of sponzor, investigator, trial subjekt. Contract research organisation . Contracts, fees, instance in clinical trials. Prerequisites for open clinical

trial, regulatory and ethics committees requests . Ethical aspects , Czech nett of ethics committees and theire activities, Standard operating procedures, necessary documents.
6. Compliance and control mechanism. Sponsor, monitor and investigator responsibilities . Pharmacovigilance, adverse event and drug reaction.
7. Possible use of nonregistered drugs. Cooperation between pharmacy and organisers in clinical trials. Pharmacist activities in drug clinical research.

Literatura

doporučená literatura

BROWN, M. J., Pankaj SHARMA, Fraz A. MIR a P. N. BENNETT. *Clinical pharmacology*. Twelfth edition. Edinburgh: Elsevier, 2019, 1 online. ISBN 9780702073304. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1742282

PIANTADOSI, Steven. *Clinical trials : a methodologic perspective*. Third edition. New York: Wiley, 2017, xxvii, 886. ISBN 9781118959206.

FaF:aFAHT1_11 **Health Technology Assessment**

Předmět není v aktuálních obdobích! 3 kredity, ukončení k, garant předmětu PharmDr. Dominik Grega, Ph.D.

Vyučující

PharmDr. Dominik Grega, Ph.D. (přednášející)
PharmDr. Dominik Grega, Ph.D. (cvičící)

Cíle předmětu

A theoretical framework for selected domains of HTA will be presented (medical efficacy and safety, economic evaluation, social, legal, institutional, ethical and organizational issues), complemented by real-world examples and case studies.

Výukové metody

Monologic (reading, lecture, briefing)

Dialogic (discussion, interview, brainstorming) Workshops

Metody hodnocení

Colloquium

Primární způsob výuky

kontaktní

Výstupy z učení

By completing the subject, students will acquire basic knowledge in the field of pharmacoeconomics, health technology assessment and health economics, with an emphasis on proposed EUnetHTA Core Model Methodology, HE/HTA Dissemination across various stakeholders, including an update of Clinical Practice Guidelines, PE/HTA Assessment & Appraisal Principles, Horizon Scanning Algorithms and Disinvestment Strategies.

Osnova

1. History of Health Economics (HE), Pharmacoeconomics (PE) and Health Technology Assessment (HTA); Importance, Principles and Practices of HE, PE and HTA, EU ‘Cross-border Healthcare’ Directive, EUnetH TA Core Model, HEOR Overview

2. Clinical Research Program (RCTs) vs. RWE Data (Registries, Pharmacovigilance); Systematic Reviews in HE, PE and HTA

3. Health Policy Analysis

4. Economic Evaluation — Analyses in Healthcare

5. Institutional Management and Budget Impact Assessment

Implementation of HE Outcomes into Clinical Practice, Dissemination and Transfer of knowledge in PE/HTA and HE

6. Transferability of Data, Outcomes and Results, local adaptation of HEOR; Ethics, Social, Cultural and other soft-domains in HE, PE and HTA

7. Managed Entry agreements, Coverage with Evidence Development, Payments by Results, Compassionate Use Programs, Compulsory Licensing, Google/Netflix Model in Healthcare

Literatura

doporučená literatura

STRAUS, Sharon E., Paul GLASZIOU, W. Scott RICHARDSON a R. Brian HAYNES. *Evidence-based medicine : how to practice and teach EBM*. Edited by Reena Pattani - Areti Angeliki Veroniki. Fifth edition. Edinburgh: Elsevier, 2019, xii, 324. ISBN 9780702062964.

Economic evaluation of pharmacy services. Edited by Zaheer-ud-din Babar. Amsterdam: Academic Press, 2017, xviii, 229. ISBN 9780128036594.

Drummond, F. Michael, Sculpher, J. Mark, Claxton, Karl, Stoddart. *Methods for the Economic Evaluation of Health Care Programmes*. Oxford Medical Publications, 4th Edition, 2015. ISBN 978-0199665884.

RASCATI, Karen L. *Essentials of pharmacoeconomics*. 1. vyd. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins, 2009, viii, 250. ISBN 9780781765442.

FaF:aFAIA1_13 **Instrumental Methods in Medicinal Products Characterization**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. Mgr. Jan Muselík, Ph.D.

Vyučující

doc. Mgr. Jan Muselík, Ph.D. (přednášející)
doc. Mgr. Jan Muselík, Ph.D. (cvičící)
Mgr. Sylvie Pavloková, Ph.D. (cvičící)

Cíle předmětu

The subject named "Instrumental analytical methods in the pharmaceutical technology" is dealing with modern instrumental methods useful in the field of the pharmaceutical technology, development and industry. The main aim of this subject is to create a comprehensive overview of methods used for the evaluation, analysis and quality control of pharmaceutical dosage forms. Main topics: Near and middle infrared spectroscopy, Raman microscopy, dissolution tests and drug content analysis (UV/VIS spectrophotometry, HPLC), light and electron microscopy, laser diffraction analysis, X-ray diffraction analysis, thermal analysis. The theoretical principles of selected methods are discussed and their practical applications are demonstrated.

Výukové metody

lectures laboratory practice

Metody hodnocení

Written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to: - summarize the main methods used in the analysis of solid dosage forms; - understand the theoretical basis of these methods; - describe the main applications of these methods in pharmaceutical research and industry.

Osnova

1 Middle and near infrared spectroscopy, principles, instrumentation, measurement techniques. Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
2 Applications of infrared spectroscopy, evaluation of spectra
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
3 Dissolution test, methods of determination of active compound content (UV/VIS spectrophotometry).
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
4 Methods of determination of active compound content (HPLC).
Lecturer: Assoc.Prof. Jan Muselík, Ph.D
5 Division of modern microscopic methods; light microscopy: basics of optics, resolution, and magnification of the microscope, lens defects, microscope design, sample preparation, basic methods, measurement principles, use in pharmaceutical technology.
Lecturer: Mgr. Sylvie Pavloková, Ph.D.
6 Electron microscopy: interaction of electrons with the matter, electron source, microscope construction, sample preparation, basic methods (scanning, transmission, and environmental electron microscopy), use in pharmaceutical technology.
Lecturer: Mgr. Sylvie Pavloková, Ph.D.
7 Scanning electron microscopy: standard operating procedure, the influence of parameters on image quality, practical examples.
Lecturer: Mgr. Sylvie Pavloková, Ph.D.
8 Scanning probe microscopy: scanning tunneling microscopy and atomic force microscopy (basic principles, microscope design, measurement modes, use in pharmaceutical technology).
Lecturer: Mgr. Sylvie Pavloková, Ph.D.
9 Determination of particle size and shape: parameters, basic methods (sieve analysis, sedimentation analysis, Coulter particle counters, microscopic techniques, image analysis).
Lecturer: Mgr. Sylvie Pavloková, Ph.D.
10 Methods of particle size determination - laser diffraction
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
11 X-ray analysis, instrumentation and applications in pharmaceutical technology.
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
12 Methods of thermal analysis (differential thermal analysis - DTA, thermogravimetry - TGA, differential scanning calorimetry - DSC).
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
13 Raman microscopy.
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
14 Tutorial giving

SYLABUS OF LABORATORY PRACTISE
1.-2. FT-NIR (evaluation of spectra by chemometric methods).
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
3.-4. Light microscopy in connection with image analysis: work with the device and software, analysis of a model pharmaceutical sample - determination of basic size and shape parameters.
Lecturer: Mgr. Sylvie Pavloková, Ph.D.
5.-6. Optimization of chromatographic conditions, dissolution test of dosage form, chromatographic determination of active compound content.
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.

7.-9. Electron microscopy: work with instrument and software, analysis of a model pharmaceutical sample, examples of use in research at DPT.
Lecturer: Mgr. Sylvie Pavloková, Ph.D.
10.-11. Thermal analysis. Calculations.
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.
12.-13. Excursion to the laboratory of Raman microscopy.
Lecturer: Assoc.Prof. Jan Muselík, Ph.D.

Literatura

doporučená literatura

European Pharmacopoeia

MUSELÍK, Jan, Jakub VYSLOUŽIL a Kateřina KUBOVÁ. *Modern Instrumental Methods in Solid Dosage Form Analysis*. Online. 1., elektronické vyd. Brno: Masarykova univerzita, 2021, 231 s. ISBN 978-80-210-9724-7. Dostupné z: https://dx.doi.org/10.5817/CZ.MUNI.M210-9724-2021. Čítárna Munispace https://munispace.muni.cz/library/catalog/book/1955

FaF:aFAIC1_15 **Interactions of Medicines, People and Environment**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA

Vyučující

RNDr. Eva Havránková, Ph.D. (přednášející)
Mgr. Veronika Murgašová (přednášející)
PharmDr. Magdaléna Onuščáková (přednášející)
doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA (přednášející)

Cíle předmětu

The aim of the course is to introduce the students into the basic interactions between the organisms, medicines and the environment.

Výukové metody

Lectures

Metody hodnocení

exam, written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

It is absolutely necessary to ensure the proper medicines handling, considering potential environmental hazards in the context of pharmaceutical factories, analytical laboratories, supply chains and medical facilities, but also in the households and workplaces, where the medicines are commonly used to treat acute and chronic medical conditions. The topic is extremely important, multidisciplinary and relevant not only for the experts from the field of pharmacy, medicine and science, but also for experts in humanities, social sciences and for general public.

Osnova

1. Introduction to the issue, basic concepts.
2. Legislation, consumption of drugs in the Czech Republic and the EU.
3. Pathways and interactions of chemical substances in the environment, Analytical methods for monitoring the concentration of substances in the environment.
4. Principles of removing drugs from the environment.
5. Analgesics - interactions - organism - environment.
6. Hormones - interactions - organism - environment.
7. Antimicrobial substances - interactions - organism - environment.
8. Drugs in Neurology - interactions - organism - environment.
9. Drugs from groups of Diseases of Civilization- interactions - organism - environment.
10. Cytostatics and radiopharmaceuticals - interactions - organism - environment.
11. Cosmetics - interaction - organism - environment.
12. Washing powders, hygiene products - interactions - organism - environment.
13. Nanoparticles - interactions - organism - environment.
14. Summary, future, recommendations, outputs.

Literatura

doporučená literatura

Český lékopis, Evropský lékopis (platné vydání vč. doplňků).

CAMPBELL, P. G. C., Peter V. HODSON, Pamela WELBOURN, David A. WRIGHT, Valérie S. LANGLOIS, Christopher J. MARTYNIUK, Christopher D. METCALFE a Louise M. WINN. *Ecotoxicology*. First published. Cambridge: Cambridge University Press, 2022, xviii, 576. ISBN 9781108819732.

FaF:aFAIF1_16 **Immunology for Pharmacists**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. RNDr. Milan Číž, Ph.D.

Vyučující
doc. RNDr. Milan Číž, Ph.D. (přednášející)
doc. Mgr. Lukáš Kubala, Ph.D. (přednášející)

Cíle předmětu
The aim of the course is to provide students with knowledge of the organization of the immune system of vertebrates and all essential mechanisms that are used in the defense of the organism and immunological surveillance. The interpretation is oriented to the general principles of immune reactions in mammals with an emphasis on species peculiarities. The basics of clinical immunology and immunopathology are part of the presentation.

Výukové metody
Lectures

Metody hodnocení
Written exam

Primární způsob výuky
kontaktní

Výstupy z učení
Basic knowledge forming the basis for follow-up subjects.

Osnova
1. Basic characteristics of the immune system 2. Humoral and cellular immune response
3.-4. Antigen and its receptors
5. Antigen presenting cells
6. T-lymphocytes
7. Autoimmunity
8. Immunodeficiency
9. Transplantation immunology
10. Tumor immunity
11. Immunity and reproduction
12. Immune-based therapies
13. The methods used in immunology

Literatura
doporučená literatura
GOERING, Richard V., Mark A. ZUCKERMAN, Hazel M. DOCKRELL a Peter L. CHIODINI. *Mims' medical microbiology and immunology*. Edited by Cedric A. Mims. Sixth edition. Edinburgh: Elsevier, 2019, xv, 552. ISBN 9780702071546.

HELBERT, Matthew. *Immunology for medical students*. Third edition. Philadelphia, PA: Elsevier, 2017, xii, 306. ISBN 9780702068010.

FaF:aFAIZ1_12 **Work with Information Sources**
Předmět není v aktuálních obdobích! 3 kredity, ukončení z, garant předmětu PharmDr. Milan Malaník, Ph.D.

Vyučující
PharmDr. Milan Malaník, Ph.D. (přednášející)
PharmDr. Milan Malaník, Ph.D. (cvičící)
Mgr. Ing. Jiří Václavík, Ph.D. (cvičící)

Cíle předmětu
The course is aimed to teach the students how to obtain information from the full-text scientific databases accessible from the FaF MU local network, as well as the secondary information sources accessible from the Internet. The integral part of the education process is dedicated to work with specialized computer programs, which can be used in the elaboration of seminar and diploma theses, mainly in the area of molecular graphics and drawing of the structures of chemical compounds.

Výukové metody
work with information sources, consultation with the teacher, semminars

Metody hodnocení
elaboration of protocol

Primární způsob výuky
Žádné informace.

Výstupy z učení
Ability to work with literature sources, independent search, and compilation of data.

Osnova
Syllabus of the course 1. Scientific information; classic information sources (primary, secondary); fundamentals of critical thinking; structure of a scientific article; review article elaboration strategy. Practical part: Work with primary and secondary information sources in classic form (scientific journals, Chemical Abstracts). 2. Citation metrics (impact factor, h-index) and assessment of the scientific quality of journals; basic electronic information sources (Web of Science, Science Direct). Practical part: Work with selected electronic information sources. Selection of the topic of the semester work. 3. Further full-text and combined information sources (Springer Link, Wiley Online Library, ACS, RSC). Practical part: Searching in electronic full-text and combined information sources. 4. Citation ethics; bibliographic citations; citation generators and citation managers; additional programs

for preparing semester work (MarvinSketch, ChemSketch). Practical part: Work with additional programs for preparing semester work. 5. Basics of typography and text processing on the computer (principles of text writing, formal editing). Practical part: Working with MS Word and preparing the semester paper. 6. Completion of semester work, presentation of works. 7. Evaluation of semester papers. Granting credits

Literatura

Žádné informace.

FaF:aFAKP1_13 **Cosmetology for Pharmacists**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Kateřina Kubová, Ph.D.

Vyučující

PharmDr. Kateřina Brückner, Ph.D. (přednášející)
doc. PharmDr. Ruta Masteiková, CSc. (přednášející)
PharmDr. Miroslava Pavelková, Ph.D. (přednášející)

Cíle předmětu

Objectives of the course: To acquaint students with selected types of cosmetics and their composition, effect and use. These are skin care products (skin hydration, care for mature or problematic skin, photoprotection), hair cosmetics, oral hygiene products, products with deodorant and antiperspirant effects.

Výukové metody

Lectures

Metody hodnocení

Final evaluation in the form of a written test. At least 51% of points must be achieved to succeed.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to: - determine the basic procedures for the care of the skin, hair, oral cavity from a cosmetic point of view - orientate in the composition of cosmetic products - describe the properties of the basic active substances and excipients present in cosmetic products - design simple compositions of cosmetics for selected applications

Osnova

Introduction to the subject Cosmetics. Definition, classification, characteristics, requirements. Legislation in the field of cosmetics and quality assurance.

Basics of anatomy and physiology of the skin. Skin hydration and preparations - active substances and technological aspects.

Skin aging. Skin care in old age - active substances and technological aspects.

Problematic skin care. Oily skin. Acne. Reasons and basics of care.

Photoprotection of the skin I. Influence of ultraviolet (UV) sunlight on human skin. Basics of protection against the adverse effects of UV radiation.

Photoprotection of skin II. Sunscreen products - UV filters (sunscreens) and technological aspects. Self-tanning preparations.

Cleansing and exfoliation of the skin. Nature and types of cleansing and exfoliating products. Active ingredients and technological aspects

Hair care I. Basics of anatomy and physiology of the hair system. Hair cosmetics - shampoos (composition and basics of technology)

Hair care II. Hair cosmetics - conditioners. Anti-dandruff preparations. Preparations against hair loss.

Oral hygiene products I. Basics of anatomy and physiology of the dental system. Problems of teeth and oral cavity (dental plaque, tartar, tooth decay, sensitive teeth, bad breath, etc.) and the possibility of influencing of them by cosmetics.

Oral hygiene products II. Active substances and excipients in dental preparations. Overview of oral hygiene products and technological aspects.

Preparations with deodorizing and antiperspirant effects - active substances and technological aspects.

Natural Cosmetics. Current state, legislation. Active substances and excipients.

Literatura

doporučená literatura

International Journal of Cosmetic Science.

Journal of Cosmetic Dermatology.

BAKI, Gabriella. *Introduction to cosmetic formulation and technology*. Second edition. Hoboken, NJ: Wiley, 2023, xxvi, 796. ISBN 9781119709770.

Cosmetic formulation : principles and practice. Edited by Heather A. E. Benson - Michael S. Roberts - Vânia Rodrigues Leite-Sil. Boca Raton: CRC Press, 2021, xvi, 479. ISBN 9781032093079.

Cosmetic science and technology : theoretical principles and applications. Edited by Kazutami Sakamoto - Robert Y. Lochhead - Howard I. Maibach - Yuji Yama. Amsterdam: Elsevier, 2017, xvii, 835. ISBN 9780128020050.

André O. Barel, Marc Paye, Howard I. Maibach. *Handbook of Cosmetic Science and Technology. 3rd ed.*. New York, 2009. ISBN 1-4200-6963-2.

FaF:aFALR1_12 **Production of Medicinal Plants**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu PharmDr. Margita Dvorská, Ph.D.

Vyučující

PharmDr. Margita Dvorská, Ph.D. (přednášející)
PharmDr. Margita Dvorská, Ph.D. (cvičící)
Ing. Marcela Nejezchlebová (cvičící)

Cíle předmětu

The composition of the active substances in the medicinal plants varies with the ambient conditions. The aim of this course is to acquaint students with the influence of these conditions on the qualitative and quantitative composition of active substances in plants. This course specifies the conditions for growing, harvesting, processing and storing of plants in order to obtain a quality drug that meets the requirements.

Výukové metody

lectures, practical exercises, excursion, homework

Metody hodnocení

control of processed protocols or seminar works, final written exam (exam has 20 questions, maximum is 30 points, minimum for passing the exam is 18 points)

Primární způsob výuky

Žádné informace.

Výstupy z učení

Ability to practically evaluate the conditions of cultivation, harvesting and processing of medicinal plants; to learn the basic methods for soil analysis and cultivation practices.

Osnova

PRODUCTION OF MEDICINAL PLANTS - lectures 1. Introduction, history and basic definitions.Current situation of MP production.
2. Growth, onthogeny and variability of medicinal plants.
3. Affecting of medicinal plants quality.
4. Factors affecting the habitat and their importance for the yield and quality of medicinal plants.
5. Influence of light and temperature on growth and quality of medicinal plants.
6. The influence of humidity, rainfall and altitude on growth and quality of medicinal plants.
7. Soil, its properties, importance of soil organic matter. Soil types.
8. Guidelines of mineral nutrition. The significance of some macro and micro elements in the production of content compounds.
9. Seed, seed treatment. Sowing. Planting.
10. Harvest and post-harvest treatment of medicinal plants.
11. Drying, storage, processing (documentation procedures).
12. Diseases of medicinal plants. The fight against pests. New guidelines for obtaining of protecting compounds from the natural resources.
13. Breeding of medicinal plants. The procedures and principles of cultivation of selected medicinal plants.
14. Possibilities and requirements for growing medical cannabis (virtual excursion).

PRODUCTION OF MEDICINAL PLANTS - practical exercises
Academic year 2022/2023
1: Influence of oxygen and essential oils on germination. Seeds vitality. Evidence of amylase in germinating plants.
2: Influence of environmental conditions (climatic and soil) on the formation of secondary metabolites - establishment of an attempt. Pests and diseases of medicinal plants - examples. Vegetative and generative propagation of plants.
3: Specific gravity of soil. Calculation of soil bulk density and porosity.
4: Basic determination of carbonates.Calculation of soil reaction by potentiometry.
5: Influence of environmental conditions (climatic and soil) on the formation of secondary metabolites - results. Determination of nitrogen and phosphorus. Color reactions of anthocyanins. The importance of sugars for maintaining the vitality of cells in conditions of low temperatures.
6: Excursion - Center of medicinal plants.
7: Credit.

Literatura

doporučená literatura

From herbs to healing : pharmacognosy - phytochemistry - phytotherapy - biotechnology. Edited by Éva Szöke - Ágnes Kéry - Éva Lemberkovics. Cham: Springer, 2023, xvii, 570. ISBN 9783031173004.

Plant biotechnology and genetics : principles, techniques, and applications. Edited by C. Neal Stewart. Second edition. Hoboken: John Wiley & Sons, 2016, xxi, 406. ISBN 9781118820124.

FaF:aFAMA1_13 **Mathemathics and Basics of Data Analysis**

Předmět není v aktuálních obdobích! 2 kredity, ukončení k, garant předmětu Mgr. Sylvie Pavloková, Ph.D.

Vyučující

Mgr. Sylvie Pavloková, Ph.D. (cvičící)
PharmDr. Jiří Zeman, Ph.D. (cvičící)

Cíle předmětu

The subject includes an introduction to basic math skills and to MS Excel.

The combination of these skills is one of the pillars of experimental activity in pharmaceutical practice (whether in the preparation of individually prepared medicinal products or in pharmaceutical research and industry).

Lessons include the basic prerequisites for correctly performed and effective experimental activity within the laboratory exercises of various subjects and diploma theses.

The course also aims to strengthen the competencies related to logical reasoning and the correct and attractive presentation of the acquired knowledge.

Výukové metody

Seminars. PC exercises.

Metody hodnocení

Colloquium with group discussion. Activity in individual lessons. The understanding of the topics discussed and the ability to create one's own solutions when processing data are evaluated. Attendance at seminars is mandatory, absence is permitted according to the rules of the MU Study and Examination Regulations.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

Work with mathematical formulas, write quantities and units appropriately;

Orientate yourself in the basic menu of MS Excel functions;

Define and interpret basic metrics of descriptive statistics;

Visualize data and adjust graphical output according to specific requirements;

Process linear regression, interpret its outputs and use this method to determine the concentration of an unknown solution;

Orientate yourself in the basic requirements for a quality laboratory report and apply the acquired knowledge in the study of other subjects based on laboratory exercises or in the process of an experimental thesis.

Osnova

Mathematical background of pharmaceutical experimental activity; calculation and recording of the result, rounding; notation of quantities, units and mathematical formulas; expression unknown from the formula; unit conversion;

Introduction to the MS Excel; basic functions; collecting, organizing, sorting and filtering of data, conditional formatting;

Basic descriptive statistics; estimates of mean and variance;

Basic types of data visualization; work with graphic output;

Linear regression and calibration;

Principles for developing a laboratory protocol.

Literatura

doporučená literatura

EVANS, David, Paul GRUBA a Justin ZOBEL. *How to write a better thesis*. Third edition. Cham: Springer, 2014, xiv, 167. ISBN 9783319042855.

FaF:aFAMF1_15 **Forensic Analysis Methods**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA

Vyučující

doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA (přednášející)

Cíle předmětu

The course Methods of Forensic Analysis focuses on the introduction and practical application of methods and techniques in the field of forensic analysis. Students will gain a basic understanding of the process of collecting, evaluating, and interpreting evidence in criminal investigations.

Výukové metody

lectures, class discussion

Metody hodnocení

exam - written test

Primární způsob výuky

Žádné informace.

Výstupy z učení

During the course, students will be introduced to various techniques and procedures used in forensic analysis and will gain practical skills through simulated case studies. The goal of the course is to prepare students to work in the field of forensic analysis and to provide them with a solid foundation for collecting, evaluating, and interpreting evidence in practice.

Osnova

1. Introduction, basic concepts, Legislation for forensic analysis methods
2. Toxicological analysis in forensic practice
3. Biological traces - securing, packaging, transport and storage
4. Methods of sample collection
5. Stability and contamination of biological traces
6. Methods of sample preparation prior to forensic analysis
7. Analysis procedures for selected synthetic substances
8. Analysis of addictive and narcotic substances
9. Analytical methods in doping control
10. Approaches to the analysis of explosives
11. Analysis of heavy metal poisoning
12. Forensic interpretation of analytical results
13. Examples of practice cases
14. Summary, future, recommendations, outcomes

Literatura

doporučená literatura

ELKINS, Kelly M. *Introduction to forensic chemistry*. Boca Raton, FL: CRC Press, 2019, xxx, 323. ISBN 9781032094632.

Forensic chemistry : fundamentals and applications. Edited by Jay A. Siegel. Chichester: Wiley Blackwell, 2016, xvii, 523. ISBN 9781118897720.

BELL, Suzanne. *Forensic chemistry*. 1st ed. Upper Saddle River, N.J.: Pearson Prentice Hall, 2006, xxi, 671. ISBN 0131478354.

FaF:aFAMH1_13 **Methods of Evaluation and Formualtion Dossiers of Medicinal Products**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu prof. PharmDr. Mgr. David Vetchý, Ph.D.

Vyučující

prof. PharmDr. Mgr. David Vetchý, Ph.D. (přednášející)
prof. PharmDr. Mgr. David Vetchý, Ph.D. (cvičící)

Cíle předmětu

Methods of evaluation and forming formulation files of the drugs

The subject presents a number of issues from the applied pharmacy - stability studies, bioequivalence studies, patent protection and registration procedure of the drugs. Students can learn the aplication of proper statistic method for their pharmaceutical studies and experiments also.

Výukové metody

lectures, seminars

Metody hodnocení

credit, oral exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will be able to:

- describe the procedures for creating and conducting stability studies;
- describe the factors that influence the bioequivalence of medicinal products;
- identify and describe the procedures leading to the marketing authorization of a medicinal product and the placing on the market of a food supplement;
- apply the principles of legal protection of medicinal products;
- apply appropriate statistical methods to their pharmaceutical studies and experiments

Osnova

Introductory lecture. The subject content, original drug development process, generic drug development process (lecture 2 hrs)Stability studies I. Basic definitions of terms, the purpose of stability studies, good manufacturing practice in relation to the stability studies, the basic procedures for stability testing, stability studies of management practices (lecture 2 hrs)
Stability studies II. Types of stability studies, pharmaceutical packaging in relation to stability, statistical analysis of data from stability studies, documentation, trends in stability studies (lecture 2 hrs)
Bioequivalence studies I. Basic definitions of terms, types of bioequivalence studies (lecture 2 hrs)
Bioequivalence studies II. Biopharmaceutics classification system, the implementation rules of bioequivalence studies in EU (lecture 2 hrs)
Marketing authorisation of medicinal products. Introduction, marketing authorisation applications, marketing authorisation procedures, variations applications, marketing authorisation transfer, parallel import of medicinal products. The content and layout of a complete dossier for a medicinal product, labelling, packaging leaflet data,

content and layout of the summary of product characteristics (lecture 2 hrs)
Placing on the market within the EU of food supplements, novel foods or novel food ingredients (lecture 2 hrs)
Legal protection of medicinal products. Industrial Property Office, patent and its protection, utility model and its protection, industrial design and its protection, trademark and its protection. International patent classification, the procedure for searching information in internet databases (seminar 2 hrs)
Excursions to the pharmaceutical company Oncomed
Excursions to the pharmaceutical company Angelini
Credit test (seminar 2 hrs)
Amending credit test, replacement seminar, credit (seminar 2 hrs)

Literatura

doporučená literatura

Drug delivery : principles and applications. Edited by Binghe Wang - Longqin Hu - Teruna Siahaan. Second edition. Hoboken, New Jersey: Wiley, 2016, 1 online. ISBN 9781118833230. http://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,uid&db=nlebk&AN=1202091&lang=cs&site=eds-live&scope=site&ebv=EB&ppid=pp_C1

Martin's physical pharmacy and pharmaceutical sciences : physical chemical and biopharmaceutical principles in the pharmaceutical sciences. Edited by Patrick J. Sinko - Yashveer Singh. Sixth edition. Philadelphia: Wolters Kluwer, 2011, viii, 659. ISBN 9781609134020.

FaF:aFAMI1_12 **Modern Methods of Extraction and Identification of Natural Compounds**

Předmět není v aktuálních obdobích! 2 kredity, ukončení zk, garant předmětu PharmDr. Milan Malaník, Ph.D.

Vyučující

PharmDr. Milan Malaník, Ph.D. (přednášející)
prof. PharmDr. Karel Šmejkal, Ph.D. (přednášející)

Cíle předmětu

The course introduces students to the modern analytical techniques used for the extraction and identification of natural compounds. Briefly compares old and modern procedures and outlines the advantages of modern techniques. The content of the course follows up some compulsory subjects with emphasis on new approaches and modern techniques that are actually applied in phytochemistry worldwide.

Výukové metody

Lecture

Metody hodnocení

Written exam

Primární způsob výuky

kontaktní

Výstupy z učení

Students will be acquainted with modern extraction and identification techniques. After completing the course, they will recognize their irreplaceable role in phytochemistry research and the pharmaceutical industry.

Osnova

- Introduction and history of extraction and identification of natural compounds
- Green extraction — definition and basic principles
- Renewable plant resources
- Alternative solvents
- Reduction of energy consumption
- Modern analytical techniques for the identification of natural compounds
- NMR spectroscopy
- High-resolution mass spectrometry (HRMS)
- Hyphenated techniques

Literatura

doporučená literatura

Green extraction of natural products : theory and practice. Edited by Farid Chemat - Jochen Strube. Weinheim: Wiley-VCH, 2015, xviii, 363. ISBN 9783527336531.

Natural products isolation : methods and protocols. Edited by Satyajit D. Sarker - Lufthun Nahar. Third edition. New York: Humana Press, 2012, xii, 552. ISBN 9781617796234.

BERGER, Stefan a Siegmar BRAUN. *200 and more NMR experiments : a practical course*. Weinheim: Wiley-VCH, 2004, xv, 838. ISBN 3527310673.

FaF:aFAMZ1_15 **Molecular Principles of Drug Design**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu doc. PharmDr. Oldřich Farsa, Ph.D.

Vyučující

doc. PharmDr. Oldřich Farsa, Ph.D. (přednášející)
PharmDr. Tomáš Goněc, Ph.D. (přednášející)
doc. PharmDr. Oldřich Farsa, Ph.D. (cvičící)
PharmDr. Tomáš Goněc, Ph.D. (cvičící)
Mgr. Ing. Jiří Václavík, Ph.D. (cvičící)

Cíle předmětu

Objectives of the course: The course develops and deepens knowledge of pharmaceutical chemistry in combination with other pharmaceutical and biological branches of knowledge in terms of drug research and development strategy. The key objective is structure proposal and further optimisations so that a new potential drug met basic bioavailability requirements, i.e. absorption, distribution, and binding to receptors.

Content:
The course covers knowledge at the interface between pharmaceutical chemistry, pharmacology, molecular biology and pharmaceutical technology. Approaches generally used at drug structure development, including QSAR, combinatorial chemistry, molecular modelling, and fragment approach are discussed. Structural factors affecting biological effect, factors affecting drug absorption and transport to the place of action, and drug binding to receptors are considered. Polymorphism, influence of particle size, and other physico-chemical methods of drug molecule modification are regarded. The review of actual administrative regulations in the sphere of drug development is provided.

Výukové metody

Lectures, practical classes

Metody hodnocení

With a mark. Written quiz combining multiple-choice questions with questions for a text or a drawing answer. Attendance at all the practical classes and/or seminars including providing all required reports, and their confirmation by the teacher, are conditions for doing the eaxam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After passing the subject, the student will have to know, present, explain or draw:
-meaning of physicochemical properties for drug development, including a simple calculation of a basic lipophilic parameter (log P ...) -combinatorial chemistry, fragment method, and QSAR as drug development tools
-meaning of metabolism and efflux pumps for drug development
-usage of formula editors, fundamentals of structure encoding, searching for compound properties and information about them by the usage of structure codes
-principles of interactions of small molecules with target structures
specifics of veterinary drugs development
-fundamentals of privileged structures theory and chemogenomics

Osnova

Topics of lectures 1. Introduction into the discipline, its concept and organisation. Combinatorial chemistry as a tool of drug design.
2. Physico-chemical properties of compounds and their importance for the activity in the organism.
3. Quantitative structure-activity relationships
4. Optimisation of physico-chemical properties based on analogy.
5. Design of strong analgesics.
6. Development of biologic therapeutics.
7. Theory of priviledged structures. Chemogenomics.
8. Fragment method in drug design.
9. Design of drugs with respect to their metabolism I. Toxic metabolites.
10. Design of drugs with respect to their metabolism II. Prodrugs and their design.
11. Development of specific veterinary medicines.
12. Membrane transporters and their importance for drug design.
13. Efflux pumps and their importance in drug design and development.
14. Interaction of a target structure and a drug on molecular level.

Literatura

doporučená literatura

Small molecule medicinal chemistry : strategies and technologies. Edited by Werngard Czechtizky - Peter Hamley. Hoboken, New Jersey: Wiley, 2016, 1 online. ISBN 9781118771723. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1070595

The practice of medicinal chemistry. Edited by Camille Georges Wermuth - David Aldous - Pierre Raboisson - Didier Rog. Fourth edition. Amsterdam: Elsevier, 2015, 1 online. ISBN 9780124172135. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=596616

FaF:aFANF1_13 **Hospital Pharmacy**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu PharmDr. Jakub Vysloužil, Ph.D.

Vyučující

PharmDr. Lenka Smejkalová, Ph.D. (přednášející)
PharmDr. Stanislav Synek, Ph. D (přednášející)
PharmDr. Martin Šimíček (přednášející)
PharmDr. Jakub Vysloužil, Ph.D. (přednášející)
PharmDr. Jakub Vysloužil, Ph.D. (cvičící)

Cíle předmětu

The course introduces students to the specifics of hospital pharmacy operations, the role of the pharmacist in the hospital's healthcare team, the specifics of the hospital's assortment of medicines and the issue of compounding technologically demanding dosage forms or preparations characteristic of various hospital departments.

Výukové metody

Přednášení Monologická (výklad, přednáška, instruktáž)
Demonstrace
Laborování

Metody hodnocení

Písemná zkouška

Primární způsob výuky

Žádné informace.

Výstupy z učení

The student will get:

- an overview of the operation of hospital pharmacies, the role of the pharmacist in the hospital team
- knowledge of the rules and procedures applied in managing the activities of hospital pharmacies
- the ability to apply knowledge of pharmaceutical technology to specific preparations from practice with an emphasis on current magistraliter preparation in hospital pharmacies
- an overview of specific topics that are dealt with within hospital pharmacies
- an overview of the various types of possible pharmacy calculations from practice
- an overview of modern molecules in magistraliter preparation
- an overview of modern trends in pharmaceutical forms used also in magistriliter preparation

Osnova

Lectures:

- Hospital pharmacy, specifics of institutional care
- Pharmacist in the hospital - tasks, cooperation, multidisciplinary teams
- Professional consultations provided by pharmacists in hospitals
- The role of the hospital pharmacist in clinical trials
- The issue of hospital preparation of medicinal products
- The composition of the hospital recipe and the share of prepared LPs
- The role of the pharmacist in the formulation of medicinal products intended for hospital departments
- Medicines for pediatric departments. Dosing of medicines for children with regard to different methods of application. Specific properties of dosage forms for children. Main principles of formulation of pediatric preparations
- Cytostatics. Basic methods of administration and dosage forms. Principles of preparation in the hospital pharmacy and administration in the hospital department, safety of working with cytostatics
- Total parenteral nutrition. Enteral nutrition. Formulation principles of "all-in-one" preparations, preparation, compatibility, stability
- LP for surgical departments. Preparations for the treatment of wounds. Disinfectants. Main principles of formulation and preparation
- Pharmaceutical incompatibilities, stability and shelf life of the drugs being prepared
- Medicines for dermatology departments. The choice of the dosage form, the basis of the topical preparation and other auxiliary substances according to the nature and stage of the disease. Main principles of formulation and preparation of dermatological preparations.

Exercises/seminars:

- The role of the hospital pharmacist in patient care
- Assortment of hospital pharmacies, drug commissions, positive lists
- Calculations in the formulation of medicinal products. Formulation of preparations for various application purposes
- Excursion to the hospital pharmacy
- Laboratory exercise: Preparation of drugs specific for use in a hospital ward

Literatura

doporučená literatura

Martin Stephens. Hospital Pharmacy. Pharmaceutical Press, 2003. ISBN 0853699003. doporučená literatura

KELLY, William N. *Pharmacy : what it is and how it works*. Fourth edition. Boca Raton, FL: CRC Press, 2018, xxi, 397. ISBN 9781138038332.

TEIXEIRA, Maria Glaucia a Joel L. ZATZ. *Pharmaceutical calculations*. Fifth edition. Hoboken, New Jersey: Wiley, 2017, 1 online. ISBN 9781118978535. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/

login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=1461646

Pharmaceutical practice. Edited by Judith A. Rees - Ian Smith - Jennie Watson. 5th ed. Edinburgh: Churchill Livingstone Elsevier, 2014, xvii, 552. ISBN 9780702051432.

FaF:aFANM1_15 **NMR Structural Analysis of Organic Compounds**
Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Jan Otevřel, Ph.D.

Vyučující
PharmDr. Jan Otevřel, Ph.D. (přednášející)
Mgr. David Švestka (cvičící)

Cíle předmětu
The subject aims to acquaint students not only with the theoretical foundations of nuclear magnetic resonance, but above all with the practical interpretation of measured spectra. The acquired knowledge will enable students to independently process and analyze spectra obtained using NMR and determine the structure of organic compounds based on these spectra.

Výukové metody
seminars, class discussion, work with PC applications and laboratory tools

Metody hodnocení
Attending the seminars, submitting the individual assignments. Final examination - oral and practical part.

Primární způsob výuky
Žádné informace.

Výstupy z učení
After completing the course, the student is able to explain the theoretical foundations of NMR spectroscopy, process and interpret NMR spectra (mainly 1H, 13C, 19F, 31P), orientate themselves in the basic issues of 2D NMR spectra, confirm or derive the resulting structure of organic substances from the presented spectra.

Osnova
1. Theoretical foundations of NMR, signal generation, types of nuclear interactions, chemical shift, interaction constant
2. Construction of spectrometers, sample preparation and measurement, solvents used in NMR, computer programs used to process NMR spectra
3. Symmetry of molecules and chemical equivalence of nuclei, magnetic equivalence of nuclei, effects on chemical shift
4. Formation of multiplets, notation of spin systems, analysis of simple spin systems.
5. Analysis of more complex spin systems and multiplets, dynamic processes in NMR
6. Interpretation and recording of 1H NMR spectra
7. Specifics of 13C NMR, interpretation and recording of 13C NMR, decaplink, multipulse experiments (APT, ...)
8. Specificity of 19F, 31P and other elements in NMR, interpretation and recording of 19F NMR
9. Tasks to practice the interpretation of spectra
10. Homo- and heteronuclear 2D NMR experiments
11. Tasks to practice the interpretation of spectra
12. NMR as a tool for quantitative analysis

Literatura
doporučená literatura
SILVERSTEIN, Robert M. *Spectrometric identification of organic compounds. 8th ed.*. Hoboken: Wiley„ 2015. ISBN 978-0-470-61637-6.

FaF:aFAOL1_cjv **Professional Latin I**
Předmět není v aktuálních obdobích! 2 kredity, ukončení z, garant předmětu PhDr. Renata Prucklová

Vyučující
PhDr. Renata Prucklová (cvičící)

Cíle předmětu
Purpose of education. Obtaining the ability to use medical and pharmaceutical Latin-Greek terminology accurately and correctly in oral and written form and the basic orientation in general theoretic issues of medical and pharmaceutical terminology.Content of education : Facilitating of Latin and Greek knowledge that enables the students to master quickly and effectively semantic side of terms, their grammatical form and structure of word formation.

Výukové metody
Lectures, translation and grammar exercises, drills.

Metody hodnocení
Vocabulary tests in every lesson Compulsory ROPOTs
Final exam

Primární způsob výuky
Žádné informace.

Výstupy z učení
At the end of the course students should be able to: recognize and explain grammatical devices and rules relevant for acquisition of Greek-Latin medical terminology; translate expressions from particular field of studies; employ and understand basic medical terminology; recognize the semantic structure of selected anatomical and clinical terms; form compound words applying particular word-formation principles; explain syntactic structure of complex terms. + getting knowledge of medical prescription Latin

Osnova
SEMINAR 1: Introduction (Latin alphabet, pronunciation, lenght of syllable, accent, nominal and verbal categories, syntactic structure of Latin and Greek medical terms)Substantives and adjectives of 1st decension
SEMINAR 2: Substantives and adjectives of 2nd declension (general rules of declension of substantives and adjectives of neuter)
SEMINAR 3: Revision of 1st and 2nd declensions.
SEMINAR 4: Latin substantives of 3rd declension — genitive stem, konsonant stem and i-stem
SEMINAR 5: Latin substantives of 3rd declension — paradigms
SEMINAR 6: Greek substantives of 3rd declension (Greek suffixes -itis, -osis, -oma)
SEMINAR 7: Revision of Latin and Greek 3rd declension
SEMINAR 8: Adjectives of 3rd declension
SEMINAR 9: Revision of 3rd declension adjectives
SEMINAR 10: Comparison of adjectives — regular comparison
SEMINAR 10: Comparison of adjectives — irregular, incomplete and periphrastic comparison
SEMINAR 12: Revision
SEMINAR 13: Credit test

Literatura
doporučená literatura
ŘITIČKOVÁ, L. Professional Latin for Pharmacists

Vejražka, Martin, Svobodová, Dana. *Terminologiae medicae ianua*. Praha, 2011. ISBN 978-80-200-2017-8.

Kábrt, Jan, Kábrt, Jan. *Lexicon medicum*. Praha, 2004. ISBN 80-7262-235-8.

FaF:aFAOL2_cjv **Professional Latin II**
Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PhDr. Renata Prucklová

Vyučující
PhDr. Renata Prucklová (cvičící)

Cíle předmětu
Purpose of education. Obtaining the ability to use medical and pharmaceutical Latin-Greek terminology accurately and correctly in oral and written form and the basic orientation in general theoretic issues of medical and pharmaceutical terminology.Content of education : Facilitating of Latin and Greek knowledge that enables the students to master quickly and effectively semantic side of terms, their grammatical form and structure of word formation.

Výukové metody
Lectures, translation and grammar exercises, drills. Homework and self-preparation for the class work is required. Class test in the middle of the semester.

Metody hodnocení
Class test in the middle of the semester. Final written and oral exam in the end of the semester.

Primární způsob výuky
kontaktní

Výstupy z učení
At the end of the course students should be able to: use Latin and Greek-Latin medical terminology and expressions correctly and understand them (see syllabus of the course); recognize and explain grammatical devices and rules relevant for acquisition of Greek-Latin medical terminology; explain syntactic structure of complex terms; recognize the semantic structure of selected anatomical, clinical and pharmaceutical one-word terms; form compound words applying the most used word-formation principles; translate selected expressions from anatomy and pre-clinical and clinical fields of study.

Osnova
SEMINAR 1Revision (declension of Latin and Greek substantives of 1st, 2nd and 3rd declination, declension of adjectives of 1st, 2nd and 3rd declination, vocabulery, comparison of adjectives)
SEMINAR 2
Adverbs (formation and comparison of adverbs, the most usuel adverbs in medical terminology)
SEMINAR 3
Substantives of 4th and 5th declination (declension) Prepositions (overview of Latin prepositions, prepositional phrases)
SEMINAR 4
Numerals (cardinal numerals - formation, declension, ordinal, distributive, multiple numerals, numeral multiple adverbs)
SEMINAR 5
Numerals II (putting together with multiple object, percentage)
SEMINAR 6

Verbs I (3rd person sg. and pl. of subjunctive of present tense, SEMINAR 7
Verbs II present active participle, perfect passive participle, gerundive, frequently current verbs in medical terminology, borrowed Latin and Greek verbs in Czech).
SEMINAR 8
Prescription (grammatical and lexical side of the prescription, reading the recipe, the most important prescription terms and abbreviations)
International Latin chemical nomenclature
SEMINAR 9
Word formation - Latin prefixes and suffixes (overview and meaning of important Latin prefixes and suffixes occurring in medical terminology)
SEMINAR 10
Word formation - Greek prefixes and suffixes (overview and meaning of important Greek prefixes and suffixes occurring in medical terminology)
SEMINAR 11
Word formation - Latin and Greek compound words, hybrid words (structure and meaning of Latin and Greek compound words, overview of important Greek word-forming components in medical terminology, structure of hybrid words). Borrowed Latin and Greek words in Czech, phone adaptation and orthography)
SEMINAR 12
Prescription issues I (fundamental vocabulery, idioms)
SEMINAR 13
Prescription issues II (Latin names of drug forms, medicanal plants and their compounds, important drug groups
SEMINAR 14
Revision
Credit testing

Literatura

doporučená literatura

ŘITIČKOVÁ, L. Professional Latin for Pharmacists

Vejražka, Martin, Svobodová, Dana. *Terminologiae medicae ianua*. Praha, 2011. ISBN 978-80-200-2017-8.

Kábrt, Jan, Kábrt, Jan. *Lexikon medicum*. Praha, 2004. ISBN 80-7262-235-8.

FaF:aFAPB1_16 **Pathobiochemistry**

Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu Mgr. Marie Brázdová, Ph.D.

Vyučující

Mgr. Marie Brázdová, Ph.D. (přednášející)
Mgr. Marie Brázdová, Ph.D. (cvičící)
Mgr. Bc. Daniela Nykodýmová (cvičící)

Cíle předmětu

Pathobiochemistry follows the course of Biochemistry taught in the winter semester. Biochemistry deals with the metabolic processes in living organisms. The aim of the Pathobiochemistry course is to obtain knowledge of the possible disorders of metabolic processes, their causes, symptoms, possible reparations and therapy.
The aim of the practical exercises are analyzes of some selected diagnostically important compounds, the correct interpretation of the results of analyzes and their use for the purpose of human diagnostic and therapeutic practice.

Výukové metody

lectures, class discussion, laboratory work, video

Metody hodnocení

The written part (online), which consists of a on-line test. . To successfully complete the course, it is necessary to pass the test at 60%. Prerequisite for passing the exam is to complete all practical exercises, passing a test from practical work at 80%, adequate knowledge of biochemical issues and the correct elaboration of all protocols for exercises. He will then reimburse the teaching at the time and in the manner determined by the respective teacher.

Primární způsob výuky

Žádné informace.

Výstupy z učení

The aim of the Pathobiochemistry course is to obtain knowledge of the possible disorders of metabolic processes, their causes, symptoms, possible reparations and therapy. Advance knowledge of biochemistry forming the basis for follow-up subjects Methods of molecular biology, Biotechnology of drugs, Exercises from drug biotechnology and Pharmacogenomics.

Osnova

Syllabus Pathobiochemistry
1. Introduction, the importance of studying pathobiochemistry. The scope and requirements for successful completion of the course exam, recommended literature. Understanding the regulation of metabolism. Biochemical communication.
2. Metabolism disorders, types and causes. Hereditary metabolic diseases. Enzymes, regulation of metabolism. Causes increased activity of cellular enzymes in the plasma. Clinically significant enzymes.

3. Pathobiochemistry of carbohydrates, glucose metabolism and its disorders. Glycemic control disorders. Pathobiochemistry of diabetes mellitus, types of DM. Disorders of glycogen metabolism, glykogenosis.
4. Amino acid metabolism and its disorders. Types of diseases and therapy.
5. Disorders of lipid metabolism. Cholesterol, lipoproteins. Lipidosy, dyslipoproteinaemia.
6. Pathobiochemistry of arteriosclerosis. Ischemic heart failure - cardiac markers.
7. The nucleic acid metabolism disorders of purine and pyrimidine. Hyperuricemia, orotacidurie, therapy.
8. Blood, blood plasma proteins. Blood clotting, coagulopathy. Dysproteinaemias. Porphyrins. Biosynthesis, metabolism disorders. Porphyria, hemoglobinopathies.
9. Xenobiotics and their effects on the body. Detoxification mechanism. Biological oxidation. The effects of free radicals on the organism. Lipoperoxidation antioxidants.
10. Tumor, tumor markers. Basic characteristics of tumor cells. Strategy laboratory tests. Requirements ideal tumor marker. Used tumor markers.
11. Relation between Pathobiochemistry and Clinical Biochemistry. Clinical and biochemical analysis and its specific features. Terminology of Clinical Biochemistry. The analyzed material. Material removal.
12. Analysis of urea and the urinary sediment. Immunochemical methods.
13. Hormones and neurodegenerative disorders. 14. Inflamation.
Sylabus of practical exercises in pathobiochemistry:
1. Exercise: Analysis of tumor suppressor by immunodetection on the membrane.
2. Exercise: Basic biochemical determinations.
3. Exercise: Immunochemical methods.
4. Exercise: Hematological methods. Use of automated hematology analyzers in clinical practice. Coagulation methods.
5. Exercise: Final test

Literatura

doporučená literatura

Murray et al. *Harpeŕs Illustrated Biochemistry. 29th Edition*. Lange, 2012.

Robbins SL, Cotrans RS, Kumar V. *The Pathologic Basis of Disease, 3rd Edition.*. Saunders, 2010.

FaF:aFAPK1_11 **Pharmacy Counselling**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Karel Vašut, Ph.D.

Vyučující

PharmDr. Marek Lžičař (cvičící)
PharmDr. Bc. Dana Mazánková, Ph.D. (cvičící)
PharmDr. Karel Vašut, Ph.D. (cvičící)
PharmDr. MVDr. Vilma Vranová, Ph.D. (cvičící)

Cíle předmětu

Introducing issues of patient - pharmacist relationship , interviewing, nonverbal characteristics, verbal characteristics, asking questions, verifying of understanding.

Výukové metody

Dialogic (discussion, interview, brainstorming) Training of movement and work skills Activating (simulation, games, dramatization)

Metody hodnocení

Student consultation analysis, závěrečné kolokvium

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the course the student will be able to:
- provide planning the organizational and technical aspects of counselling activities in the pharmacy;
- provide professional dialog with the patient within pharmacy counselling;
- provide relevant documentation and check the outcomes of recommended interventions.

Osnova

1. Information on requirements for consulting services 2. Introduction to the relationship ”pharmacist - patient”
3. How to develope the interaction ”pharmacist - patient”
4. Communication techniques for managing consulting interview
5. Documentation of the consultations
6. Specifics of work with handicapped patients
7. Practise complete consulting interview

Literatura

doporučená literatura

Pharmacotherapy : principles & practice. Edited by Marie A. Chisholm-Burns - Terry L. Schwinghammer - Patrick M. Malone -. Sixth edition. New York: McGraw-Hill, 2022, xxxvii, 17. ISBN 9781260460278.

Medical ethics, law, and communication at a glance. Edited by Patrick Davey - Anna Rathmell - Michael Dunn - Charles Foster - Helen. Chichester: Wiley Blackwell, 2017, 1 online. ISBN 9781119266174. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=

true&db=nlebk&AN=1373001

RUTTER, Paul. *Community pharmacy : symptoms, diagnosis, and treatment*. Third edition. Edinburgh: Churchill Livingstone, 2013, xiv, 361. ISBN 9780702050183.

FaF:aFAPL1_11 **Managed Practice in Pharmacies (2 weeks)**

Předmět není v aktuálních obdobích! 2 kredity, ukončení z, garant předmětu PharmDr. Martina Šutorová

Vyučující

PharmDr. Martina Šutorová (přednášející)

Cíle předmětu

Main objectives: To get basic skills and knowledge in practical activities in the pharmacy.Basic processes in compounding and adjusting drugs, use of equipment, accomplishing hygienic requirements and principles of stocking drugs are the contents of the training. Students work under the supervision of the pharmacy staff.

Výukové metody

Practical training

Metody hodnocení

Interview Monitoring of student's activities, assesment of given tasks

Primární způsob výuky

Žádné informace.

Výstupy z učení

Completing the course the student will be able to orientate in pharmacy practice, know the basic competencies of employees, apply ethical principles, the student will be able to perform basic activities in pharmacy: basic procedures of preparation of medicinal products, use Czech pharmacopoeia, will be orientated in the assortment of the pharmacy(medicinal products, foods for special medical purposes, supplements, medical devices, veterinary drugs, other pharmaceutical assortment)

Osnova

The goal of the course is to use the knowledge of Introduction to Pharmacy in the everyday Pharmacy routine, especially in respect to:

Arrangement of the pharmacy settings
a) workplaces in the pharmacy
b) Internal Operating Rules of the Pharmacy, staff, job description
2. Rules of the safety at work
a) contact pharmacist- patient: danger of infection
b) strong and very strong acting substances, poisons,
c) flammable matters, electricity, gas
d) first aid rules
3. Rules of hygiene at the pharmacy
a) sanitation of the workplace
b) personal hygiene
4. Assistance in washing, desinfection, sterilization
a) washing and drying of the appliances, equipment used for preparnig drugs
b) types of containers used for adjusting drugs
5. Basic operations in preparing drugs
a) processes (weighing, trituration, pulverization, mixing, adjusting, labeling)
b) handling of commonly used appliances, equipment
6. Storing of medicinal products
Principles of storing of pharmaceuticals (according to the Pharmacopoeia)
7. Medical prescription, its reading and assesment
Basic calculations and their application in compounding medicinal products

Literatura

European Pharmacopoeia

FaF:aFAPX1_11 **Managed Pharmaceutical Practice (2 weeks)**

Předmět není v aktuálních obdobích! 2 kredity, ukončení z, garant předmětu PharmDr. Tünde Ambrus, Ph.D.

Vyučující

PharmDr. Tünde Ambrus, Ph.D. (cvičící)

Cíle předmětu

Main objectives are to get information on the work of pharmacists and other professionals in different pharmaceutical and healthcare facilities (except pharmacies). Students can undertake training in laboratory settings, pharmaceutical industry, wholesaling or other fields according their interest.

Výukové metody

Practical training.

Metody hodnocení

Requirements:1. Completely filled in and confirmed formulary ”Confirmation and evaluation of the practice”.
2. Original of ”Acceptance sheet”.
3. Diary of the practice.
4. Filling in the the evaluation quiestionnaire.

Primární způsob výuky

Žádné informace.

Výstupy z učení

After attending the course, the student will be able: - to characterize legislative and organizational framework of professional activities provided at the training workplace;
- to apply basic rules of work hygiene and safety in pharmaceutical/healthcare facilities;
- to use selected information and communication technologies and applications relevant for the training workplace;
- to provide simple routine working activities typical for the training workplace.

Osnova

The practical training should be attended in different pharmaceutical/health care facilities according to the student´s interests, EXCEPT THE PHARMACY, recommended are e.g. pharmaceutical industry, research institutions, state control institutions in pharmacy, pharmaceutical wholesalers, laboratories in healthcare (e.g. biochemistry, haematology, microbiology, genetics), suppliers of medical devices, veterinary care surgeries, pensionary houses or other (please, discuss with the course guarantor).Basic contents of the practice:
1. Characteristics of the facility - location, professional activities, staff - number and structure, set of working rules, occupational hygiene, information technologies.
2. Legislative framework of the realized professional activities.
3. Student´s working activites are defined by the supervisor, supposed are basic laboratory and administrative operations, work with information sources, etc.

Literatura

doporučená literatura

European Pharmacopoeia

FaF:aFARF1_13 **Radiopharmaceuticals**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Michal Budinský, Ph.D.

Vyučující

PharmDr. Michal Budinský, Ph.D. (přednášející)
PharmDr. Michal Budinský, Ph.D. (cvičící)

Cíle předmětu

Short synopsis outlining contents and aim of the subject:Aim of subject: Subject focused on special requirements for handling the radioactive substances in manufacturing of medicinal preparation in required dosage form and on relevant control procedures. Subject introduces into usage of these drugs in diagnostics and therapy.

Výukové metody

Lecture Monologic (interpretation, lecture, briefing)

Metody hodnocení

Written exam.

Primární způsob výuky

Žádné informace.

Výstupy z učení

Knowledge of radiation effect on tissue. Explanation of radiopharmacy and nuclear medicine. Consciousness of importance of radiopharmacy and nuclear medicine.

Osnova

Lectures:
- Introduction into practical training from Radiopharmaceuticals, effect of radiation on organism, radiation protection and its application in practice.
- Preparation of radiopharmaceuticals and their quality evaluation, dosage forms of radiopharmaceuticals. Radiopharmaceuticals in therapy.
- Kinetic of radiopharmaceuticals. Radioactivity use in chemistry.
- Legislation in radiopharmacy, production and distribution of radiopharmaceuticals.
- Investigation of patient at nuclear medicine departement, SPECT, PET, hybride systems, PET and protone therapy.
- Clinical use of radiopharmaceuticals in diagnosis. New radiopharmaceuticals.

Practice:
- radiation protection principles.
- personnel, documentation.
- preparation and QC of radiopharmaceuticals
- preparation of 99mTc and 111In radiopharmaceuticals in SPECT dg.
- preparation of 18F radiopharmaceuticals in PET dg.
- oncological and non-oncological radiopharmaceuticals in diagnosis and therapy.

Literatura

doporučená literatura

Walter and Miller's textbook of radiotherapy : radiation physics, therapy and oncology. Edited by Paul Symonds - John A. Mills - Angela Duxbury. Eight edition. London: Elsevier, 2019, xxiii, 615. ISBN 9780702074851.

FaF:aFASC1_15 **Drug Stereochemistry**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Jan Otevřel, Ph.D.

Vyučující

PharmDr. Jan Otevřel, Ph.D. (přednášející)
Mgr. David Švestka (přednášející)

Cíle předmětu

The aim of the subject is to deepen students' knowledge of static and dynamic stereochemistry of natural and synthetic substances with pharmaceutical significance. The subject aims to expand the student's knowledge in the area of traditional and modern methods of preparation and isolation of chiral non-racemic compounds, in methods of determining their absolute configuration and optical purity, and in selected stereochemical aspects of the action of chiral drugs in the living organism.

Výukové metody

Lectures

Metody hodnocení

Written final test

Primární způsob výuky

Žádné informace.

Výstupy z učení

Basic orientation in static and dynamic stereochemistry. Fundamental knowledge of methods of synthesis, isolation and analysis of chiral non-racemic compounds.

Osnova

1. Stereochemical nomenclature and basic concepts of static stereochemistry
2. Relationships between chirality and biological activity of organic compounds
3. Basic concepts and principles of dynamic stereochemistry
4. Classification of isomerization reactions of chiral compounds
5. Principles and methods of resolution of racemic compounds
6. Principles and methods of asymmetric synthesis
7. Analytical methods for determining optical purity and absolute configuration
8. Topological isomerism and chirality

Literatura

povinná literatura

L. A. Nguyen, H. He, C. Pham-Huy, Chiral Drugs: An Overview; Int. J. Biomed. Sci. 2006, 2, 85 — 100.

Stereochemistry and stereoselective synthesis : an introduction. Edited by József Nagy - Gábor Hornyánszky - Zoltán Boros - László Poppe -. Weinheim: Wiley-VCH, 2016, xiv, 265. ISBN 9783527339013.

doporučená literatura

A. G. Draffan, G. R. Evans, J. A. Henshilwood, 18. kapitola: Chirality and Biological Activity, 1. svazek: Drug Discovery and Development, Burger' s Medicinal Chemistry and Drug Discovery; John Wiley & Sons, 2010.

WOLF, Christian. *Dynamic stereochemistry of chiral compounds : principles and applications*. Cambridge: RSC Publishing, 2008, xix, 512. ISBN 9780854042463.

FaF:aFASI1_15 **Substance Interactions Analysis**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA

Vyučující

doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA (přednášející)
Mgr. Veronika Murgašová (přednášející)
PharmDr. Bc. Lenka Coufalová, Ph.D. (přednášející)
RNDr. Eva Havránková, Ph.D. (přednášející)
Mgr. Michaela Kuchynka, Ph.D. (přednášející)
Mgr. Adéla Lamaczová (přednášející)
PharmDr. Magdaléna Onuščáková (přednášející)

Cíle předmětu

Understanding the basic principles of substance interactions: Students will gain an in-depth understanding of the different types of interactions between medicinal substances, dietary supplement ingredients and food ingredients, cosmetic products, and hygiene products including chemical, physical and biological processes.

Výukové metody

lectures, class discussion

Metody hodnocení
exam - written test

Primární způsob výuky
Žádné informace.

Výstupy z učení
Understanding the basic principles of substance interactions: Students will gain an in-depth understanding of the different types of interactions between medicinal substances, dietary supplement ingredients and food ingredients, cosmetic products, and hygiene products including chemical, physical and biological processes.

Osnova
1. Introduction, basic concepts, Legislation, medicinal substances, dietary supplement ingredients and food ingredients, cosmetic products, and hygiene products.
2. General principles of pharmacokinetic interactions at the absorption and excretion levels between medicinal substances, dietary supplement and food ingredients, cosmetics and hygiene products.
3. General principles of pharmacodynamic interactions between medicinal substances, dietary supplement ingredients and food ingredients, cosmetic, and hygiene products.
4. General biological principles of interactions between medicinal substances, dietary supplement ingredients and food ingredients, cosmetic products, and hygiene products.
5. General side effects of interactions between medicinal substances, dietary supplement ingredients and food ingredients, cosmetic products, and hygiene products.
6. Physical interaction - nanoparticles — UV and other interaction principles.
7. Principles of the interactions between medicinal substances and dietary supplement. Practical examples.
8. Principle of on the Interactions of medicinal substances (Rx Drugs) and medicinal substances (OTC Drugs). Practical examples
9. Principles of the interactions between medicinal substances and cosmetic products. Practical examples.
10. Principle of on the Interactions of medicinal substances (Rx Drugs) and Phytopharmaceuticals. Practical examples
11. Principles of the interactions between dietary supplement ingredients and cosmetic products. Practical examples.
12. Principles of the interactions between food ingredients and cosmetic products. Practical examples.
13. Hygiene ingredients and their interactions. Practical examples.
14. Summary, future, recommendations, outcomes.

Literatura
doporučená literatura
Handbook of Food-Drug Interactions

Lectures

FaF:aFATL1_12 **Toxicology of Natural Compounds**
Předmět není v aktuálních obdobích! 4 kredity, ukončení zk, garant předmětu prof. PharmDr. Karel Šmejkal, Ph.D.

Vyučující
PharmDr. Dagmar Jankovská, Ph.D. (přednášející)
doc. PharmDr. Renata Kubínová, Ph.D. (přednášející)
prof. PharmDr. Karel Šmejkal, Ph.D. (přednášející)
PharmDr. Dagmar Jankovská, Ph.D. (cvičící)
PharmDr. Lenka Molčanová, Ph.D. (cvičící)

Cíle předmětu
Toxicology of natural compounds is engaged in producents of toxic compounds, in their chemical composition, metabolism and toxic effect.

Výukové metody
Lectures, practical classes

Metody hodnocení
Written test

Primární způsob výuky
Žádné informace.

Výstupy z učení
The knowledge of toxicologically important natural compounds.

Osnova
Introduction to toxicology, basic toxicological concepts, history The basic characteristics of natural toxins, metabolism of toxins
Plant poisons I - terpenoids
Plant poisons II. - alkaloids
Plant poisons III. - alkaloids and others
Poisonous algae and cyanobacteria
Bacterial toxins
Toxicology of poisons from marine and terrestrial organisms I.

Toxicology of poisons from marine and terrestrial organisms II.
Practical courses:
Treatment of intoxication natural substances.
Steroidal alkaloids
Toxicity of nicotine

Literatura

povinná literatura

Hrdina V., Hrdina R., Jahodář L. a kol. *Přírodní toxiny a jedy.*.

Baloun J. *Rostliny způsobující otravy a alergie.*. Avicenum, 1989.

doporučená literatura

Vondráček O. *Klinická toxikologie*.

FaF:aFAVF1_14 **Veterinary Pharmacology and Pharmacotherapy**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu PharmDr. Zuzana Široká, Ph.D.

Vyučující

MVDr. Peter Scheer, Ph.D. (cvičící)
PharmDr. Zuzana Široká, Ph.D. (cvičící)

Cíle předmětu

The aim of the veterinary pharmacology course is to broaden knowledge about the specifics of pharmacotherapy in animals, including the specifics of veterinary drug legislation. Understanding the differences in different classes of vertebrates compared to humans, the specifics of therapy in food animals.

Výukové metody

Seminars (theoretical and interactive) Excursion and a lecture by a professional in the field

Metody hodnocení

Fulfilling requirements (Credit) - attendance (maximum one absence) + presentation of the assigned topic within interactive seminars Exam - Written test (combination of multiple choice and writing questions)

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, the student will:

- able to handle the specifics of consulting in the distribution and sale of veterinary drugs
- have a basic knowledge of specific veterinary drugs and their dosage forms
- have basic knowledge of interspecies differences in pharmacodynamics and pharmacokinetics
- have knowledge about the possibilities of using human drugs in animals and about the toxicity of some of them for animals

Osnova

1) Specifics of veterinary pharmacology, specific veterinary dosage forms (T)
2) Specifics of toxicokinetics in animals, specifics of treatment in food animals (MRLs, withdrawal periods), ecological aspects of the use of veterinary drugs (T)
3) Use of human drugs in animal treatment, toxicity of human drugs for animals (T)
4) Zoonoses and other infectious diseases of animals, vaccination (I)
5) Antibiotics in animals, antibiotic policy (I)
6) Veterinary antiparasitics, antifungals, dermatologicals, ophthalmologicals, otologicals (I)
7) Medicines affecting the CNS in animals, anesthetics, euthanasia; treatment of behavioral disorders in small animals (I)
8) Cardiovascular and respiratory drugs in animals (I)
9) Gastrointestinal and urinary system, animal nutrition (I)
10) Hormonal system (including reproduction, castration), oncological treatment and cytostatics (I)
11) Possibilities of employment of a pharmacist in the field of veterinary medicines (lecture by an extern from a distribution and manufacturing company) (T)
12) Excursion to Institute for State Control of Veterinary Biologicals and Medicines (T)
13) Alternative approaches to animal therapy (homeopathy, traditional Chinese medicine, aromatherapy, etc.) (I)
14) Consultation, credit

Literatura

doporučená literatura

Hsu, W.H. *Handbook of Veterinary Pharmacology*. Wiley-Blackwell, Iowa, 2008.

\&{}. *BAG GOT, J.D. : The Physiological Basis of Veterinary Clinical Pharmacology. Blackwell Science, Oxford, 2001. 283 s. ADAMS, H. R.: Veterinary Pharmacology and Therapeutics. 8th Ed. Iowa State University Press, Ames, 2001. 1220 s. FREY. H.-H. a LÖSCHER, W.: Lehrbuch der Pharmakologie und Toxikologie für die Veterinärmedizin. 2. vyd. Enke Verlag, Stuttgart. 2002. 609 s.*. &.

Veterinary medicines in the environment : from the SETAC Pellston Workshop on Veterinary Medicines in the Environment : Pensacola, Florida, USA, 12-16 February 2006. Edited by Mark Crane - Alistair B. A. Boxall - Katie Barrett. Boca Raton, Fla.: CRC Press, 2009, xxv, 196. ISBN 9781420084245.

FaF:aFAVG1_13 **Advanced Drug Delivery and Technologies**

Předmět není v aktuálních obdobích! 5 kreditů, ukončení zk, garant předmětu doc. PharmDr. Jan Gajdziok, Ph.D.

Vyučující

PharmDr. Jan Elbl, Ph.D. (přednášející)
doc. PharmDr. Aleš Franc, Ph.D. (přednášející)
doc. PharmDr. Jan Gajdziok, Ph.D. (přednášející)
PharmDr. Hana Hořavová (přednášející)
doc. PharmDr. Kateřina Kubová, Ph.D. (přednášející)
doc. PharmDr. Ruta Masteiková, CSc. (přednášející)
PharmDr. Jakub Vysloužil, Ph.D. (přednášející)
PharmDr. Jan Elbl, Ph.D. (cvičící)
doc. PharmDr. Aleš Franc, Ph.D. (cvičící)
doc. PharmDr. Jan Gajdziok, Ph.D. (cvičící)
PharmDr. Hana Hořavová (cvičící)
doc. PharmDr. Kateřina Kubová, Ph.D. (cvičící)
prof. PharmDr. Mgr. David Vetchý, Ph.D. (cvičící)
PharmDr. Jakub Vysloužil, Ph.D. (cvičící)

Cíle předmětu

The course aims to acquaint students with advanced dosage/application forms, modern methods of formulation, and evaluation methods, all emphasizing their application in pharmacotherapeutic practice. Theoretical lectures are suitably complemented by practical exercises in the form of laboratory workshops, where modern formulation procedures of dosage forms and methods of their evaluation will be presented.

Výukové metody

Lectures, practical laboratory work.

Metody hodnocení

Oral/written examination, colloquium - moderated discussion with students about topics of this subject.

Primární způsob výuky

Žádné informace.

Výstupy z učení

By completing this course, students gain a deeper knowledge of advanced dosage/application forms for systemic and local drug delivery from the perspective of pharmaceutical technology. An integral part is the study of excipients and technologies and the evaluation of these innovative dosage forms. The information obtained suits motivated students who want to work in the pharmaceutical industry/research or pharmacy.

Osnova

Lectures: 1) Pellets - preparation technologies and use in pharmacotherapy 2) Liquisolid systems - principles, preparation and application 3) Ocular therapeutic systems 4) Implants 5) Colon drug delivery systems and IBD solutions 6) Abuse resistant drug formulations and dose dumping 7) 3D printing as a tool for individualized therapy 8) Drug forms for pediatric patients 9) Spray techniques in drug formulation and co-processed excipients 10) Veterinary dosage forms 11) Nano- and innovative micro-forms 12) Gastro-retentive dosage forms 13) Electronic systems in pharmacotherapy 14) Use of artificial intelligence in drug formulation 15) Modern transdermal dosage forms

Exercise: 1) Preparation of pellets by extrusion/spheronization method 2) Methods of evaluation of technological parameters of dosage forms 3) Preparation of pellets by rotary agglomeration method 4) Preparation of microparticles by ion gelation method 5) Preparation of pellets by layering drug solution on inactive pellets and their evaluation by dislocation test 6) Preparation of liquisolid systems 7) Preparation of microparticles by spray drying

Literatura

doporučená literatura

3D printing and bioprinting for pharmaceutical and medical applications. Edited by Jose Luis Pedraz Mu oz - Laura Saenz del Burgo Martínez - Gustavo P. First published. Boca Raton, FL: Elsevier, 2024, xviii, 314. ISBN 9781032228679.

HILL, Ray G. a Duncan B. RICHARDS. *Drug discovery and development : technology in transition*. 3rd edition. [Edinburgh?]: Elsevier, 2022, ix, 373. ISBN 9780702078040.

NG, Rick. *Drugs : from discovery to approval*. Third edition. Hoboken, New Jersey: Wiley Blackwell, 2015, 1 online. ISBN 9781118907221. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=981389

Wise. *Handbook of Pharmaceutical controlled drug release*. USA, 2008. ISBN 0-8247-0369-3.

Rathbone, Hadgraft, Roberts. *Modified drug delivery technology*. USA, 2006. ISBN 0-8247-0869-5.

FaF:aFAVL1_13 **Veterinary Dosage Forms**

Předmět není v aktuálních obdobích! 3 kredity, ukončení zk, garant předmětu doc. PharmDr. Aleš Franc, Ph.D.

Vyučující
doc. PharmDr. Aleš Franc, Ph.D. (přednášející)

Cíle předmětu
The aim of the course is to acquaint students with the specifics of the veterinary therapeutic area in relation to the dosage forms, their formulation, compounding, production and quality assurance.

Výukové metody
Lectures, demonstration, class discussion

Metody hodnocení
Final exam

Primární způsob výuky
Žádné informace.

Výstupy z učení
Knowledge of specific veterinary dosage forms and ability to apply the principles of their formulation, compounding, production and quality control.

Osnova
- Introduction to veterinary dosage forms: Definition, classification and importance of veterinary dosage forms.
- Regulation of veterinary dosage forms: Overview of regulations concerning veterinary dosage forms in the EU and the Czech Republic.
- Production and quality control of veterinary dosage forms: Production processes, quality control and product safety assurance.
- Research and development in the field of veterinary dosage forms: Current trends and innovations in the field of research and development of veterinary dosage forms.
- Solid veterinary dosage forms: Overview of solid veterinary dosage forms, including powders and premixes.
- Liquid veterinary dosage forms for internal use: Overview of liquid veterinary dosage forms for internal use.
- Liquid veterinary dosage forms for dermal use: Overview of liquid veterinary dosage forms for dermal use.
- Injectable veterinary dosage forms: Overview of injectable veterinary dosage forms.
- Medicines for rectal and vaginal use: Overview of medicines for rectal and vaginal use.
- Aerodispersions for veterinary use: Overview of pressurized drugs for veterinary use.
- Specific veterinary dosage forms: Overview of specific veterinary dosage forms.
- Evaluation of the stability of veterinary dosage forms: Methods of evaluating the stability of veterinary dosage forms.
- Trends and future of veterinary dosage forms: Discussion of current trends and future developments in the field of veterinary dosage forms.
- Global market of veterinary dosage forms: major players, trends and challenges.

Literatura
doporučená literatura
Hardee, G., & Baggot, J. (Eds.). Development and Formulation of Veterinary Dosage Forms (2nd ed.). CRC Press. https://doi.org/10.1201/9780367800765

European Pharmacopoeia

FaF:aFAZL1_15 **Basics of Chemical Drugs**
Předmět není v aktuálních obdobích! kreditů, ukončení zk, garant předmětu Mgr. Petr Mokrý, Ph.D.

Vyučující
prof. RNDr. Jozef Csöllei, CSc. (přednášející)
Mgr. Petr Mokrý, Ph.D. (přednášející)
Mgr. Petr Mokrý, Ph.D. (cvičící)

Cíle předmětu
The course Basics of chemical drugs will enable students to combine their knowledge of Organic chemistry with the basic principles of Medicinal chemistry. The aim is to provide students with general knowledge about the chemical structure of drugs and the effect of structural modifications on the biological effect.The lectures focus on nomenclature principles of synthetic drugs, structural factors influencing the biological activity of drugs and modification of their structure using the principles of isomerism, homology and analogy. The separate part is represented by the lectures about selected active fragments and heterocyclic structures occurring in several pharmacological groups.
The seminar part offers the overview of synthetic reactions leading to the formation of selected compounds, used as drugs or as their intermediates.

Výukové metody
lectures — explanation
seminars — explanation and practice (examples solving)

Metody hodnocení
- 100% attendance at seminars required - seminar test with a minimum success rate of 60%
- written exam

Primární způsob výuky

Žádné informace.

Výstupy z učení

After completing the course, a student will be able to:

- describe the basic principles of drug structure modification;

- predict how changes in physicochemical properties, spatial arrangement or other structural factors will affect drug activity;

- describe basic methods of biologically active substances preparation ;

- design partial synthetic steps for the preparation of simple organic compounds.

Osnova

Lectures:

1. Definition and characterization of the subject, nomenclature of organic compounds, nomenclature principles of chemical drugs.

2. Structural factors influencing the biological activity of drugs — hydrocarbon component and nitrogen-containing functional groups.

3. Structural factors influencing the biological activity of drugs — oxygen-containing functional groups and organic sulfur compounds.

4. Structural modifications of drugs — alkyl and alkylene homology.

5. Structural modifications of drugs — analogy — hydrogenation and dehydrogenation, alkyl and radical analogy.

6. Structural modifications of drugs — analogy — isostery, analogy of functional groups, cyclic and ring analogy, models and doubling of molecules.

7. Structural modifications of drugs — chain isomerism, positional and geometric isomers.

8. Structural modifications of drugs — stereoisomerism, optical isomers.

9. Structural modifications of drugs — temporary changes in the drug properties.

10. Phenylalkylamine structure in several pharmacological groups.

11. Aromatic-aliphatic structural fragment in several pharmacological groups.

12. Derivatives of 4-aminobenzenesulfonic acid, beta-lactams and polycyclic aromatic compounds as the drug structure basis.

13. Five- and six-membered heterocycles with one or more heteroatoms as the drug structure basis.

Seminars:

1.-2. Carbon-carbon bond forming reactions - Friedel-Crafts reactions, alkylation of active hydrogen compounds, Gattermann reaction, Grignard reaction, Wurtz-Fittig reaction, halogenalkylation (chloromethylation), Kolbe-Schmitt reaction. Synthesis: adrenaline, chlorprothixene, barbital, thiopental, fenipentol, fluconazole, amphetamine, mesalazine

3. Carbon-hydrogen bond forming reactions - reduction of multiple bonds carbon-carbon, dehalogenation, dehydroxylation, deamination, decarboxylation, desulfonylation. Synthesis: terazosin, adiphenine, valproic acid, propofol

4. Carbon-halogen bond forming reactions - substitution reactions (halogenation of alkanes, cycloalkanes and aromatic compounds, substitution of halogen and hydroxy derivatives), addition reaction of carbon-carbon multiple bonds. Synthesis: chloroxine, diphenhydramine, cinchocaine, atropine

5. Carbon-oxygen bond forming reactions - preparation of alcohols, phenols, ethers, carbonyl compounds, carboxylic acids, esters and lactones. Synthesis: gentisic acid, bisacodyl, sodium picosulfate, metoprolol, isoflurane, isoniazid, diclofenac, warfarin

6. Carbon-nitrogen bond forming reactions - preparation of amines, nitro and azo compounds, amides, lactams and hydrazides. Synthesis: trimecaine, chlorambucil, metoprolol, benzocaine, paracetamol, piracetam, isoniazid

Literatura

doporučená literatura

VOGEL, Pierre a Kendall N. HOUK. *Organic chemistry : theory, reactivity and mechanisms in modern synthesis*. Edited by Robert H. Grubbs. Weinheim: Wiley-VCH, 2019, xxx, 1352. ISBN 9783527345328.

The practice of medicinal chemistry. Edited by Camille Georges Wermuth - David Aldous - Pierre Raboisson - Didier Rog. Fourth edition. Amsterdam: Elsevier, 2015, 1 online. ISBN 9780124172135. https://ezproxy.muni.cz/login?url=https://search.ebscohost.com/login.aspx?authtype=ip&custid=s8431878&lang=cs&profile=eds&direct=true&db=nlebk&AN=596616

Wilson and Gisvold's textbook of organic medicinal and pharmaceutical chemistry. Edited by John Marlowe Beale - John H. Block. 12th ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins, 2011, x, 1010. ISBN 9780781779296.

3 Personální zabezpečení

Kapitola zahrnuje akademické pracovníky MU podílející se na garanci nebo výuce povinných a povinně volitelných předmětů ve studijním programu.
U všech akademických pracovníků jsou uvedeny údaje o zkušenostech s vedením kvalifikačních prací na MU od roku 2000 a to ve formě počet aktuálně vedených prací / celkový počet vedených a úspěšně obhájených prací.

U garantů předmětů profilujícího základu (P) a garantů základních teoretických předmětů profilujícího základu (Z) jsou v souladu s nařízením vlády (č. 274/2016 Sb.) o Standardech pro akreditaci ve VŠ automaticky kontrolovány následující náležitosti:

- Personální list: kontrola zjišťuje, zda je vyplněný personální list.
- Kvalifikace: Garanti (P) předmětů u magisterských programů musí mít minimálně vysokoškolské doktorské vzdělání. Garanti (Z) předmětů v bakalářských programech musí mít minimálně vysokoškolské doktorské vzdělání.
- Habilitace: Garanti (Z) předmětů u magisterských programů musí být habilitovaní.
- Podíl na výuce: Garanti (Z) předmětů v bakalářských a magisterských programech se musí podílet na výuce.

3.1 Garanti profilujících předmětů

PharmDr. Tünde Ambrus, Ph.D.
Garant profilujícího předmětu — P
FaF: AFADP5_FAF Diploma Thesis Submission (cvičící, garant)
FaF: AFAHF1_11 History of Pharmacy (přednášející, garant)
FaF: AFALK1_11 Pharmacy Practice I (přednášející)
FaF: AFAPX1_11 Managed Pharmaceutical Practice (2 weeks) (cvičící, garant)
FaF: AFASF2_11 Social Pharmacy II (přednášející, cvičící)
FaF: AFAUF1_11 Introduction to Pharmaceuticals and Pharmacy (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 13
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce: 25, Rigorózní práce: 20

prof. PharmDr. Petr Babula, Ph.D.
Garant profilujícího předmětu — P
Profesura: (2017) Farmakognozie (Veterinární a farmaceutická univerzita Brno)
Habilitace: (2010) Farmakognozie (Veterinární a farmaceutická univerzita Brno)
FaF: AFABO1_12 Pharmaceutical Botany I (přednášející, garant)
FaF: AFABO2_12 Pharmaceutical Botany II (přednášející, garant)

Bakalářské práce: 1 / 1
Diplomové práce: 3 / 6
Disertační práce: 4 / 8

Kvalifikační práce mimo MU:
Diplomové práce - 53

doc. Ing. Pavel Bobáľ, CSc.
Garant profilujícího předmětu — P
Habilitace: (2019) Farmaceutická chemie (Univerzita Karlova)
FaF: AFAOC1_15 Organic Chemistry for Pharmacists I (přednášející, cvičící, garant)
FaF: AFAOC2_15 Organic Chemistry for Pharmacists II (přednášející, cvičící, garant)
FaF: AFAOC3_15 Organic Chemistry - Practical Classes (cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 7
Disertační práce: 4 / 4

Kvalifikační práce mimo MU:
Bakalářské práce: 0;, Diplomové práce: 35 (obhájené: 32), 30 - VFU, 1 - University of Neuchâtel, Švýcarsko, 1 - Komenského Univerzita, Bratislava, Slovensko;, Rigorózní práce: 4 (obhájené: 4);, Disertační práce: 6 (obhájené: 1).

doc. MUDr. Regina Demlová, Ph.D.
Garant profilujícího předmětu — P
Habilitace: (2015) Lékařská farmakologie (Univerzita Komenského v Bratislave, Slovensko)(2018) Lékařská farmakologie (Masarykova univerzita)
FaF: AFAFP2_LF Pharmaceutical Care II (cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 3 / 7

doc. PharmDr. Oldřich Farsa, Ph.D.
Garant profilujícího předmětu — Z
Habilitace: (2010) Farmaceutická chemie (Veterinární a farmaceutická univerzita Brno)
FaF: AFABL1_15 Biological Medicinal Products (přednášející, garant)
FaF: AFACF1_15 Chemistry of Pharmaceutical Excipients (přednášející, garant)
FaF: AFACH1_15 Medicinal Chemistry I (přednášející, cvičící, garant)
FaF: AFACH2_15 Medicinal Chemistry II (přednášející, cvičící, garant)
FaF: AFAMZ1_15 Molecular Principles of Drug Design (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 7
Disertační práce: 3 / 3

Kvalifikační práce mimo MU:
Diplomové práce: 31 (2002 - 2020) úspěšně obhájených na FaF VFU Brno, Dizertační práce: 5, úspěšně obhájená 1 na FaF VFU Brno, Rigorózní práce: 11 úspěšně obhájených na FaF VFU Brno (2001 - 2020)

doc. PharmDr. Aleš Franc, Ph.D.
Garant profilujícího předmětu — P
Habilitace: (2018) Farmaceutická technologie-galenická farmacie (Veterinární a farmaceutická univerzita Brno)
FaF: AFABL1_15 Biological Medicinal Products (přednášející)
FaF: AFAFT2_13 Pharmceutical Technology II (přednášející)
FaF: AFAFT3_13 Pharmaceutical Technology III (přednášející, cvičící)
FaF: AFAPF1_13 Industrial Pharmacy (přednášející, garant)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (přednášející, cvičící)
FaF: AFAVL1_13 Veterinary Dosage Forms (přednášející, garant)

Bakalářské práce: 0 / 1
Diplomové práce: 2 / 11
Disertační práce: 2 / 5

Kvalifikační práce mimo MU:
Diplomové práce (Mgr.): 27 (VFU Brno), Absolventské práce (Dis.): 3 (VOŠMT Kolín)

PharmDr. Tomáš Goněc, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAAC1_15 General and Inorganic Chemistry (přednášející, cvičící, garant)
FaF: AFACH1_15 Medicinal Chemistry I (cvičící)
FaF: AFACH2_15 Medicinal Chemistry II (cvičící)
FaF: AFAMZ1_15 Molecular Principles of Drug Design (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 15
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
FaF VFU Brno:, Diplomové práce: 30 (vedoucí), Rigorózní práce: 12 (konzultant), Diserteční práce: 1 (školitel specialista)

doc. RNDr. Jan Hošek, Ph.D.
Garant profilujícího předmětu — P
Habilitace: (2019) Genomika a proteomika (Masarykova univerzita)
FaF: AFABB1_16 Cell Biology for Pharmacists (přednášející, cvičící, garant)
FaF: AFABT1_16 Pharmaceutical Biotechnology (přednášející, cvičící, garant)
FaF: AFAMO1_16 Molecular Biology for Pharmacists (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 2 / 5
Disertační práce: 2 / 4

Kvalifikační práce mimo MU:
Diplomové práce: 20, Disertační práce: 1

MUDr. Marta Chalupová, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAFC1_14 Human Physiology and Pathophysiology I (přednášející)
FaF: AFAFK3_14 Pharmacology III (cvičící)

FaF: AFAMC1_14 Human Morphology (přednášející, cvičící, garant)
FaF: AFATO1_14 Toxicology (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 24
Disertační práce: 0 / 0

doc. RNDr. Jozef Kolář, CSc.
Garant profilujícího předmětu — Z
Habilitace: (1997) Lékárenství (Univerzita Komenského v Bratislavě)
FaF: AFALK1_11 Pharmacy Practice I (přednášející, cvičící)
FaF: AFAPF1_13 Industrial Pharmacy (přednášející)
FaF: AFASF1_11 Social Pharmacy I (přednášející, garant)
FaF: AFASF2_11 Social Pharmacy II (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 6
Disertační práce: 1 / 2

Kvalifikační práce mimo MU:
Diplomové práce: 115, Rigorózní práce: 144, Disertační práce: 11

doc. PharmDr. Peter Kollár, Ph.D.
Garant profilujícího předmětu — P, Z
Habilitace: (2014) Farmakologie a toxikologie (Veterinární a farmaceutická univerzita Brno)
FaF: AFADP1_FAF Diploma Thesis I (cvičící, garant)
FaF: AFADP2_FAF Diploma Thesis II (cvičící, garant)
FaF: AFADP3_FAF Diploma Thesis III (cvičící, garant)
FaF: AFADP4_FAF Diploma Thesis IV (cvičící, garant)
FaF: AFAFK1_14 Pharmacology I (přednášející, garant)
FaF: AFAFK2_14 Pharmacology II (přednášející, cvičící, garant)
FaF: AFAFK3_14 Pharmacology III (přednášející, garant)
FaF: AFAKF1_14 Clinical Pharmacy and Pharmacotherapy (přednášející, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 1 / 6
Disertační práce: 1 / 2

Kvalifikační práce mimo MU:
Diplomové práce (obhájené): 56, Rigorózní práce (obhájené): 36, Disertační práce (obhájené): 3

PharmDr. Bc. Hana Kotolová, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAFK2_14 Pharmacology II (cvičící)
FaF: AFAFK3_14 Pharmacology III (cvičící)
FaF: AFAFP3_14 Pharmaceutical Care III (cvičící, garant)
FaF: AFAKF1_14 Clinical Pharmacy and Pharmacotherapy (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 17
Disertační práce: 1 / 2

Kvalifikační práce mimo MU:
Diplomové práce - 53 - FaF VFU Brno, Disertační práce - 1 - FaF VFU Brno, Rigorózní práce - 12 - FaF VFU Brno

Mgr. Aleš Kroutil, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAAC1_15 General and Inorganic Chemistry (přednášející, cvičící)
FaF: AFACV1_15 Chemical Calculations (cvičící, garant)
FaF: AFACH1_15 Medicinal Chemistry I (cvičící)
FaF: AFACH2_15 Medicinal Chemistry II (přednášející)
FaF: AFAPF1_13 Industrial Pharmacy (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 8
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 14

doc. PharmDr. Kateřina Kubová, Ph.D.
Garant profilujícího předmětu — Z
Habilitace: (2013) Farmaceutická technologie-galenická farmacie (Veterinární a farmaceutická univerzita Brno)
FaF: AFAFT2_13 Pharmceutical Technology II (přednášející, garant)
FaF: AFAFT3_13 Pharmaceutical Technology III (přednášející, cvičící, garant)
FaF: AFAKP1_13 Cosmetology for Pharmacists (garant)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 15
Disertační práce: 4 / 6

Kvalifikační práce mimo MU:
Diplomové práce: 39, Rigorózní práce: 30, Dizertační práce: 3, VFU Brno

Mgr. Michaela Kuchynka, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAAI1_15 Analytical Chemistry for Pharmacists I (cvičící)
FaF: AFAAI2_15 Analytical Chemistry for Pharmacists II (cvičící)
FaF: AFAPM1_15 Advanced Analytical Methods in Pharmacy and Biomedicine (přednášející, garant)
FaF: AFASI1_15 Substance Interactions Analysis (přednášející)

Bakalářské práce: 0 / 3
Diplomové práce: 5 / 7
Disertační práce: 1 / 1

PharmDr. Bc. Dana Mazánková, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAFP1_11 Pharmaceutical Care I (cvičící, garant)
FaF: AFAOP2_11 Pharmacy Internship II (4 weeks) (cvičící, garant)
FaF: AFAOP3_11 Pharmacy Internship III (20 weeks) (cvičící, garant)
FaF: AFAPK1_11 Pharmacy Counselling (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 28
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce (VFU Brno): 55, Rigorózní práce (VFU Brno): 50, Disertační práce (VFU Brno): 2

doc. Mgr. Jan Muselík, Ph.D.
Garant profilujícího předmětu — P
Habilitace: (2013) Farmaceutická chemie (Veterinární a farmaceutická univerzita Brno)
FaF: AFABF1_13 Biophysics for Pharmacists (přednášející, garant)
FaF: AFAFT1_13 Pharmaceutical Technology I (cvičící)
FaF: AFAFY1_13 Physical Pharmacy (přednášející, cvičící)
FaF: AFAIA1_13 Instrumental Methods in Medicinal Products Characterization (přednášející, cvičící, garant)
FaF: AFAPM1_15 Advanced Analytical Methods in Pharmacy and Biomedicine (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 11
Disertační práce: 1 / 2

Kvalifikační práce mimo MU:
Diplomové práce: 23, Rigorózní práce: 13, Disertační práce: 3

doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA
Garant profilujícího předmětu — Z
Habilitace: (2011) Farmaceutická chemie (Veterinární a farmaceutická univerzita Brno)
FaF: AFACP1_15 Food Chemistry (přednášející, garant)
FaF: AFAIC1_15 Interactions of Medicines, People and Environment (přednášející, garant)
FaF: AFAKL1_15 Quality Control of Pharmaceuticals (přednášející, cvičící, garant)
FaF: AFAMF1_15 Forensic Analysis Methods (přednášející, garant)

FaF: AFASI1_15 Substance Interactions Analysis (přednášející, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 9
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce - 37, Disertační práce — 5, Rigorózní práce - 21

MUDr. Tomáš Parák, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAFC1_14 Human Physiology and Pathophysiology I (přednášející, cvičící, garant)
FaF: AFAFC2_14 Human Physiology and Pathophysiology II (přednášející, cvičící, garant)
FaF: AFAMC1_14 Human Morphology (přednášející)
FaF: AFATO1_14 Toxicology (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 25
Disertační práce: 0 / 1

Kvalifikační práce mimo MU:
Vedení diplomových prací na FaF VFU - více než 50, Vedení rigorozních prací na FaF VFU - 1x

doc. RNDr. Bc. Jiří Pazourek, Ph.D.
Garant profilujícího předmětu — P
Habilitace: (2004) Analytická chemie (Masarykova univerzita)
FaF: AFAAI1_15 Analytical Chemistry for Pharmacists I (přednášející, cvičící, garant)
FaF: AFAAI2_15 Analytical Chemistry for Pharmacists II (přednášející, cvičící, garant)
FaF: AFAAS1_15 Applied Statistics (přednášející, cvičící, garant)

Bakalářské práce: 0 / 3
Diplomové práce: 9 / 30
Disertační práce: 1 / 3

PharmDr. Lenka Smejkalová, Ph.D.
Garant profilujícího předmětu — P
FaF: AFALK1_11 Pharmacy Practice I (přednášející, cvičící, garant)
FaF: AFALK2_11 Pharmacy Practice II (cvičící, garant)
FaF: AFANF1_13 Hospital Pharmacy (přednášející)
FaF: AFAOP1_11 Pharmacy Internship I (2 weeks) (cvičící, garant)
FaF: AFASF1_11 Social Pharmacy I (přednášející, cvičící)
FaF: AFAUF1_11 Introduction to Pharmaceuticals and Pharmacy (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 20
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 24 (VFU), Rigorozní práce: 7 (VFU)

doc. MVDr. Pavel Suchý, Ph.D.
Garant profilujícího předmětu — P
Habilitace: (2008) Toxikologie (Univerzita veterinár.lekár,a farmácie v Košiciach, Slovensko)
FaF: AFAFC1_14 Human Physiology and Pathophysiology I (přednášející)
FaF: AFAFC2_14 Human Physiology and Pathophysiology II (přednášející)
FaF: AFATO1_14 Toxicology (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 15
Disertační práce: 1 / 2

Kvalifikační práce mimo MU:
Bakalářské práce: 2, Diplomové práce: 43, Disertační práce: 5

prof. PharmDr. Karel Šmejkal, Ph.D.
Garant profilujícího předmětu — P, Z

Profesura: (2020) Farmakognosie (Univerzita Karlova)
Habilitace: (2013) Farmakognozie (Veterinární a farmaceutická univerzita Brno)
FaF: AFAFG1_12 Pharmacognosy I (přednášející, garant)
FaF: AFAFG2_12 Pharmacognosy II (přednášející, garant)
FaF: AFAFO1_12 Phytochemistry (přednášející, cvičící, garant)
FaF: AFAMI1_12 Modern Methods of Extraction and Identification of Natural Compounds (přednášející)
FaF: AFATL1_12 Toxicology of Natural Compounds (přednášející, garant)
FaF: AFATO1_14 Toxicology (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 17
Disertační práce: 7 / 9

Kvalifikační práce mimo MU:
Diplomové práce: 96, Disertační práce: 11

prof. MUDr. Petr Štourač, Ph.D., MBA, FESAIC
Garant profilujícího předmětu — P
Profesura: (2020) Anesteziologie, intenzivní medicína a algeziologie (Masarykova univerzita)
Habilitace: (2016) Anesteziologie, intenzivní medicína a algeziologie (Masarykova univerzita)
FaF: AFAPP1_LF Premedical First Aid (přednášející, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 7 / 11

PharmDr. Jakub Treml, Ph.D.
Garant profilujícího předmětu — P
FaF: AFAAT1_16 Advanced Therapy Medicinal Products (přednášející, garant)
FaF: AFABC1_16 Biochemistry for Pharmacists (přednášející, garant)
FaF: AFABT1_16 Pharmaceutical Biotechnology (cvičící)
FaF: AFAMB1_16 Microbiology for Pharmacists (přednášející, cvičící, garant)
FaF: AFAMO1_16 Molecular Biology for Pharmacists (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 18
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce (VFU): 15, Disertační práce - školitel specialista: 1 (aktivní studium)

prof. PharmDr. Mgr. David Vetchý, Ph.D.
Garant profilujícího předmětu — P, Z
Profesura: (2021) Farmaceutická technologie (Univerzita Karlova)
Habilitace: (2009) Farmaceutická technologie-galenická farmacie (Veterinární a farmaceutická univerzita Brno)
FaF: AFAEX1_13 Excursion to Pharmaceutical Industry (cvičící, garant)
FaF: AFAFT1_13 Pharmaceutical Technology I (přednášející, garant)
FaF: AFAFY1_13 Physical Pharmacy (přednášející, garant)
FaF: AFAMH1_13 Methods of Evaluation and Formualtion Dossiers of Medicinal Products (přednášející, cvičící, garant)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 1 / 5
Disertační práce: 2 / 4

Kvalifikační práce mimo MU:
Diplomové práce: 42, Disertační práce: 3

3.2 Vyučující a cvičící

MUDr. Daniel Barvík

FaF: AFAPP1_LF Premedical First Aid (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0

Disertační práce: 0 / 0

MVDr. Renata Blechová, Ph.D.
FaF: AFAFK2_14 Pharmacology II (cvičící)
FaF: AFAFK3_14 Pharmacology III (cvičící)
FaF: AFAGF1_14 Geriatric Pharmacotherapy (přednášející, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

Mgr. Marie Brázdová, Ph.D.
FaF: AFABC1_16 Biochemistry for Pharmacists (přednášející, cvičící)
FaF: AFAMO1_16 Molecular Biology for Pharmacists (přednášející, cvičící)
FaF: AFAPB1_16 Pathobiochemistry (přednášející, cvičící, garant)

Bakalářské práce: 0 / 9
Diplomové práce: 6 / 19
Disertační práce: 0 / 4

Kvalifikační práce mimo MU:
Bakalářské práce: 0, Diplomové práce: 20, Disertační práce: 0

PharmDr. Kateřina Brückner, Ph.D.
FaF: AFAFT2_13 Pharmceutical Technology II (cvičící)
FaF: AFAFT3_13 Pharmaceutical Technology III (cvičící)
FaF: AFAKP1_13 Cosmetology for Pharmacists (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 10
Disertační práce: 0 / 0

Mgr. Tomáš Crha
FaF: AFAAI1_15 Analytical Chemistry for Pharmacists I (cvičící)
FaF: AFAAI2_15 Analytical Chemistry for Pharmacists II (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

prof. RNDr. Jozef Csöllei, CSc.
FaF: AFACH1_15 Medicinal Chemistry I (přednášející)
FaF: AFACH2_15 Medicinal Chemistry II (přednášející)
FaF: AFAZL1_15 Basics of Chemical Drugs (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 7
Disertační práce: 2 / 3

Kvalifikační práce mimo MU:
Diplomové práce: 1994 - 2020 více jak 30, Doktorské disertační práce: 5 studentů úspěšně ukončilo, školitel specialista 4 obhájených prací.

doc. RNDr. Milan Číž, Ph.D.
FaF: AFAIF1_16 Immunology for Pharmacists (přednášející, garant)

Bakalářské práce: 0 / 10
Diplomové práce: 0 / 11
Disertační práce: 0 / 2

PharmDr. Ivana Daňková, Ph.D.
FaF: AFAFF1_12 Phytopharmaceuticals and Phytotherapy (přednášející, garant)
FaF: AFAFG1_12 Pharmacognosy I (cvičící)
FaF: AFAFG2_12 Pharmacognosy II (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 7
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 19 (FaF VFU Brno)

PharmDr. Margita Dvorská, Ph.D.
FaF: AFABO1_12 Pharmaceutical Botany I (cvičící)
FaF: AFABO2_12 Pharmaceutical Botany II (cvičící)
FaF: AFAFG1_12 Pharmacognosy I (cvičící)
FaF: AFALR1_12 Production of Medicinal Plants (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 12
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 15, Rigorózní práce: 4

Mgr. Jan Dvořáček, DiS.
FaF: AFAPP1_LF Premedical First Aid (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

PharmDr. Jan Elbl, Ph.D.
FaF: AFAAM1_13 Additive Manufacturing in Pharmaceutical Technology (přednášející, cvičící, garant)
FaF: AFAFT1_13 Pharmaceutical Technology I (přednášející, cvičící)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 10
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce: 7

doc. PharmDr. Jan Gajdziok, Ph.D.
FaF: AFAFT1_13 Pharmaceutical Technology I (přednášející)
FaF: AFAFT2_13 Pharmceutical Technology II (přednášející)
FaF: AFAFT3_13 Pharmaceutical Technology III (přednášející, cvičící)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 14
Disertační práce: 2 / 4

Kvalifikační práce mimo MU:
Diplomové práce: 40, Rigorózní práce: 20, Disertační práce: 2

prof. RNDr. Milan Gelnar, CSc.
FaF: AFAEK1_PRF General Ecology and Ecology of Human Health (přednášející, garant)

Bakalářské práce: 0 / 9
Diplomové práce: 0 / 18
Disertační práce: 0 / 14

PharmDr. Dominik Grega, Ph.D.
FaF: AFAHT1_11 Health Technology Assessment (přednášející, cvičící, garant)
FaF: AFALK1_11 Pharmacy Practice I (cvičící)
FaF: AFAPF1_13 Industrial Pharmacy (přednášející)
FaF: AFASF1_11 Social Pharmacy I (cvičící)

FaF: AFASF2_11 Social Pharmacy II (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 8
Disertační práce: 0 / 0

Mgr. Petra Hájková
FaF: AFAPP1_LF Premedical First Aid (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

RNDr. Eva Havránková, Ph.D.
FaF: AFACH2_15 Medicinal Chemistry II (cvičící)
FaF: AFAIC1_15 Interactions of Medicines, People and Environment (přednášející)
FaF: AFAOC1_15 Organic Chemistry for Pharmacists I (cvičící)
FaF: AFAOC2_15 Organic Chemistry for Pharmacists II (cvičící)
FaF: AFAOC3_15 Organic Chemistry - Practical Classes (cvičící)
FaF: AFASI1_15 Substance Interactions Analysis (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 10
Disertační práce: 0 / 0

Mgr. Petra Herczogová
FaF: AFABC1_16 Biochemistry for Pharmacists (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

MVDr. Jana Hložková, Ph.D.
FaF: AFABB1_16 Cell Biology for Pharmacists (přednášející)
FaF: AFAFC1_14 Human Physiology and Pathophysiology I (cvičící)
FaF: AFAFC2_14 Human Physiology and Pathophysiology II (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 14
Disertační práce: 1 / 1

PharmDr. Bc. Kateřina Horská, Ph.D.
FaF: AFAHL1_14 Preclinical and Clinical Trials of Medicines (přednášející, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 14
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce: 8

PharmDr. Hana Hořavová
FaF: AFAFT2_13 Pharmceutical Technology II (cvičící)
FaF: AFAFT3_13 Pharmaceutical Technology III (cvičící)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 4
Disertační práce: 0 / 0

PharmDr. Dagmar Jankovská, Ph.D.
FaF: AFAAO1_12 Antioxidants and Free Radicals (přednášející)
FaF: AFAFF1_12 Phytopharmaceuticals and Phytotherapy (přednášející)
FaF: AFAFG1_12 Pharmacognosy I (cvičící)

FaF: AFAFG2_12 Pharmacognosy II (cvičící)
FaF: AFATL1_12 Toxicology of Natural Compounds (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 11
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
diplomové práce: 27 (Veterinární a farmaceutická univerzita)

Ing. Ondřej Jurček, Ph.D. et Ph.D.
FaF: AFAFO1_12 Phytochemistry (cvičící)

Bakalářské práce: 0 / 6
Diplomové práce: 1 / 5
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 2

doc. PharmDr. Jan Juřica, Ph.D.
FaF: AFAFK1_14 Pharmacology I (přednášející)
FaF: AFAFK2_14 Pharmacology II (přednášející)
FaF: AFAFK3_14 Pharmacology III (přednášející)
FaF: AFAKF1_14 Clinical Pharmacy and Pharmacotherapy (přednášející)

Bakalářské práce: 0 / 7
Diplomové práce: 3 / 15
Disertační práce: 4 / 7

PharmDr. Tereza Kauerová, Ph.D.
FaF: AFAFI1_14 Pharmacokinetics and Biopharmacy (přednášející, cvičící, garant)
FaF: AFAFK1_14 Pharmacology I (přednášející)
FaF: AFAFK2_14 Pharmacology II (přednášející, cvičící)
FaF: AFAFK3_14 Pharmacology III (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 11
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce: 2

Mgr. Bc. Michal Koščík, Ph.D.
FaF: AFASF1_11 Social Pharmacy I (přednášející, cvičící)

Bakalářské práce: 0 / 3
Diplomové práce: 2 / 18
Disertační práce: 3 / 3

PharmDr. Mgr. Alžběta Kružicová, Ph.D.
FaF: AFAGE1_16 Applied Genetics (přednášející)
FaF: AFATO1_14 Toxicology (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 1 / 5
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce/Master’s theses: 5

doc. Mgr. Lukáš Kubala, Ph.D.
FaF: AFAIF1_16 Immunology for Pharmacists (přednášející)

Bakalářské práce: 0 / 13
Diplomové práce: 4 / 21
Disertační práce: 4 / 20

doc. PharmDr. Renata Kubínová, Ph.D.
FaF: AFAAO1_12 Antioxidants and Free Radicals (přednášející, garant)
FaF: AFABO1_12 Pharmaceutical Botany I (cvičící)
FaF: AFABO2_12 Pharmaceutical Botany II (cvičící)
FaF: AFAFG1_12 Pharmacognosy I (přednášející, cvičící)
FaF: AFAFG2_12 Pharmacognosy II (přednášející, cvičící)
FaF: AFATL1_12 Toxicology of Natural Compounds (přednášející)

Bakalářské práce: 0 / 1
Diplomové práce: 3 / 13
Disertační práce: 0 / 2

Kvalifikační práce mimo MU:
Disertační práce: 2, Diplomové práce: 47, Rigorózní práce: 6

Mgr. Adéla Lamaczová
FaF: AFASI1_15 Substance Interactions Analysis (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

PharmDr. Milan Malaník, Ph.D.
FaF: AFAFG1_12 Pharmacognosy I (cvičící)
FaF: AFAFG2_12 Pharmacognosy II (cvičící)
FaF: AFAIZ1_12 Work with Information Sources (přednášející, cvičící, garant)
FaF: AFAMI1_12 Modern Methods of Extraction and Identification of Natural Compounds (přednášející, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 16
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 4x (3x VFU Brno, 1x UVLF v Košiciach)

PharmDr. Pavlína Marvanová, Ph.D.
FaF: AFACV1_15 Chemical Calculations (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 2
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 2

doc. PharmDr. Ruta Masteiková, CSc.
FaF: AFAFT2_13 Pharmceutical Technology II (přednášející)
FaF: AFAFT3_13 Pharmaceutical Technology III (přednášející)
FaF: AFAKP1_13 Cosmetology for Pharmacists (přednášející)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 14
Disertační práce: 1 / 2

Kvalifikační práce mimo MU:
Diplomové práce: přes 60 obhájených diplomových prací na VFU, Rigorózní práce: cca 20 obhájených rigorózních prací na VFU, Disertační práce: 4 obhájené disertační práce na VFU

Mgr. Petr Mokrý, Ph.D.
FaF: AFACV1_15 Chemical Calculations (cvičící)

FaF: AFACH2_15 Medicinal Chemistry II (cvičící)
FaF: AFAOC1_15 Organic Chemistry for Pharmacists I (cvičící)
FaF: AFAOC2_15 Organic Chemistry for Pharmacists II (cvičící)
FaF: AFAZL1_15 Basics of Chemical Drugs (přednášející, cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 10
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 43, Rigorózní práce: 14, Disertační práce: 4 (3 obhájené), , (vše FaF VFU Brno)

PharmDr. Lenka Molčanová, Ph.D.
FaF: AFAFG1_12 Pharmacognosy I (cvičící)
FaF: AFAFG2_12 Pharmacognosy II (cvičící)
FaF: AFATL1_12 Toxicology of Natural Compounds (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 7 / 14
Disertační práce: 0 / 0

Mgr. Veronika Murgašová
FaF: AFAAC1_15 General and Inorganic Chemistry (cvičící)
FaF: AFACH2_15 Medicinal Chemistry II (cvičící)
FaF: AFAIC1_15 Interactions of Medicines, People and Environment (přednášející)
FaF: AFASI1_15 Substance Interactions Analysis (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 2 / 2
Disertační práce: 0 / 0

Ing. Marcela Nejezchlebová
FaF: AFABB1_16 Cell Biology for Pharmacists (cvičící)
FaF: AFABO1_12 Pharmaceutical Botany I (cvičící)
FaF: AFABO2_12 Pharmaceutical Botany II (cvičící)
FaF: AFABT1_16 Pharmaceutical Biotechnology (cvičící)
FaF: AFALR1_12 Production of Medicinal Plants (cvičící)
FaF: AFAMB1_16 Microbiology for Pharmacists (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 25
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce/Master’s theses: 23

Mgr. Bc. Daniela Nykodýmová
FaF: AFABB1_16 Cell Biology for Pharmacists (cvičící)
FaF: AFABC1_16 Biochemistry for Pharmacists (cvičící)
FaF: AFAMB1_16 Microbiology for Pharmacists (cvičící)
FaF: AFAPB1_16 Pathobiochemistry (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 4
Disertační práce: 0 / 0

Ing. Klára Odehnalová, Ph.D.
FaF: AFAAI1_15 Analytical Chemistry for Pharmacists I (cvičící)
FaF: AFAAI2_15 Analytical Chemistry for Pharmacists II (cvičící)

Bakalářské práce: 0 / 1
Diplomové práce: 1 / 1
Disertační práce: 0 / 0

PharmDr. Magdaléna Onuščáková
FaF: AFAIC1_15 Interactions of Medicines, People and Environment (přednášející)
FaF: AFASI1_15 Substance Interactions Analysis (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

PharmDr. Jan Otevřel, Ph.D.
FaF: AFACH2_15 Medicinal Chemistry II (cvičící)
FaF: AFANM1_15 NMR Structural Analysis of Organic Compounds (přednášející, garant)
FaF: AFAOC3_15 Organic Chemistry - Practical Classes (cvičící)
FaF: AFASC1_15 Drug Stereochemistry (přednášející, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 3
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
- Diplomové práce: 3 (školitel specialista), - Dizertační práce: 1 (probíhající, školitel specialista)

PharmDr. Lenka Paráková, Ph.D.
FaF: AFAFC2_14 Human Physiology and Pathophysiology II (cvičící)
FaF: AFAMC1_14 Human Morphology (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 26
Disertační práce: 0 / 0

PharmDr. Miroslava Pavelková, Ph.D.
FaF: AFAFT2_13 Pharmceutical Technology II (cvičící)
FaF: AFAFT3_13 Pharmaceutical Technology III (přednášející, cvičící)
FaF: AFAKP1_13 Cosmetology for Pharmacists (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 13
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
VFU, Brno - diplomové práce: 5

Mgr. Sylvie Pavloková, Ph.D.
FaF: AFAAS1_15 Applied Statistics (cvičící)
FaF: AFAFT1_13 Pharmaceutical Technology I (cvičící)
FaF: AFAFY1_13 Physical Pharmacy (cvičící)
FaF: AFAIA1_13 Instrumental Methods in Medicinal Products Characterization (cvičící)
FaF: AFAMA1_13 Mathemathics and Basics of Data Analysis (cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 6 / 15
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 4 (v rámci působení na VFU Brno)

Mgr. Hana Pížová, Ph.D.
FaF: AFAAI1_15 Analytical Chemistry for Pharmacists I (cvičící)
FaF: AFAKL1_15 Quality Control of Pharmaceuticals (cvičící)
FaF: AFAOC1_15 Organic Chemistry for Pharmacists I (cvičící)
FaF: AFAOC2_15 Organic Chemistry for Pharmacists II (cvičící)
FaF: AFAOC3_15 Organic Chemistry - Practical Classes (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 9
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 4

PhDr. Renata Prucklová
FaF: AFACJ1_CJV Czech Language I (cvičící, garant)
FaF: AFACJ2_CJV Czech Language II (přednášející, garant)
FaF: AFAOL1_CJV Professional Latin I (cvičící, garant)
FaF: AFAOL2_CJV Professional Latin II (cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

PharmDr. Jitka Rychlíčková, Ph.D.
FaF: AFAFP2_LF Pharmaceutical Care II (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

MVDr. Peter Scheer, Ph.D.
FaF: AFAFC1_14 Human Physiology and Pathophysiology I (cvičící)
FaF: AFAFC2_14 Human Physiology and Pathophysiology II (cvičící)
FaF: AFAVF1_14 Veterinary Pharmacology and Pharmacotherapy (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 5 / 9
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce - FVL VFU Brno 6

RNDr. Pavel Slanina
FaF: AFAPF1_13 Industrial Pharmacy (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

PharmDr. Lenka Součková, Ph.D.
FaF: AFAFP2_LF Pharmaceutical Care II (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 1 / 2

PharmDr. Alice Sychrová, Ph.D.
FaF: AFAFG1_12 Pharmacognosy I (cvičící)
FaF: AFAMB1_16 Microbiology for Pharmacists (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 5
Disertační práce: 0 / 1

Kvalifikační práce mimo MU:
Diplomové práce: 31, Rigorózní práce: 4

PharmDr. Zuzana Široká, Ph.D.
FaF: AFAFK2_14 Pharmacology II (cvičící)
FaF: AFAFK3_14 Pharmacology III (cvičící)
FaF: AFAVF1_14 Veterinary Pharmacology and Pharmacotherapy (cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 2 / 2

Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Bakalářská práce: 15, Diplomová práce: 12, Disertační práce: 1 (školitel specialista)

PharmDr. Martina Šutorová
FaF: AFALK1_11 Pharmacy Practice I (cvičící)
FaF: AFALK2_11 Pharmacy Practice II (cvičící)
FaF: AFAPL1_11 Managed Practice in Pharmacies (2 weeks) (přednášející, garant)
FaF: AFASF1_11 Social Pharmacy I (cvičící)
FaF: AFAUF1_11 Introduction to Pharmaceuticals and Pharmacy (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Diplomové práce: 8

Mgr. David Švestka
FaF: AFAAC1_15 General and Inorganic Chemistry (cvičící)
FaF: AFAKL1_15 Quality Control of Pharmaceuticals (cvičící)
FaF: AFANM1_15 NMR Structural Analysis of Organic Compounds (cvičící)
FaF: AFAOC3_15 Organic Chemistry - Practical Classes (cvičící)
FaF: AFASC1_15 Drug Stereochemistry (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

MVDr. Lada Tlučhořová
FaF: AFAMC1_14 Human Morphology (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 0
Disertační práce: 0 / 0

prof. MUDr. Bc. Libor Ustohal, Ph.D.
FaF: AFAKF1_14 Clinical Pharmacy and Pharmacotherapy (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 2 / 2
Disertační práce: 4 / 8

Mgr. Ing. Jiří Václavík, Ph.D.
FaF: AFAAO1_12 Antioxidants and Free Radicals (přednášející)
FaF: AFAFG1_12 Pharmacognosy I (cvičící)
FaF: AFAFG2_12 Pharmacognosy II (cvičící)
FaF: AFAIZ1_12 Work with Information Sources (cvičící)
FaF: AFAMZ1_15 Molecular Principles of Drug Design (cvičící)

Bakalářské práce: 1 / 1
Diplomové práce: 3 / 12
Disertační práce: 1 / 1

Kvalifikační práce mimo MU:
Diplomové práce: 5

PharmDr. Karel Vašut, Ph.D.
FaF: AFAFP1_11 Pharmaceutical Care I (cvičící)
FaF: AFAPK1_11 Pharmacy Counselling (cvičící, garant)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 13

Disertační práce: 0 / 1

Kvalifikační práce mimo MU:
Diplomové práce/Master's theses: 27, Disertační práce/Dissertations: 5

RNDr. Veronika Vaverková, Ph.D.
FaF: AFABO1_12 Pharmaceutical Botany I (cvičící)
FaF: AFABO2_12 Pharmaceutical Botany II (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 0 / 1
Disertační práce: 0 / 0

prof. MUDr. Jiří Vítovec, CSc.
FaF: AFAFC1_14 Human Physiology and Pathophysiology I (přednášející)
FaF: AFAFC2_14 Human Physiology and Pathophysiology II (přednášející)
FaF: AFAKF1_14 Clinical Pharmacy and Pharmacotherapy (přednášející)

Bakalářské práce: 0 / 0
Diplomové práce: 1 / 1
Disertační práce: 0 / 11

PharmDr. MVDr. Vilma Vranová, Ph.D.
FaF: AFACP1_15 Food Chemistry (přednášející)
FaF: AFAFP1_11 Pharmaceutical Care I (cvičící)
FaF: AFAPK1_11 Pharmacy Counselling (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 3 / 21
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
Vedení cca 30 diplomových prací na Farmaceutické fakultě Veterinární a farmaceutické univerzity v Brně, Vedení cca 10 rigorozních prací na Farmaceutické fakultě Veterinární a farmaceutické univerzity v Brně

PharmDr. Jakub Vysloužil, Ph.D.
FaF: AFABF1_13 Biophysics for Pharmacists (přednášející)
FaF: AFAFT2_13 Pharmceutical Technology II (cvičící)
FaF: AFAFT3_13 Pharmaceutical Technology III (cvičící)
FaF: AFANF1_13 Hospital Pharmacy (přednášející, cvičící, garant)
FaF: AFAVG1_13 Advanced Drug Delivery and Technologies (přednášející, cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 8 / 22
Disertační práce: 0 / 0

Kvalifikační práce mimo MU:
FaF VFU, Diplomové práce: 19, Rigorozní práce: 5

PharmDr. Jiří Zeman, Ph.D.
FaF: AFAFT1_13 Pharmaceutical Technology I (cvičící)
FaF: AFAFT2_13 Pharmceutical Technology II (cvičící)
FaF: AFAFT3_13 Pharmaceutical Technology III (cvičící)
FaF: AFAFY1_13 Physical Pharmacy (cvičící)
FaF: AFAMA1_13 Mathemathics and Basics of Data Analysis (cvičící)

Bakalářské práce: 0 / 0
Diplomové práce: 4 / 13
Disertační práce: 0 / 0

3.3 Struktura pedagogických pracovníků dle věku

Pracovní pozice	Do 35 let	36 — 55 let	56 — 70 let	71 a více let
Profesor	0	5	1	2
Docent	0	11	6	1
Odborný asistent	9	34	3	1
Asistent	7	3	2	0
Lektor	0	0	1	0
Jiná (není akademický pracovník)	1	1	0	0

3.4 Počet zahraničních pedagogických pracovníků

	Počet
Celkový počet pedagogických pracovníků	88
Z toho ze Slovenské republiky	9
Z toho z ostatních zemí	2
Celkový počet pracovníků ze zahraničí	11

3.5 Publikační činnost

V kapitole je autorem vybráno jeho až pět nejvýznamnějších publikací za posledních pět let.

PharmDr. Tünde Ambrus, Ph.D.

Attitudes and behaviors regarding online pharmacies in the aftermath of COVID-19 pandemic: At the tipping point towards the new normal [Typ výsledku: Jimp]

FITTLER, Andras, Tünde AMBRUS, Anna SEREFKO, Lenka SMEJKALOVÁ, Anna KIJEWSKA, Aleksandra SZOPA a Matyas KAPLAR. Attitudes and behaviors regarding online pharmacies in the aftermath of COVID-19 pandemic: At the tipping point towards the new normal. Frontiers in Pharmacology. Lausanne: Frontiers Media S.A., 2022, roč. 13, December, s. 1-12. ISSN 1663-9812. Dostupné z: https://dx.doi.org/10.3389/fphar.2022.1070473.

ANALYSIS OF THE EFFECTIVENESS OF THE PHARMACY NETWORK [Typ výsledku: Jimp]

GREGA, Dominik, Tünde AMBRUS, A. MATEJOVIC, Martina ŠUTOROVÁ a J. KOLÁŘ. ANALYSIS OF THE EFFECTIVENESS OF THE PHARMACY NETWORK. FARMACIA. BUCURESTI: SOC STIINTE FARMACEUTICE ROMANIA, 2021, roč. 69, č. 4, s. 799-805. ISSN 0014-8237. Dostupné z: https://dx.doi.org/10.31925/farmacia.2021.4.23.

Ethnobotanical, historical and histological evaluation of Helleborus L. genetic resources used in veterinary and human ethnomedicine [Typ výsledku: Jimp]

BALAZS, V. L., R. FILEP, Tünde AMBRUS, M. KOCSIS, A. FARKAS, S. STRANCZINGER a N. PAPP. Ethnobotanical, historical and histological evaluation of Helleborus L. genetic resources used in veterinary and human ethnomedicine. GENETIC RESOURCES AND CROP EVOLUTION. DORDRECHT: SPRINGER, 2020, roč. 67, č. 3, s. 781-797. ISSN 0925-9864. Dostupné z: https://dx.doi.org/10.1007/s10722-019-00876-5.

Příspěvek k pojmu polypragmazie I. Etymologické poznámky a charakteristika [Typ výsledku: Jsc]

KOLÁŘ, Jozef, Tünde AMBRUS, Dominik GREGA a Lenka SMEJKALOVÁ. Příspěvek k pojmu polypragmazie I. Etymologické poznámky a charakteristika. Česka a slovenska farmacie. Praha: Česká lékařská společnost J. E. Purkyně, 2022, roč. 71, č. 6, s. 245-250. ISSN 1210-7816.

Role fyzických osob, kterým je poskytována zdravotní péče - terminologické poznámky [Typ výsledku: Jsc]

KOLÁŘ, Jozef a Tünde AMBRUS. Role fyzických osob, kterým je poskytována zdravotní péče - terminologické poznámky. Česká a slovenská farmacie. Praha: Česká lékařská společnost J.E. Purkyně, 2022, roč. 71, č. 1, s. 13-19. ISSN 1210-7816. Dostupné z: https://dx.doi.org/10.5817/csf2022-1-13.

prof. PharmDr. Petr Babula, Ph.D.

Allantoin overaccumulation enhances production of metabolites under excess of metals but is not tightly regulated by nitric oxide [Typ výsledku: Jimp]

DRESLER, Slawomir, Jozef KOVACIK, Ireneusz SOWA, Magdalena WOJCIAK, Maciej STRZEMSKI, Anna RYSIAK, Petr BABULA a Christopher D. TODD. Allantoin overaccumulation enhances production of metabolites under excess of metals but is not tightly regulated by nitric oxide. Journal of Hazardous Materials. Amsterdam: Elsevier Science BV., 2022, roč. 436, August 2022, s. 1-10. ISSN 0304-3894. Dostupné z: https://dx.doi.org/10.1016/j.jhazmat.2022.129138.

Nitrogen modulates strontium uptake and toxicity in Hypericum perforatum plants [Typ výsledku: Jimp]

KOVACIK, Jozef, Slawomir DRESLER, Maciej STRZEMSKI, Ireneusz SOWA, Petr BABULA a Magdalena WOJCIAK-KOSIOR. Nitrogen modulates strontium uptake and toxicity in Hypericum perforatum plants. Journal of Hazardous Materials. Amsterdam: Elsevier Science BV., 2022, roč. 425, March 2022, s. 1-10. ISSN 0304-3894. Dostupné z: https://dx.doi.org/10.1016/j.jhazmat.2021.127894.

TET protein inhibitors: Potential and limitations [Typ výsledku: Jimp]

KAPLÁNEK, Robert, Zdeněk KEJÍK, Jan HAJDUCH, Kateřina VESELÁ, Kateřina KUČNIROVÁ, Markéta SKALIČKOVÁ, Anna VENHAUEROVÁ, Božena HOSNEDLOVÁ, Róbert HROMÁDKA, Petr DYTRYCH, Petr NOVOTNÝ, Nikita ABRAMENKO, Veronika ANTONYOVÁ, David HOSKOVEC, Petr BABULA, Michal MASAŘÍK, Pavel MARTÁSEK a Milan JAKUBEK. TET protein inhibitors: Potential and limitations. Biomedicine & Pharmacotherapy. ISSY-LES-MOULINEAUX: ELSEVIER, 2023, roč. 166, October 2023, s. 1-15. ISSN 0753-3322. Dostupné z: https://dx.doi.org/10.1016/j.biopha.2

Iron Complexes of Flavonoids-Antioxidant Capacity and Beyond [Typ výsledku: Jimp]

KEJÍK, Zdenek, Robert KAPLÁNEK, Michal MASAŘÍK, Petr BABULA, Adam MATKOWSKI, Petr FILIPENSKÝ, Katerina VESELÁ, Jakub GBUREK, David SÝKORA, Pavel MARTÁSEK a Milan JAKUBEK. Iron Complexes of Flavonoids-Antioxidant Capacity and Beyond. International Journal of Molecular Sciences. Basel: MDPI, 2021, roč. 22, č. 2, s. 1-20. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms22020646.

Calcium signaling affects migration and proliferation differently in individual cancer cells due to nifedipine treatment [Typ výsledku: Jimp]

CHOVANCOVÁ, Barbora, Veronika LISKOVÁ, Svetlana MIKLIKOVA, Sona HUDECOVA, Petr BABULA, Adela PENESOVA, Angelika SEVCIKOVA, Erika DURINIKOVA, Marie NOVÁKOVÁ, Miroslava MATUSKOVA a Oľga KRIŽANOVÁ. Calcium signaling affects migration and proliferation differently in individual cancer cells due to nifedipine treatment. Biochemical Pharmacology. Oxford: Elsevier, 2020, roč. 171, January 2020, s. 1-15. ISSN 0006-2952. Dostupné z: https://dx.doi.org/10.1016/j.bcp.2019.113695.

doc. Ing. Pavel Bobáľ, CSc.

Parallel in vitro and in silico investigations into anti-inflammatory effects of non-prenylated stilbenoids [Typ výsledku: Jimp]

LELÁKOVÁ, Veronika, Karel ŠMEJKAL, K. JAKUBCZYK, O. VESELY, P. LANDA, Jiří VÁCLAVÍK, Pavel BOBÁĽ, Hana PÍŽOVÁ, V. TEMML, T. STEINACHER, D. SCHUSTER, S. GRANICA, Z. HANAKOVA a J. HOSEK. Parallel in vitro and in silico investigations into anti-inflammatory effects of non-prenylated stilbenoids. Food Chemistry. Oxford, UK: Elsevier Science, 2019, roč. 285, s. 431-440. ISSN 0308-8146. Dostupné z: https://dx.doi.org/10.1016/j.foodchem.2019.01.128.

Synthesis and application of BODIPY-based fluorescent labeling tag for oligosaccharide and N-linked glycan analysis by high-performance liquid chromatography with fluorescence detection [Typ výsledku: Jimp]

SMOLKOVÁ, Denisa, Michal GREGUŠ, Hubert VESELÝ, Richard CMELIK, Hana PÍŽOVÁ, Pavel BOBÁĽ a Jana LAVICKA. Synthesis and application of BODIPY-based fluorescent labeling tag for oligosaccharide and N-linked glycan analysis by high-performance liquid chromatography with fluorescence detection. Analytica Chimica Acta. Amsterdam: Elsevier Science publishers, 2024, roč. 1285, č. 342032, s. 1-8. ISSN 0003-2670. Dostupné z: https://dx.doi.org/10.1016/j.aca.20

Common Post-translational Modifications (PTMs) of Proteins: Analysis by Up-to-Date Analytical Techniques with an Emphasis on Barley [Typ výsledku: Jimp]

BOBALOVA, Janette, Dana STROUHALOVA a Pavel BOBÁĽ. Common Post-translational Modifications (PTMs) of Proteins: Analysis by Up-to-Date Analytical Techniques with an Emphasis on Barley. Journal of Agricultural and Food Chemistry. WASHINGTON: AMER CHEMICAL SOC, 2023, roč. 71, č. 41, s. 14825-14837. ISSN 0021-8561. Dostupné z: https://dx.doi.org/10.1021/acs.jafc.3c00886.

Asymmetric Organocatalyzed Friedel-Crafts Reaction of Trihaloacetaldehydes and Phenols [Typ výsledku: Jimp]

ŠVESTKA, David, Jan OTEVŘEL a Pavel BOBÁĽ. Asymmetric Organocatalyzed Friedel-Crafts Reaction of Trihaloacetaldehydes and Phenols. Advanced Synthesis and Catalysis. Weinheim: Wiley-VCH GmbH., 2022, roč. 364, č. 13, s. 2174-2183. ISSN 1615-4150. Dostupné z: https://dx.doi.org/10.1002/adsc.202200180.

Asymmetric Organocatalyzed Transfer Hydroxymethylation of Isoindolinones Using Formaldehyde Surrogates [Typ výsledku: Jimp]

ŠVESTKA, David, Pavel BOBÁĽ, Jan OTEVŘEL a Mario WASER. Asymmetric Organocatalyzed Transfer Hydroxymethylation of Isoindolinones Using Formaldehyde Surrogates. Organic Letters. Spojené státy: American Chemical Society, 2024, roč. 12, č. 26, s. 2505-2510. ISSN 1523-7060. Dostupné z: https://dx.doi.org/10.1021/acs.orglett.4c00818.

doc. MUDr. Regina Demlová, Ph.D.

High prevalence of severe hypovitaminosis D in patients with advanced gastric cancer treated with first-line chemotherapy with or without anti-EGFR-directed monoclonal antibody (EXPAND trial) showing no prognostic impact [Typ výsledku: Jimp]

OBERMANNOVÁ, Radka, Dalibor VALÍK, Dirk HASENCLEVER, Lenka ZDRAŽILOVÁ DUBSKÁ, Ulrich HACKER, Regina DEMLOVÁ, Iveta SELINGEROVA a Florian LORDICK. High prevalence of severe hypovitaminosis D in patients with advanced gastric cancer treated with first-line chemotherapy with or without anti-EGFR-directed monoclonal antibody (EXPAND trial) showing no prognostic impact. European Journal of Cancer. Oxford: Elsevier Science Inc., 2019, roč. 116, JUL 2019, s. 107-113. ISSN 0959-8049. Dostupné z: https://dx.doi.org/10.1016/j.ejca.2019.05.011.

PET/CT-tailored treatment of locally advanced oesophago-gastric junction adenocarcinoma: a report on the feasibility of the multicenter GastroPET study [Typ výsledku: Jimp]

OBERMANNOVÁ, Radka, Iveta SELINGEROVÁ, Zdeněk ŘEHÁK, Václav JEDLIČKA, Marek SLÁVIK, Pavel FABIAN, Ivo NOVOTNÝ, Milada ZEMANOVA, Hana STUDENTOVA, Peter GRELL, Lenka ZDRAŽILOVÁ DUBSKÁ, Regina DEMLOVÁ, Tomáš HARUSTIAK, Renata HEJNOVA, Igor KISS a Rostislav VYZULA. PET/CT-tailored treatment of locally advanced oesophago-gastric junction adenocarcinoma: a report on the feasibility of the multicenter GastroPET study. THERAPEUTIC ADVANCES IN MEDICAL ONCOLOGY. LONDON: SAGE PUBLICATIONS LTD, 2021, roč. 13, December 2021, s. 1-14. ISSN 1758-8340. Dostupné z: https://dx.doi.org/10.1177/17588359211065153.

Second primary malignancies in colorectal cancer patients [Typ výsledku: Jimp]

HALÁMKOVÁ, Jana, Tomáš KAZDA, Lucie PEHALOVÁ, Roman GONĚC, Šárka KOZÁKOVÁ, Lucia BOHOVICOVÁ, Dagmar KRAKOROVA ADAMKOVA, Ondřej SLABÝ, Regina DEMLOVÁ, Marek SVOBODA a Igor KISS. Second primary malignancies in colorectal cancer patients. Nature Scientific Reports. London: NATURE RESEARCH, 2021, roč. 11, č. 1, s. 1-12. ISSN 2045-2322. Dostupné z: https://dx.doi.org/10.1038/s41598-021-82248-7.

Assessment of Immune Response Following Dendritic Cell-Based Immunotherapy in Pediatric Patients With Relapsing Sarcoma [Typ výsledku: Jimp]

FĚDOROVÁ, Lenka, Peter MÚDRY, Kateřina PILÁTOVÁ, Iveta SELINGEROVA, Jana MERHAUTOVÁ, Zdenek REHAK, Dalibor VALÍK, Eva HLAVÁČKOVÁ, Dáša ČERNÁ, Lucie FABEROVÁ, Pavel MAZÁNEK, Zdeněk PAVELKA, Regina DEMLOVÁ, Jaroslav ŠTĚRBA a Lenka ZDRAŽILOVÁ DUBSKÁ. Assessment of Immune Response Following Dendritic Cell-Based Immunotherapy in Pediatric Patients With Relapsing Sarcoma. Frontiers in Oncology. Lausanne: Frontiers Media S.A., 2019, roč. 9, NOV 14 2019, s. 1-12. ISSN 2234-943X. Dostupné z: https://dx.doi.org/10.3389/fonc.2019.01169.

Effects of Early and Systematic Integration of Specialist Palliative Care in Patients with Advanced Cancer: Randomized Controlled Trial PALINT [Typ výsledku: Jimp]

SLÁMA, Ondřej, Lukas POCHOP, Jiří ŠEDO, Jan ŠVANCARA, Petra ŠEDOVÁ, Lucie SVETLAKOVA, Regina DEMLOVÁ a Rostislav VYZULA. Effects of Early and Systematic Integration of Specialist Palliative Care in Patients with Advanced Cancer: Randomized Controlled Trial PALINT. JOURNAL OF PALLIATIVE MEDICINE. NEW ROCHELLE: MARY ANN LIEBERT, INC, 2020, roč. 23, č. 12, s. 1586-1593. ISSN 1096-6218. Dostupné z: https://dx.doi.org/10.1089/jpm.2019.069

doc. PharmDr. Oldřich Farsa, Ph.D.

Aminopeptidase N Inhibitors as Pointers for Overcoming Antitumor Treatment Resistance [Typ výsledku: Jimp]

FARSA, Oldřich, Veronika BALLAYOVÁ, Radka ŽÁČKOVÁ, Peter KOLLÁR, Tereza KAUEROVÁ a Peter ZUBÁČ. Aminopeptidase N Inhibitors as Pointers for Overcoming Antitumor Treatment Resistance. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2022, roč. 23, č. 17, s. 1-15. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms23179813.

Protein and Small-Molecule Leucopoiesis and Thrombopoiesis Stimulators [Typ výsledku: Jimp]

FARSA, Oldřich a Peter ZUBÁČ. Protein and Small-Molecule Leucopoiesis and Thrombopoiesis Stimulators. Mini-reviews in medicinal chemistry. Sharjah: Betham Science Publ Ltd., 2021, roč. 21, č. 13, s. 1638-1645. ISSN 1389-5575. Dostupné z: https://dx.doi.org/10.2174/1389557521999201230195926.

Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity [Typ výsledku: Jimp]

PADRTOVÁ, Tereza, Pavlína MARVANOVÁ, Renata KUBÍNOVÁ, Jozef CSÖLLEI, Oldřich FARSA, Tomáš GONĚC, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Jiří PAZOUREK, Alice SYCHROVÁ, Karel ŠMEJKAL a Petr MOKRÝ. Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity. Current organic synthesis. Sharjah: Bentham Science Publ Ltd, 2020, roč. 17, č. 7, s. 576-587. ISSN 1570-1794. Dostupné z: https://dx.doi.org/10.2174/1570179417666200619132218.

Erythropoetins in Therapy from the Point of View of a Medicinal Chemist [Typ výsledku: Jimp]

FARSA, Oldřich a Peter ZUBÁČ. Erythropoetins in Therapy from the Point of View of a Medicinal Chemist. CHEMICKÉ LISTY. Praha: Česká společnost chemická, 2019, roč. 113, č. 9, s. 540-544. ISSN 0009-2770.

Aminopeptidase N as a potential drug target [Typ výsledku: Jost]

FARSA, Oldřich, Veronika BALLAYOVÁ, Radka ŽÁČKOVÁ a Peter ZUBÁČ. Aminopeptidase N as a potential drug target. European Pharmaceutical Journal. Sciendo, 2023, roč. 70, s2, s. „ AoP,1 “-„ 2 “, 2 s. ISSN 2453-6725. Dostupné z: https://dx.doi.org/10.2478/afpuc-2024-0002.

doc. PharmDr. Aleš Franc, Ph.D.

Do foodborne polyethylene microparticles affect the health of rainbow trout (Oncorhynchus mykiss)? [Typ výsledku: Jimp]

HODKOVICOVA, N., A. HOLLEROVA, H. CALOUDOVA, J. BLAHOVA, Aleš FRANC, Michaela GARAJOVÁ, J. LENZ, F. TICHY, M. FALDYNA, P. KULICH, J. MARES, R. MACHAT, V. ENEVOVA a Z. SVOBODOVA. Do foodborne polyethylene microparticles affect the health of rainbow trout (Oncorhynchus mykiss)? Science of the Total Environment. Amsterdam: Elsevier Science, 2021, roč. 793, č. 148490, s. 1-14. ISSN 0048-9697. Dostupné z: https://dx.doi.org/10.1016/j.scitotenv.

The biological activity of the organic UV filter ethylhexyl methoxycinnamate in rainbow trout (Oncorhynchus mykiss) [Typ výsledku: Jimp]

CAHOVA, Jana, Jana BLAHOVA, Petr MARSALEK, Veronika DOUBKOVA, Aleš FRANC, Michaela GARAJOVÁ, Frantisek TICHY, Jan MARES a Zdenka SVOBODOVA. The biological activity of the organic UV filter ethylhexyl methoxycinnamate in rainbow trout (Oncorhynchus mykiss). Science of the Total Environment. Amsterdam: Elsevier Science, 2021, roč. 774, č. 145570, s. 1-8. ISSN 0048-9697. Dostupné z: https://dx.doi.org/10.1016/j.scitotenv.2021.145570.

Non-steroidal anti-inflammatory drugs caused an outbreak of inflammation and oxidative stress with changes in the gut microbiota in rainbow trout (Onconhytichus mykiss) [Typ výsledku: Jimp]

HODKOVICOVA, N., A. HOLLEROVA, J. BLAHOVA, P. MIKULA, M. CRHANOVA, D. KARASOVA, Aleš FRANC, Sylvie PAVLOKOVÁ, J. MARES, E. POSTULKOVA, F. TICHY, P. MARSALEK, J. LANIKOVA, M. FALDYNA a Z. SVOBODOVA. Non-steroidal anti-inflammatory drugs caused an outbreak of inflammation and oxidative stress with changes in the gut microbiota in rainbow trout (Onconhytichus mykiss). Science of the Total Environment. Amsterdam: Elsevier, 2022, roč. 849, November, s. 1-16. ISSN 0048-9697. Dostupné z: https://dx.doi.org/10.1016/j.scitotenv.2022.157921.

Polystyrene microparticles can affect the health status of freshwater fish-Threat of oral microplastics intake [Typ výsledku: Jimp]

HOLLEROVA, A., N. HODKOVICOVA, J. BLAHOVA, M. FALDYNA, Aleš FRANC, Sylvie PAVLOKOVÁ, F. TICHY, E. POSTULKOVA, J. MARES, D. MEDKOVA, M. KYLLAR a Z. SVOBODOVA. Polystyrene microparticles can affect the health status of freshwater fish-Threat of oral microplastics intake. Science of the Total Environment. Amsterdam: Elsevier, 2023, roč. 858, č. 3, s. 1-12. ISSN 0048-9697. Dostupné z: https://dx.doi.org/10.1016/j.scitotenv.2022.159976.

Příručka pro tvorbu a použití disoluční metody se zřetelem k perorálním léčivým přípravkům s okamžitým uvolňováním [Typ výsledku: B]

FRANC, Aleš. Příručka pro tvorbu a použití disoluční metody se zřetelem k perorálním léčivým přípravkům s okamžitým uvolňováním. 1. vyd. Pardubice: Univerzita Pardubice, 2021, 61 s. učebnice. ISBN 978-80-7560-364-7.

PharmDr. Tomáš Goněc, Ph.D.

Ring-Substituted 1-Hydroxynaphthalene-2-Carboxanilides Inhibit Proliferation and Trigger Mitochondria-Mediated Apoptosis [Typ výsledku: Jimp]

KAUEROVÁ, Tereza, Tomáš GONĚC, Josef JAMPÍLEK, Susanne HAFNER, Ann-Kathrin GAISER, Tatiana SYROVETS, Radek FEDR, Karel SOUČEK a Peter KOLLÁR. Ring-Substituted 1-Hydroxynaphthalene-2-Carboxanilides Inhibit Proliferation and Trigger Mitochondria-Mediated Apoptosis. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2020, roč. 21, č. 10, s. 1-17. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms

Trifluoromethylcinnamanilide Michael Acceptors for Treatment of Resistant Bacterial Infections [Typ výsledku: Jimp]

STRHÁRSKY, Tomáš, Dominika PINDJAKOVA, Jiří KOS, Lucia VRABLOVA, Pavel ŠMAK, Hana MICHNOVA, Tomáš GONĚC, Jan HOŠEK, Michal ORAVEC, Izabela JENDRZEJEWSKA, Alois ČÍŽEK a Josef JAMPILEK. Trifluoromethylcinnamanilide Michael Acceptors for Treatment of Resistant Bacterial Infections. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2022, roč. 23, č. 23, s. 1-22. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms232315090.

Towards Arginase Inhibition: Hybrid SAR Protocol for Property Mapping of Chlorinated N-arylcinnamamides [Typ výsledku: Jimp]

BAK, Andrzej, Jiří KOS, Gilles DEGOTTE, Aleksandra SWIETLICKA, Tomáš STRHÁRSKY, Dominika PINDJAKOVA, Tomáš GONĚC, Adam SMOLINSKI, Pierre FRANCOTTE, Michel FREDERICH, Violetta KOZIK a Josef JAMPÍLEK. Towards Arginase Inhibition: Hybrid SAR Protocol for Property Mapping of Chlorinated N-arylcinnamamides. International Journal of Molecular Sciences. BASEL: MDPI, 2023, roč. 24, č. 4, s. 1-23. ISSN 1661-6596. Dostupné z: https://dx.doi.org/10.3390/ijms24043611.

Hydroxynaphthalenecarboxamides and substituted piperazinylpropandiols, two new series of BRAF inhibitors. A theoretical and experimental study [Typ výsledku: Jimp]

CAMPOS, L.E., F. GARIBOTTO, E. ANGELINA, J. KOS, Tomáš GONĚC, Pavlína MARVANOVÁ, M. VETTORAZZI, M. ORAVEC, I. JENDRZEJEWSKA, J. JAMPILEK, S.E. ALVAREZ a R.D. ENRIZ. Hydroxynaphthalenecarboxamides and substituted piperazinylpropandiols, two new series of BRAF inhibitors. A theoretical and experimental study. Bioorganic Chemistry. SAN DIEGO: ACADEMIC PRESS INC ELSEVIER SCIENCE, 2020, roč. 103, č. 104145, s. 1-13. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2020.104145.

Antistaphylococcal Activities and ADME-Related Properties of Chlorinated Arylcarbamoylnaphthalenylcarbamates [Typ výsledku: Jimp]

GONĚC, Tomáš, D. PINDJAKOVA, L. VRABLOVA, Tomáš STRHÁRSKY, H. MICHNOVA, Tereza KAUEROVÁ, Peter KOLLÁR, M. ORAVEC, I. JENDRZEJEWSKA, A. CIZEK a J. JAMPILEK. Antistaphylococcal Activities and ADME-Related Properties of Chlorinated Arylcarbamoylnaphthalenylcarbamates. Pharmaceuticals. BASEL: MDPI, 2022, roč. 15, č. 6, s. 1-19. ISSN 1424-8247. Dostupné z: https://dx.doi.org/10.3390/ph15060715.

doc. RNDr. Jan Hošek, Ph.D.

Cross sectional study on exposure to BPA and its analogues and semen parameters in Czech men [Typ výsledku: Jimp]

JEŠETA, Michal, Jiří KALINA, Kateřina FRANZOVÁ, Sandra FIALKOVÁ, Jan HOŠEK, Lenka MEKIŇOVÁ, Igor CRHA, Bartosz KEMPISTY, Pavel VENTRUBA a Jana NAVRÁTILOVÁ. Cross sectional study on exposure to BPA and its analogues and semen parameters in Czech men. Environmental Pollution. OXFORD: ELSEVIER SCI LTD, 2024, roč. 345, March 2024, s. 1-9. ISSN 0269-7491. Dostupné z: https://dx.doi.org/10.1016/j.envpol.2024.123445.

Trifluoromethylcinnamanilide Michael Acceptors for Treatment of Resistant Bacterial Infections [Typ výsledku: Jimp]

STRHÁRSKY, Tomáš, Dominika PINDJAKOVA, Jiří KOS, Lucia VRABLOVA, Pavel ŠMAK, Hana MICHNOVA, Tomáš GONĚC, Jan HOŠEK, Michal ORAVEC, Izabela JENDRZEJEWSKA, Alois ČÍŽEK a Josef JAMPILEK. Trifluoromethylcinnamanilide Michael Acceptors for Treatment of Resistant Bacterial Infections. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2022, roč. 23, č. 23, s. 1-22. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms232315090.

Sildenafil affects the human Kir2.1 and Kir2.2 channels at clinically relevant concentrations: Inhibition potentiated by low Ba2+ [Typ výsledku: Jimp]

IIJIMA, Akimasa, Olga ŠVECOVÁ, Jan HOŠEK, Roman KULA a Markéta BÉBAROVÁ. Sildenafil affects the human Kir2.1 and Kir2.2 channels at clinically relevant concentrations: Inhibition potentiated by low Ba2+. FRONTIERS IN PHARMACOLOGY. LAUSANNE: FRONTIERS MEDIA SA, 2023, roč. 14, February 2023, s. 1-10. ISSN 1663-9812. Dostupné z: https://dx.doi.org/10.3389/fphar.2023.1136272.

Therapeutic potential of prenylated stilbenoid macasiamenene F through its anti-inflammatory and cytoprotective effects on LPS-challenged monocytes and microglia [Typ výsledku: Jimp]

LELÁKOVÁ, Veronika, Sophie BÉRAUD-DUFOUR, Jan HOŠEK, Karel ŠMEJKAL, Vilailak PRACHYAWARAKORN, Phanruethai PAILEE, Catherine WIDMANN, Jiří VÁCLAVÍK, Thierry COPPOLA, Jean MAZELLA, Nicolas BLONDEAU a Catherine HEURTEAUX. Therapeutic potential of prenylated stilbenoid macasiamenene F through its anti-inflammatory and cytoprotective effects on LPS-challenged monocytes and microglia. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2020, roč. 263, č. 263, s. 1-14. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2020.113147.

Enhancing Solubility and Bioefficacy of Stilbenes by Liposomal Encapsulation-The Case of Macasiamenene F [Typ výsledku: Jimp]

BREZANI, Veronika, Nicolas BLONDEAU, Jan KOTOUCEK, Eva KLÁSKOVÁ, Karel ŠMEJKAL, Jan HOŠEK, Eliska MASKOVA, Pavel KULICH, Vilailak PRACHYAWARAKORN, Catherine HEURTEAUX a Josef MASEK. Enhancing Solubility and Bioefficacy of Stilbenes by Liposomal Encapsulation-The Case of Macasiamenene F. ACS Omega. WASHINGTON: American Chemical Society, 2024, roč. 9, č. 8, s. 9027-9039. ISSN 2470-1343. Dostupné z: https://dx.doi.org/10.1021/ac

MUDr. Marta Chalupová, Ph.D.

Evaluation and comparison of structurally different cellulose-based hemostatic agents in a rat kidney model [Typ výsledku: Jimp]

PAPRSKÁROVÁ, Alice, Pavel SUCHÝ, Marta CHALUPOVÁ, L. MICHLOVSKA, Jarmila KLUSÁKOVÁ, T. SOPUCH a L. VOJTOVA. Evaluation and comparison of structurally different cellulose-based hemostatic agents in a rat kidney model. Cellulose. DORDRECHT: SPRINGER, 2021, roč. 28, č. 14, s. 9369-9382. ISSN 0969-0239. Dostupné z: https://dx.doi.org/10.1007/s10570-021-04104-1.

A synergistic effect of fibrous carboxymethyl cellulose with equine collagen improved the hemostatic properties of freeze-dried wound dressings [Typ výsledku: Jimp]

SEDLAR, M., K. KACVINSKA, Z. FOHLEROVA, D. IZSAK, Marta CHALUPOVÁ, Pavel SUCHÝ, M. DOHNALOVA, T. SOPUCH a L. VOJTOVA. A synergistic effect of fibrous carboxymethyl cellulose with equine collagen improved the hemostatic properties of freeze-dried wound dressings. Cellulose. DORDRECHT: SPRINGER, 2023, Neuveden., September, s. 1-19. ISSN 0969-0239. Dostupné z: https://dx.doi.org/10.1007/s10570-023-05499-9.

Composite Hemostatic Nonwoven Textiles Based on Hyaluronic Acid, Cellulose, and Etamsylate [Typ výsledku: Jimp]

SUCHÝ, Pavel, Alice PAPRSKÁROVÁ, Marta CHALUPOVÁ, Lucie MARHOLDOVA, Kristina NESPOROVA, Jarmila KLUSÁKOVÁ, Gabriela KUZMÍNOVÁ, Michal HENDRYCH a Vladimir VELEBNY. Composite Hemostatic Nonwoven Textiles Based on Hyaluronic Acid, Cellulose, and Etamsylate. Materials. ST ALBAN-ANLAGE: MDPI, 2020, roč. 13, č. 7, s. 1-14. ISSN 1996-1944. Dostupné z: https://dx.doi.org/10.3390/ma13071627.

Platinum(II)-oxalato complexes of seliciclib (CYC202) derivatives show different cellular effects and lesser adverse effects in mouse lymphoma model than cisplatin [Typ výsledku: Jimp]

VANCO, J., P. STARHA, J. HOSEK, Marta CHALUPOVÁ, Pavel SUCHÝ a Z. TRAVNICEK. Platinum(II)-oxalato complexes of seliciclib (CYC202) derivatives show different cellular effects and lesser adverse effects in mouse lymphoma model than cisplatin. Journal of Biological Inorganic Chemistry. NEW YORK: SPRINGER, 2020, roč. 25, č. 1, s. 67-73. ISSN 0949-8257. Dostupné z: https://dx.doi.org/10.1007/s00775-019-01735-5.

Květinův den — Mezioborová konference mladých farmakologů a toxikologů, Praha 2020, sborník abstraktů [Typ výsledku: M]

CHALUPOVÁ, Marta, Pavel SUCHÝ a Alžběta KRUŽICOVÁ. Květinův den — Mezioborová konference mladých farmakologů a toxikologů, Praha 2020, sborník abstraktů. 2020.

doc. RNDr. Jozef Kolář, CSc.

Historical analysis of pharmacoeconomic terms [Typ výsledku: Jimp]

GREGA, Dominik a Jozef KOLÁŘ. Historical analysis of pharmacoeconomic terms. Scientometrics. DORDRECHT: Springer, 2019, roč. 119, č. 3, s. 1643-1654. ISSN 0138-9130. Dostupné z: https://dx.doi.org/10.1007/s11192-019-03093-0.

The Economic Burden of Biological Drugs in Rheumatoid Arthritis Treatment [Typ výsledku: Jimp]

GREGA, Dominik a Jozef KOLÁŘ. The Economic Burden of Biological Drugs in Rheumatoid Arthritis Treatment. Value in Health Regional Issues. AMSTERDAM: Elsevier, 2024, roč. 40, March, s. 13-18. ISSN 2212-1099. Dostupné z: https://dx.doi.org/10.1016/j.vhri.2023.10.001.

Role fyzických osob, kterým je poskytována zdravotní péče - terminologické poznámky [Typ výsledku: Jsc]

KOLÁŘ, Jozef a Tünde AMBRUS. Role fyzických osob, kterým je poskytována zdravotní péče - terminologické poznámky. Česká a slovenská farmacie. Praha: Česká lékařská společnost J.E. Purkyně, 2022, roč. 71, č. 1, s. 13-19. ISSN 1210-7816. Dostupné z: https://dx.doi.org/10.5817/csf2022-1-13.

Friction cost approach methodology in pharmacoeconomic analyses [Typ výsledku: Jsc]

GREGA, Dominik a Jozef KOLÁŘ. Friction cost approach methodology in pharmacoeconomic analyses. Česká a slovenská farmacie. Česká lékařská společnost J.E. Purkyně, 2021, roč. 70, č. 3, s. 107-111. ISSN 1210-7816. Dostupné z: https://dx.doi.org/10.5817/CSF2021-3-107.

Specifický charakter léčiv a hodnota léčiv [Typ výsledku: Jsc]

KOLÁŘ, Jozef a Jan KOSTŘIBA. Specifický charakter léčiv a hodnota léčiv. Česka a slovenska farmacie. Praha: Česká lékařská společnost J. E. Purkyně, 2021, roč. 70, č. 4, s. 119-126. ISSN 1210-7816. Dostupné z: https://dx.doi.org/10.5817/CSI
4-119.

GREGA, Dominik, Tünde AMBRUS, Aadam MATEJOVIC, Martina ŠUTOROVÁ a Jozef KOLÁŘ. ANALYSIS OF THE EFFECTIVENESS OF THE PHARMACY NETWORK. FARMACIA. BUCURESTI: SOC STIINTE FARMACEUTICE ROMANIA, 2021, roč. 69, č. 4, s. 799-805. ISSN 0014-8237. Dostupné z: https://dx.doi.org/10.31925/farmacia.2021.4.23. (Typ výsledku: Jimp)

MALY, Josef, Simona DVORACKOVA, Eva ZIMCIKOVA, Ales A. KUBENA, Jozef KOLAR, Jiri VLCEK, Miroslav PENKA a Katerina MALA-LADOVA. Patterns in anticoagulant utilization in the Czech Republic during 2007-2017. JOURNAL OF THROMBOSIS AND THROMBOLYSIS. DORDRECHT: SPRINGER, 2019, roč. 47, č. 2, s. 305-311. ISSN 0929-5305. Dostupné z: https://dx.doi.org/10.1007/s11239-019-01806-z. (Typ výsledku: Jimp)

doc. PharmDr. Peter Kollár, Ph.D.

Ring-Substituted 1-Hydroxynaphthalene-2-Carboxanilides Inhibit Proliferation and Trigger Mitochondria-Mediated Apoptosis [Typ výsledku: Jimp]

KAUEROVÁ, Tereza, Tomáš GONĚC, Josef JAMPÍLEK, Susanne HAFNER, Ann-Kathrin GAISER, Tatiana SYROVETS, Radek FEDR, Karel SOUČEK a Peter KOLLÁR. Ring-Substituted 1-Hydroxynaphthalene-2-Carboxanilides Inhibit Proliferation and Trigger Mitochondria-Mediated Apoptosis. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2020, roč. 21, č. 10, s. 1-17. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms

Salicylanilides and Their Anticancer Properties [Typ výsledku: Jimp]

KAUEROVÁ, Tereza, Maria-Jesus PEREZ-PEREZ a Peter KOLLÁR. Salicylanilides and Their Anticancer Properties. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2023, roč. 24, č. 2, s. 1-22. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms24021728.

Antiproliferative and cytotoxic activities of C-Geranylated flavonoids from Paulownia tomentosa Steud. Fruit [Typ výsledku: Jimp]

MOLČANOVÁ, Lenka, Tereza KAUEROVÁ, S. DALL'ACQUA, P. MARSIK, Peter KOLLÁR a Karel ŠMEJKAL. Antiproliferative and cytotoxic activities of C-Geranylated flavonoids from Paulownia tomentosa Steud. Fruit. Bioorganic Chemistry. SAN DIEGO: ACADEMIC PRESS INC ELSEVIER SCIENCE, 2021, roč. 111, č. 104797, s. 1-12. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2021.104797.

Hybridization Approach to Identify Salicylanilides as Inhibitors of Tubulin Polymerization and Signal Transducers and Activators of Transcription 3 (STAT3) [Typ výsledku: Jimp]

GARGANTILLA, Marta, Leentje PERSOONS, Tereza KAUEROVÁ, Natalia DEL RIO, Dirk DAELEMANS, Eva-Maria PRIEGO, Peter KOLLÁR a Maria-Jesus PEREZ-PEREZ. Hybridization Approach to Identify Salicylanilides as Inhibitors of Tubulin Polymerization and Signal Transducers and Activators of Transcription 3 (STAT3). Pharmaceuticals. BASEL: MDPI, 2022, roč. 15, č. 7, s. 1-18. ISSN 1424-8247. Dostupné z: https://dx.doi.org/10.3390/ph15070835.

Betablokátory v léčbě kardiovaskulárních onemocnění [Typ výsledku: B]

VÍTOVEC, Jiří, Peter KOLLÁR a Karel LÁBR. Betablokátory v léčbě kardiovaskulárních onemocnění. 1. vyd. Praha: Grada Publishing, a.s., 2023, 136 s. Farmakoterapie pro klinickou praxi. ISBN 978-80-271-3220-1.

PharmDr. Bc. Hana Kotolová, Ph.D.

Validation and verification of predictive salivary biomarkers for oral health [Typ výsledku: Jimp]

BOSTANCI, N., K. MITSAKAKIS, B. AFACAN, K. BAO, B. JOHANNSEN, D. BAUMGARTNER, L. MULLER, Hana KOTOLOVÁ, G. EMINGIL a Michal KARPÍŠEK. Validation and verification of predictive salivary biomarkers for oral health. Nature Scientific Reports. London: NATURE RESEARCH, 2021, roč. 11, č. 1, s. 1-12. ISSN 2045-2322. Dostupné z: https://dx.doi.org/10.1038/s41598-021-85120-w.

Metabolic profile of methylazoxymethanol model of schizophrenia in rats and effects of three antipsychotics in long-acting formulation [Typ výsledku: Jimp]

HORSKÁ, Kateřina, Hana KOTOLOVÁ, Michal KARPÍŠEK, Zuzana BABINSKÁ, Tomáš HAMMER, Jiří PROCHÁZKA, Tibor ŠTARK, Vincenzo MICALE a Jana RUDÁ. Metabolic profile of methylazoxymethanol model of schizophrenia in rats and effects of three antipsychotics in long-acting formulation. Toxicology and applied pharmacology. San Diego: Elsevier, 2020, roč. 406, November 2020, s. 1-14. ISSN 0041-008X. Dostupné z: https://dx.doi.org/10.1016/j.taap.2020.115214.

PRE-FORMULATION DESIGN OF SUSTAINED-RELEASE GnRHa-LOADED PLGA MICROSPHERES AND ASSOCIATED FORMULATIONS FOR CONTROLLING REPRODUCTION IN AQUACULTURE [Typ výsledku: Jimp]

HOLICKÁ, Martina, Jakub VYSLOUŽIL, Kateřina KUBOVÁ, Jan MUSELÍK, Eva RADINOVÁ, David VETCHÝ, Hana KOTOLOVÁ, Tomáš HAMMER, J. MAŠEK, P. PODHOREC a J. KNOWLES. PRE-FORMULATION DESIGN OF SUSTAINED-RELEASE GnRHa-LOADED PLGA MICROSPHERES AND ASSOCIATED FORMULATIONS FOR CONTROLLING REPRODUCTION IN AQUACULTURE. ACTA POLONIAE PHARMACEUTICA. Warsaw: POLSKIE TOWARZYSTWO FARMACEUTYCZNE, 2021, roč. 78, č. 6, s. 801-812. ISSN 0001-6837. Dostupné z: https://dx.doi.org/10.32383/appdr

Bolesť chrbta — odporúčania pre postup lekárnika [Typ výsledku: Jost]

GRÓFIK, Milan, Daniela MINÁRIKOVÁ a Hana KOTOLOVÁ. Bolesť chrbta — odporúčania pre postup lekárnika. Súčasná klinická prax. Praha, 2023, roč. 19, č. 1, s. 29-33. ISSN 1214-7036.

CLOZAPINE AUGMENTATION WITH LONG-ACTING INJECTABLE ANTIPSYCHOTICS - EXPERIENCES IN THE CZECH REPUBLIC [Typ výsledku: a]

KOTOLOVÁ, Hana, Martina NOVÁKOVÁ, Eliška NOVÁKOVÁ, Tomáš HAMMER a Libor USTOHAL. CLOZAPINE AUGMENTATION WITH LONG-ACTING INJECTABLE ANTIPSYCHOTICS - EXPERIENCES IN THE CZECH REPUBLIC. In ESCP PRAGUE SYMPOSIUM 2022. 2022. Dostupné z: https://dx.doi.org/10.1007/s11096-022-01521-5.

Mgr. Aleš Kroutil, Ph.D.

Arylaminopropanone Derivatives as Potential Cholinesterase Inhibitors: Synthesis, Docking Study and Biological Evaluation [Typ výsledku: Jimp]

HUDCOVÁ, Anna, Aleš KROUTIL, Renata KUBÍNOVÁ, A. D. GARRO, L. J. GUTIERREZ, D. ENRIZ, M. ORAVEC a Jozef CSÖLLEI. Arylaminopropanone Derivatives as Potential Cholinesterase Inhibitors: Synthesis, Docking Study and Biological Evaluation. Molecules. 2020, roč. 25, č. 7, s. 1751-1767. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules25071751.

doc. PharmDr. Kateřina Kubová, Ph.D.

Structure, dynamics, and functional properties of hybrid alginate-pectin gels dually crosslinked by Ca2+and Zn2+ions designed as a delivery device for self-emulsifying systems for lipophilic phytotherapeutics [Typ výsledku: Jimp]

URBANOVA, Martina, Jan MACKŮ, Kateřina KUBOVÁ, Jakub VYSLOUŽIL, Jan MUSELÍK, Miroslav SLOUF, Ivana SEDENKOVA, Olga KOCKOVA, Larisa JANISOVA, Josef MASEK, Eliska MASKOVA, Adam NOVOBILSKY, Martina PARENICOVA, Rafal KONEFAL, Jiri CZERNEK, David VETCHÝ, Miroslava PAVELKOVÁ a Jiri BRUS. Structure, dynamics, and functional properties of hybrid alginate-pectin gels dually crosslinked by Ca2+and Zn2+ions designed as a delivery device for self-emulsifying systems for lipophilic phytotherapeutics. Food Hydrocolloids. Oxford: Elsevier Science, 2024, roč. 150, May 2024, s. 1-16. ISSN 0268-005X. Dostupné z: https://dx.doi.org/10.1016/j.foodhyd.2023.109693.

Hypromellose - A traditional pharmaceutical excipient with modern applications in oral and oromucosal drug delivery [Typ výsledku: Jimp]

MASKOVA, E., Kateřina KUBOVÁ, B.T. RAIMI-ABRAHAM, D. VLLASALIU, Eva KLÁSKOVÁ, J. TURANEK a J. MASEK. Hypromellose - A traditional pharmaceutical excipient with modern applications in oral and oromucosal drug delivery. Journal of Controlled Release. Amsterdam: Elsevier Science BV, 2020, roč. 324, č. 7727, s. 695-727. ISSN 0168-3659. Dostupné z: https://dx.doi.org/10.1016/j.jconrel.2020.05.045.

Anti-Cancer Properties of Resveratrol: A Focus on Its Impact on Mitochondrial Functions [Typ výsledku: Jimp]

KURSVIETIENE, Lolita, Dalia M KOPUSTINSKIENE, Inga STANEVICIENE, Ausra MONGIRDIENE, Kateřina KUBOVÁ, Ruta MASTEIKOVÁ a Jurga BERNATONIENE. Anti-Cancer Properties of Resveratrol: A Focus on Its Impact on Mitochondrial Functions. Antioxidants. Basel: MDPI, 2023, roč. 12, č. 12, s. 1-24. ISSN 2076-3921. Dostupné z: https://dx.doi.org/10.3390/antiox12122056.

Assessment of Antimicrobic, Antivirotic and Cytotoxic Potential of Alginate Beads Cross-Linked by Bivalent Ions for Vaginal Administration [Typ výsledku: Jimp]

PAVELKOVÁ, Miroslava, Jakub VYSLOUŽIL, Kateřina KUBOVÁ, Sylvie PAVLOKOVÁ, D. MOLINKOVA, V. CELER, A. PECHOVA, J. MASEK a David VETCHÝ. Assessment of Antimicrobic, Antivirotic and Cytotoxic Potential of Alginate Beads Cross-Linked by Bivalent Ions for Vaginal Administration. Pharmaceutics. BASEL: Elsevier, 2021, roč. 13, č. 2, s. 1-20. ISSN 0939-6411. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13020165.

Matrix Vaginal Rings for Female Dogs-Effect of Altering Dimensions on Mechanical Properties and Dissolution Characteristics, and In vivo Safety Study [Typ výsledku: Jimp]

NOVÁKOVÁ TKADLEČKOVÁ, Veronika, V. PITRONOVA, Kateřina KUBOVÁ, Sylvie PAVLOKOVÁ, Jan ELBL, R. NOVOTNY, David VETCHÝ a Jakub VYSLOUŽIL. Matrix Vaginal Rings for Female Dogs-Effect of Altering Dimensions on Mechanical Properties and Dissolution Characteristics, and In vivo Safety Study. AAPS PHARMSCITECH. NEW YORK: SPRINGER, 2020, roč. 21, č. 6, s. 1-12. ISSN 1530-9932. Dostupné z: https://dx.doi.org/10.1208/s12249-020-01770-5.

Mgr. Michaela Kuchynka, Ph.D.

Variability in the Clearance of Lead Oxide Nanoparticles Is Associated with Alteration of Specific Membrane Transporters [Typ výsledku: Jimp]

DUMKOVÁ, Jana, Tereza SMUTNÁ, Lucie VRLÍKOVÁ, Hana KOTASOVÁ, Bohumil DOČEKAL, Lukáš ČAPKA, Michaela KUCHYNKA, Veronika JAKEŠOVÁ, Vendula PELKOVÁ, Kamil KŘŮMAL, Pavel COUFALÍK, Pavel MIKUŠKA, Zbyněk VEČEŘA, Tomáš VACULOVIČ, Zuzana HUSÁKOVÁ, Viktor KANICKÝ, Aleš HAMPL a Marcela BUCHTOVÁ. Variability in the Clearance of Lead Oxide Nanoparticles Is Associated with Alteration of Specific Membrane Transporters. ACS Nano. Washington, D.C.: American Chemical Society, 2020, roč. 14, č. 3, s. 3096-3120. ISSN 1936-0851. Dostupné z: https://dx.doi.org/10.1021/acsnano.9b08143.

A Clearance Period after Soluble Lead Nanoparticle Inhalation Did Not Ameliorate the Negative Effects on Target Tissues Due to Decreased Immune Response [Typ výsledku: Jimp]

DUMKOVÁ, Jana, Tereza SMUTNÁ, Lucie VRLÍKOVÁ, Bohumil DOČEKAL, Daniela KRISTEKOVÁ, Zbyněk VEČEŘA, Zuzana HUSÁKOVÁ, Veronika JAKEŠOVÁ, Adriena JEDLIČKOVÁ, Pavel MIKUŠKA, Lukáš ALEXA, Pavel COUFALÍK, Michaela TVRDOŇOVÁ, Kamil KŘŮMAL, Tomáš VACULOVIČ, Viktor KANICKÝ, Aleš HAMPL a Marcela BUCHTOVÁ. A Clearance Period after Soluble Lead Nanoparticle Inhalation Did Not Ameliorate the Negative Effects on Target Tissues Due to Decreased Immune Response. International Journal of Molecular Sciences. Basel: MDPI, 2020, roč. 21, č. 22, s. 1-27. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms21228738.

Comparison of Metal Nanoparticles (Au, Ag, Eu, Cd) Used for Immunoanalysis Using LA-ICP-MS Detection [Typ výsledku: Jimp]

VLČNOVSKÁ, Marcela, Aneta ŠTOSSOVÁ, Michaela KUCHYNKA, Veronika FALTUSOVÁ, Hana HOLCOVÁ POLANSKÁ, Michal MASAŘÍK, Roman HRSTKA, Vojtech ADAM, Viktor KANICKÝ, Tomáš VACULOVIČ a Markéta VACULOVIČOVÁ. Comparison of Metal Nanoparticles (Au, Ag, Eu, Cd) Used for Immunoanalysis Using LA-ICP-MS Detection. Molecules. Basel: MDPI, 2021, roč. 26, č. 3, s. 1-11. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules26030630.

Gold nanoparticles as labels for immunochemical analysis using laser ablation inductively coupled plasma mass spectrometry [Typ výsledku: Jimp]

TVRDOŇOVÁ, Michaela, Marcela VLČNOVSKÁ, Lucie VANICKOVA, Viktor KANICKÝ, Vojtěch ADAM, Lena ASCHER, Norbert JAKUBOWSKI, Markéta VACULOVIČOVÁ a Tomáš VACULOVIČ. Gold nanoparticles as labels for immunochemical analysis using laser ablation inductively coupled plasma mass spectrometry. Analytical and Bioanalytical chemistry. HEIDELBERG: SPRINGER HEIDELBERG, 2019, roč. 411, č. 3, s. 559-564. ISSN 1618-2642. Dostupné z: https://dx.doi.org/10.1007/s00216-018-1300-7.

Laser Ablation Inductively Coupled Plasma Mass Spectrometry as a Powerful Tool for Spatially Resolved Analysis: An Experiment for Undergraduate Analytical Chemistry Laboratory [Typ výsledku: Jimp]

KUCHYNKA, Michaela, Hana HOLCOVÁ POLANSKÁ, Jaromír GUMULEC, Viktor KANICKÝ a Tomáš VACULOVIČ. Laser Ablation Inductively Coupled Plasma Mass Spectrometry as a Powerful Tool for Spatially Resolved Analysis: An Experiment for Undergraduate Analytical Chemistry Laboratory. Journal of Chemical Education. WASHINGTON: American Chemical Society, 2023, roč. 100, č. 5, s. 1973-1979. ISSN 0021-9584. Dostupné z: https://dx.doi.org/10.1021/acs.jchemed

PharmDr. Bc. Dana Mazánková, Ph.D.

Ascorbic acid intake during pregnancy [Typ výsledku: Jimp]

PODOLSKÁ, Kristína, Dana MAZÁNKOVÁ, Maria GOBOOVA a Ivan VANO. Ascorbic acid intake during pregnancy. Biomedical Papers, Olomouc: Palacky University. Olomouc: Palacky University, 2023, roč. 167, č. 3, s. 213-218. ISSN 1213-8118. Dostupné z: https://dx.doi.org/10.5507/bp.2023.035.

The role of maternal nutrition during pregnancy — overview of daily dosages recommendations [Typ výsledku: Jost]

PODOLSKÁ, Kristína, Dana MAZÁNKOVÁ, Mária GÖBÖOVÁ a Ivan VAŇO. The role of maternal nutrition during pregnancy — overview of daily dosages recommendations. FOLIA PHARMACEUTICA CASSOVIENSIA. Košice, Slovensko: Univerzita veterinárskeho lekárstva a farmácie v Košiciach, 2023, V, č. 2, s. 100-108. ISSN 2585-9609.

Analýza farmakoterapie geriatrických pacientov v zariadeniach pre seniorov so zameraním na potencionálne nevhodná liečiva [Typ výsledku: Jost]

MAZÁNKOVÁ, Dana a Nikola KOVÁROVÁ. Analýza farmakoterapie geriatrických pacientov v zariadeniach pre seniorov so zameraním na potencionálne nevhodná liečiva. Farmaceutický obzor. Bratislava: Slovenská zdravotnická univerzita; Zdravotnické vydavateľstvo Herba, spol. s r.o., 2022, roč. 91, č. 12, s. 277-288. ISSN 0014-8172.

Fall risk scores in health care facilities of geriatric care in the Czech republic [Typ výsledku: a]

MAZÁNKOVÁ, Dana, Jana MICHALCOVÁ, Adam HRBOTICKÝ a Ivana TAŠKOVÁ. Fall risk scores in health care facilities of geriatric care in the Czech republic. In 50th ESCP Symposium on Clinical Pharmacy, Polypharmacy and ageing - highly individualized, interprofessional, person-centered care. 2022. ISSN 2210-7711. Dostupné z: https://dx.doi.org/10.1007/s11096-022-01521-5.

Metronomická terapie v léčbě nádorových onemocnění [Typ výsledku: Jsc]

MAZÁNKOVÁ, Dana, Veronika BÁRKOVÁ a Pavel MAZÁNEK. Metronomická terapie v léčbě nádorových onemocnění. Česká a Slovenská Farmacie. Praha: Nakladatelske Stredisko CLSJE Purkyne, 2022, roč. 71, č. 3, s. 91-97. ISSN 1210-7816. Dostupné z: https://dx.doi.org/10.5817/CSF2022-3-91.

doc. Mgr. Jan Muselík, Ph.D.

A Critical Overview of FDA and EMA Statistical Methods to Compare In Vitro Drug Dissolution Profiles of Pharmaceutical Products [Typ výsledku: Jimp]

MUSELÍK, Jan, A. KOMERSOVA, Kateřina KUBOVÁ, K. MATZICK a B. SKALICKA. A Critical Overview of FDA and EMA Statistical Methods to Compare In Vitro Drug Dissolution Profiles of Pharmaceutical Products. Pharmaceutics. BASEL: MDPI, 2021, roč. 13, č. 10, s. 1-12. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13101703.

Structural Changes of Sodium Warfarin in Tablets Affecting the Dissolution Profiles and Potential Safety of Generic Substitution [Typ výsledku: Jimp]

MUSELÍK, Jan, M. URBANOVA, E. BARTONICKOVA, J. PALOVCIK, David VETCHÝ, J. CZERNEK, L. JANISOVA, N. VELYCHKIVSKA, Aleš FRANC a J. BRUS. Structural Changes of Sodium Warfarin in Tablets Affecting the Dissolution Profiles and Potential Safety of Generic Substitution. Pharmaceutics. BASEL: MDPI, 2021, roč. 13, č. 9, s. 1-19. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13091364.

Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits [Typ výsledku: Jimp]

GAJDOŠOVÁ, Markéta, David VETCHÝ, Jan MUSELÍK, Jan GAJDZIOK, Jan JUŘICA, M. VETCHÁ, K. HAUPTMAN a V. JEKL. Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits. International Journal of Pharmaceutics. AMSTERDAM: ELSEVIER SCIENCE BV, 2021, roč. 592, JAN 5 2021, s. 1-12. ISSN 0378-5173. Dostupné z: https://dx.doi.org/10.1016/j.ijpharm.2020.120086.

Exploration of Neusilin® US2 as an Acceptable Filler in HPMC Matrix Systems—Comparison of Pharmacopoeial and Dynamic Biorelevant Dissolution Study [Typ výsledku: Jimp]

BÍLIK, Tomáš, Jakub VYSLOUŽIL, Martina NAISEROVÁ, Jan MUSELÍK, Miroslava PAVELKOVÁ, Josef MAŠEK, D. ČOPOVÁ a Kateřina KUBOVÁ. Exploration of Neusilin® US2 as an Acceptable Filler in HPMC Matrix Systems—Comparison of Pharmacopoeial and Dynamic Biorelevant Dissolution Study. Pharmaceutics. BASEL: MDPI, 2022, roč. 14, č. 1, s. 1-18. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics14010127.

Rational Design of Self-Emulsifying Pellet Formulation of Thymol: Technology Development Guided by Molecular-Level Structure Characterization and Ex Vivo Testing [Typ výsledku: Jimp]

MACKŮ, Jan, Kateřina KUBOVÁ, Martina URBANOVA, Jan MUSELÍK, Aleš FRANC, Gabriela KOUTNÁ, Miroslava PAVELKOVÁ, David VETCHÝ, Josef MASEK, Eliska MASKOVA a Jiri BRUS. Rational Design of Self-Emulsifying Pellet Formulation of Thymol: Technology Development Guided by Molecular-Level Structure Characterization and Ex Vivo Testing. Pharmaceutics. Basel: MDPI, 2022, roč. 14, č. 8, s. 1-21. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharm

doc. PharmDr. Ing. Radka Opatřilová, Ph.D., MBA

Potential toxicity of Schisandra chinensis to water environment: acute toxicity tests with water crustacean [Typ výsledku: Jimp]

VALICKOVA, Jana, Stepan ZEZULKA, Eliska MARSALKOVA, Josef KOTLIK, Blahoslav MARSALEK a Radka OPATŘILOVÁ. Potential toxicity of Schisandra chinensis to water environment: acute toxicity tests with water crustacean. Environmental Science and Pollution Research. HEIDELBERG: SPRINGER HEIDELBERG, 2023, Neuveden., October, s. 1-6. ISSN 0944-1344. Dostupné z: https://dx.doi.org/10.1007/s11356-023-30182-8.

Bioactive compounds from Schisandra chinensis - Risk for aquatic plants? [Typ výsledku: Jimp]

VALICKOVA, Jana, Stepan ZEZULKA, Eliska MARSALKOVA, Josef KOTLIK, Blahoslav MARSALEK a Radka OPATŘILOVÁ. Bioactive compounds from Schisandra chinensis - Risk for aquatic plants? Aquatic toxicology. AMSTERDAM: ELSEVIER, 2023, roč. 254, č. 106365, s. 1-5. ISSN 0166-445X. Dostupné z: https://dx.doi.org/10.1016/j.aquatox.2022.106365.

Antioxidative Activity of 1,3,5-Triazine Analogues Incorporating Aminobenzene Sulfonamide, Aminoalcohol/Phenol, Piperazine, Chalcone, or Stilbene Motifs [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, Nikola ČALKOVSKÁ, Tereza PADRTOVÁ, Jozef CSÖLLEI, Radka OPATŘILOVÁ a Pavel PAZDERA. Antioxidative Activity of 1,3,5-Triazine Analogues Incorporating Aminobenzene Sulfonamide, Aminoalcohol/Phenol, Piperazine, Chalcone, or Stilbene Motifs. Molecules. Basel: MDPI, 2020, roč. 25, č. 8, s. 1-15. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules25081787.

Anxiety in Duckweed — Metabolism and Effect of Diazepam on Lemna minor [Typ výsledku: Jimp]

LAMACZOVÁ, Adéla, Tomáš MALINA, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Petra PŘIBILOVÁ, Štěpán ZEZULKA, Blahoslav MARŠÁLEK a Eliška MARŠÁLKOVÁ. Anxiety in Duckweed — Metabolism and Effect of Diazepam on Lemna minor. WATER. Basel: MDPI, 2022, roč. 14, č. 9, s. 1-12. ISSN 2073-4441. Dostupné z: https://dx.doi.org/10.3390/w140914

Rapid AOP Method for Estrogens Removal via Persulfate Activated by Hydrodynamic Cavitation [Typ výsledku: Jimp]

PRIBILOVA, Petra, Klara ODEHNALOVA, Pavel RUDOLF, Frantisek POCHYLY, Stepan ZEZULKA, Eliska MARSALKOVA, Radka OPATŘILOVÁ a Blahoslav MARSALEK. Rapid AOP Method for Estrogens Removal via Persulfate Activated by Hydrodynamic Cavitation. WATER. Basel: MDPI, 2022, roč. 14, č. 23, s. 1-13. ISSN 2073-4441. Dostupné z: https://dx.doi.org/10.3390/w14233816.

MUDr. Tomáš Parák, Ph.D.

High Inductive Magnetic Stimuli and Their Effects on Mesenchymal Stromal Cells, Dendritic Cells, and Fibroblasts [Typ výsledku: Jimp]

PRUCHA, J., J. SKOPALIK, Ivan JUSTAN, T. PARAK, E. GABRIELOVA, K. HANA a L. NAVRATIL. High Inductive Magnetic Stimuli and Their Effects on Mesenchymal Stromal Cells, Dendritic Cells, and Fibroblasts. Physiological research. Praha: Fyziologický ústav AV ČR, 2019, roč. 68, Supplement 4, s. "S433"-"S443", 11 s. ISSN 0862-8408. Dostupné z: https://dx.doi.org/10.33549/physiolres.934382.

ANTIPHLOGISTIC EFFECT OF POTENTILLA ARGENTEA EXTRACT IN A DEXTRAN SULFATE-INDUCED COLITIS RAT MODEL [Typ výsledku: a]

SUCHÝ, Pavel, Marta CHALUPOVÁ, Alžběta KRUŽICOVÁ, Tomáš PARÁK, Lenka PARÁKOVÁ, Gabriela KUZMÍNOVÁ, Michal BELEJKANIČ, Karel ŠMEJKAL, Jarmila KLUSÁKOVÁ a Alfred HERA. ANTIPHLOGISTIC EFFECT OF POTENTILLA ARGENTEA EXTRACT IN A DEXTRAN SULFATE-INDUCED COLITIS RAT MODEL. In 28th Interdisciplinary Toxicological Conference - Toxcon 2023. 2023. ISSN 1337-6853.

Ověření protizánětlivé účinnosti extraktu mochny stříbrné (Potentilla argentea) na modelu dextransulfátové kolitidy u laboratorních potkanů [Typ výsledku: k]

BELEJKANIČ, Michal, Alfred HERA, Alžběta KRUŽICOVÁ, Lenka PARÁKOVÁ, Marta CHALUPOVÁ, Jarmila KLUSÁKOVÁ, Tomáš PARÁK, Karel ŠMEJKAL a Pavel SUCHÝ. Ověření protizánětlivé účinnosti extraktu mochny stříbrné (Potentilla argentea) na modelu dextransulfátové kolitidy u laboratorních potkanů. In Květinův den, Mezioborová konference mladých farmakologů a toxikologů. 2023. ISBN 978-80-280-0305-0.

New advanced biopolymer materials in the treatment of acute skin wound [Typ výsledku: a]

KRUŽICOVÁ, Alžběta, Marta CHALUPOVÁ, Jarmila KLUSÁKOVÁ, Gabriela KUZMÍNOVÁ, Tomáš PARÁK a Pavel SUCHÝ. New advanced biopolymer materials in the treatment of acute skin wound. In 27th Interdisciplinary Toxicology Conference. 2022. ISSN 0372-7025.

Matrix Assisted Laser Desorption/Ionization as a New Cancer Diagnostic Tool [Typ výsledku: B]

KIZEK, René, Branislav RUTTKAY-NEDECKÝ a Tomáš PARÁK. Matrix Assisted Laser Desorption/Ionization as a New Cancer Diagnostic Tool. 2019. Dostupné z: https://dx.doi.org/10.1016/B978-0-12-801238-3.10887-6.

Primář Centra laboratorní medicíny Úrazové nemocnice Brno a Oddělení klinických laboratoří Nemocnice Milosrdných bratří Brno

doc. RNDr. Bc. Jiří Pazourek, Ph.D.

Rapid HPLC Method for Determination of Isomaltulose in the Presence of Glucose, Sucrose, and Maltodextrins in Dietary Supplements [Typ výsledku: Jimp]

CRHA, Tomáš a Jiří PAZOUREK. Rapid HPLC Method for Determination of Isomaltulose in the Presence of Glucose, Sucrose, and Maltodextrins in Dietary Supplements. FOODS. BASEL: MDPI, 2020, roč. 9, č. 9, s. 1-20. ISSN 2304-8158. Dostupné z: https://dx.doi.org/10.3390/foods9091164.

Extension of the Internal Standard Method for Determination of Thermodynamic Acidity Constants of Compounds Sparingly Soluble in Water by Capillary Zone Electrophoresis [Typ výsledku: Jimp]

PAZOUREK, Jiří, Lucie NYTROVÁ a Klára ODEHNALOVÁ. Extension of the Internal Standard Method for Determination of Thermodynamic Acidity Constants of Compounds Sparingly Soluble in Water by Capillary Zone Electrophoresis. ACS Omega. WASHINGTON: AMER CHEMICAL SOC, 2021, roč. 7, č. 1, s. 1477-1482. ISSN 2470-1343. Dostupné z: https://dx.doi.org/10.1021/acsomega.1c06224.

HILIC Separation Methods on Poly-Hydroxyl Stationary Phases for Determination of Common Saccharides with Evaporative Light-Scattering Detector and Rapid Determination of Isomaltulose in Protein-Rich Food Supplements [Typ výsledku: Jimp]

CRHA, Tomas, Grace F ODEDINA a Jiří PAZOUREK. HILIC Separation Methods on Poly-Hydroxyl Stationary Phases for Determination of Common Saccharides with Evaporative Light-Scattering Detector and Rapid Determination of Isomaltulose in Protein-Rich Food Supplements. SEPARATIONS. SWITZERLAND: MDPI, 2024, roč. 11, č. 2, 16 s. ISSN 2297-8739. Dostupné z: https://dx.doi.org/10.3390/separations11020045.

Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity [Typ výsledku: Jimp]

PADRTOVÁ, Tereza, Pavlína MARVANOVÁ, Renata KUBÍNOVÁ, Jozef CSÖLLEI, Oldřich FARSA, Tomáš GONĚC, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Jiří PAZOUREK, Alice SYCHROVÁ, Karel ŠMEJKAL a Petr MOKRÝ. Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity. Current organic synthesis. Sharjah: Bentham Science Publ Ltd, 2020, roč. 17, č. 7, s. 576-587. ISSN 1570-1794. Dostupné z: https://dx.doi.org/10.2174/1570179417666200619132218.

Rapid HPLC method for monitoring of lactulose production with a high yield [Typ výsledku: Jimp]

PAZOUREK, Jiří. Rapid HPLC method for monitoring of lactulose production with a high yield. Carbohydrate Research. Elsevier, 2019, roč. 484, č. 107773, s. 1-5. ISSN 0008-6215. Dostupné z: https://dx.doi.org/10.1016/j.carres.2019.107773.

PharmDr. Lenka Smejkalová, Ph.D.

Attitudes and behaviors regarding online pharmacies in the aftermath of COVID-19 pandemic: At the tipping point towards the new normal [Typ výsledku: Jimp]

FITTLER, Andras, Tünde AMBRUS, Anna SEREFKO, Lenka SMEJKALOVÁ, Anna KIJEWSKA, Aleksandra SZOPA a Matyas KAPLAR. Attitudes and behaviors regarding online pharmacies in the aftermath of COVID-19 pandemic: At the tipping point towards the new normal. Frontiers in Pharmacology. Lausanne: Frontiers Media S.A., 2022, roč. 13, December, s. 1-12. ISSN 1663-9812. Dostupné z: https://dx.doi.org/10.3389/fphar.2022.1070473.

Příspěvek k pojmu polypragmazie II. Preskripce a užívání léčiv [Typ výsledku: Jsc]

KOLÁŘ, Jozef, Tünde AMBRUS, Dominik GREGA a Lenka SMEJKALOVÁ. Příspěvek k pojmu polypragmazie II. Preskripce a užívání léčiv. Česká a slovenská farmacie. Praha: Česká lékařská společnost J. E. Purkyně, 2023, roč. 72, č. 1, s. 3-10. ISSN 1210-7816. Dostupné z: https://dx.doi.org/10.5817/CSF2023-1-3.

Možnosti fytofarmak při zvládání chronického stresu [Typ výsledku: Jost]

VRANOVÁ, Vilma a Lenka SMEJKALOVÁ. Možnosti fytofarmak při zvládání chronického stresu. Praktické lékárenství. Olomouc: Solen s.r.o., 2022, roč. 18, č. 1, s. 42-47. ISSN 1801-2434. Dostupné z: https://dx.doi.org/10.36290/lek.2022.006.

Příspěvek k pojmu polypragmazie I. Etymologické poznámky a charakteristika [Typ výsledku: Jsc]

KOLÁŘ, Jozef, Tünde AMBRUS, Dominik GREGA a Lenka SMEJKALOVÁ. Příspěvek k pojmu polypragmazie I. Etymologické poznámky a charakteristika. Česka a slovenska farmacie. Praha: Česká lékařská společnost J. E. Purkyně, 2022, roč. 71, č. 6, s. 245-250. ISSN 1210-7816.

Příspěvek k problematice polypragmazie. Depreskripce — praktické techniky a nástroje [Typ výsledku: Jost]

KOLÁŘ, Jozef, Tünde AMBRUS, Dominik GREGA a Lenka SMEJKALOVÁ. Příspěvek k problematice polypragmazie. Depreskripce — praktické techniky a nástroje. Farmaceutický obzor. Bratislava: Slovenská zdravotnická univerzita; Zdravotnické vydavateľstvo Herba, spol. s r.o., 2022, roč. 91, č. 5, s. 109-117. ISSN 0014-8172.

doc. MVDr. Pavel Suchý, Ph.D.

Evaluation and comparison of structurally different cellulose-based hemostatic agents in a rat kidney model [Typ výsledku: Jimp]

PAPRSKÁROVÁ, Alice, Pavel SUCHÝ, Marta CHALUPOVÁ, L. MICHLOVSKA, Jarmila KLUSÁKOVÁ, T. SOPUCH a L. VOJTOVA. Evaluation and comparison of structurally different cellulose-based hemostatic agents in a rat kidney model. Cellulose. DORDRECHT: SPRINGER, 2021, roč. 28, č. 14, s. 9369-9382. ISSN 0969-0239. Dostupné z: https://dx.doi.org/10.1007/s10570-021-04104-1.

A synergistic effect of fibrous carboxymethyl cellulose with equine collagen improved the hemostatic properties of freeze-dried wound dressings [Typ výsledku: Jimp]

SEDLAR, M., K. KACVINSKA, Z. FOHLEROVA, D. IZSAK, Marta CHALUPOVÁ, Pavel SUCHÝ, M. DOHNALOVA, T. SOPUCH a L. VOJTOVA. A synergistic effect of fibrous carboxymethyl cellulose with equine collagen improved

the hemostatic properties of freeze-dried wound dressings. Cellulose. DORDRECHT: SPRINGER, 2023, Neuveden., September, s. 1-19. ISSN 0969-0239. Dostupné z: https://dx.doi.org/10.1007/s10570-023-05499-9.

Olanzapine, but not haloperidol, exerts pronounced acute metabolic effects in the methylazoxymethanol rat model [Typ výsledku: Jimp]

HORSKÁ, Kateřina, Silje SKREDE, Jan KUČERA, Gabriela KUZMÍNOVÁ, Pavel SUCHÝ, Vincenzo MICALE a Jana RUDÁ. Olanzapine, but not haloperidol, exerts pronounced acute metabolic effects in the methylazoxymethanol rat model. CNS NEUROSCIENCE & THERAPEUTICS. HOBOKEN: WILEY, 2024, roč. 30, č. 2, s. 1-13. ISSN 1755-5930. Dostupné z: https://dx.doi.org/10.1111/cns.14565.

Composite Hemostatic Nonwoven Textiles Based on Hyaluronic Acid, Cellulose, and Etamsylate [Typ výsledku: Jimp]

SUCHÝ, Pavel, Alice PAPRSKÁROVÁ, Marta CHALUPOVÁ, Lucie MARHOLDOVA, Kristina NESPOROVA, Jarmila KLUSÁKOVÁ, Gabriela KUZMÍNOVÁ, Michal HENDRYCH a Vladimir VELEBNY. Composite Hemostatic Nonwoven Textiles Based on Hyaluronic Acid, Cellulose, and Etamsylate. Materials. ST ALBAN-ANLAGE: MDPI, 2020, roč. 13, č. 7, s. 1-14. ISSN 1996-1944. Dostupné z: https://dx.doi.org/10.3390/ma13071627.

Špeciálna toxikológia [Typ výsledku: B]

LEGÁTH, Jaroslav, Ľubomír LEGÁTH, Karel ŠMEJKAL, Vladimír PETROVIČ, Pavel SUCHÝ, Rastislav SABO, Marcel FALIS, Štefan MAZAŇ a Vladimír PETRILA. Špeciálna toxikológia. 2. vyd. Košice, SR: UVLF Košice, 2023, 380 s. ISBN 978-80-8077-783-8.

prof. PharmDr. Karel Šmejkal, Ph.D.

Biological activity of Cannabis compounds: a modern approach to the therapy of multiple diseases [Typ výsledku: Jimp]

HELCMAN, Martin a Karel ŠMEJKAL. Biological activity of Cannabis compounds: a modern approach to the therapy of multiple diseases. Phytochemistry reviews. Dordrecht: Springer, 2021, Neuveden., October, s. 1-42. ISSN 1568-7767. Dostupné z: https://dx.doi.org/10.1007/s11101-021-09777-x.

Anti-breast cancer effects of phytochemicals: primary, secondary, and tertiary care [Typ výsledku: Jimp]

MAZURAKOVA, Alena, Lenka KOKLESOVA, Marek SAMEC, Erik KUDELA, Karol KAJO, Veronika SKUCIOVA, Sandra Hurta CSIZMAR, Veronika MESTANOVA, Martin PEC, Marian ADAMKOV, Raghad Khalid AL-ISHAQ, Karel ŠMEJKAL, Frank A GIORDANO, Dietrich BUSSELBERG, Kamil BIRINGER, Olga GOLUBNITSCHAJA a Peter KUBATKA. Anti-breast cancer effects of phytochemicals: primary, secondary, and tertiary care. EPMA JOURNAL. Cham: SPRINGER INT PUBL AG, 2022, roč. 13, č. 2, s. 315-334. ISSN 1878-5077. Dostupné z: https://dx.doi.org/10.1007/s13167-022-00277-2.

C-geranylated flavonoids from Paulownia tomentosa Steud. fruit as potential anti-inflammatory agents [Typ výsledku: Jimp]

MOLČANOVÁ, Lenka, Jakub TREML, Veronika BREZANI, Petr MARSIK, Sebnem KURHAN, Zdenek TRAVNICEK, Pavel UHRIN a Karel ŠMEJKAL. C-geranylated flavonoids from Paulownia tomentosa Steud. fruit as potential anti-inflammatory agents. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2022, roč. 296, October, s. 1-14. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2022.115509.

Multiple In vitro biological effects of phenolic compounds from Morus alba root bark [Typ výsledku: Jimp]

ČULENOVÁ, Marie, Alice SYCHROVÁ, S. T. S. HASSAN, K. BERCHOVA-BIMOVA, P. SVOBODOVA, A. HELCLOVA, H. MICHNOVA, J. HOSEK, H. VASILEV, Pavel SUCHÝ, Gabriela KUZMÍNOVÁ, Emil ŠVAJDLENKA, Jan GAJDZIOK, Alois ČÍŽEK, Václav SUCHÝ a Karel ŠMEJKAL. Multiple In vitro biological effects of phenolic compounds from Morus alba root bark. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2020, roč. 248, č. 112296, s. 1-12. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2019.112296.

Therapeutic potential of prenylated stilbenoid macasiamenene F through its anti-inflammatory and cytoprotective effects on LPS-challenged monocytes and microglia [Typ výsledku: Jimp]

LELÁKOVÁ, Veronika, Sophie BÉRAUD-DUFOUR, Jan HOŠEK, Karel ŠMEJKAL, Vilailak PRACHYAWARAKORN, Phanruethai PAILEE, Catherine WIDMANN, Jiří VÁCLAVÍK, Thierry COPPOLA, Jean MAZELLA, Nicolas BLONDEAU a Catherine HEURTEAUX. Therapeutic potential of prenylated stilbenoid macasiamenene F through its anti-inflammatory and cytoprotective effects on LPS-challenged monocytes and microglia. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2020, roč. 263, č. 263, s. 1-14. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2020.113147.

prof. MUDr. Petr Štourač, Ph.D., MBA, FESAIC

Palliative care practice and moral distress during COVID-19 pandemic (PEOpLE-C19 study): a national, cross-sectional study in intensive care units in the Czech Republic [Typ výsledku: Jimp]

PROKOPOVÁ, Tereza, Jan HUDEC, Kamil VRBICA, Jan STAŠEK, Andrea POKORNÁ, Petr ŠTOURAČ, Kateřina RUSINOVÁ, Paulína KERPNEROVÁ, Radka ŠTĚPÁNOVÁ, Adam SVOBODNÍK a Jan MALÁSKA. Palliative care practice and moral distress during COVID-19 pandemic (PEOpLE-C19 study): a national, cross-sectional study in intensive care units in the Czech Republic. Critical Care. London: BMC, 2022, roč. 26, č. 1, s. 1-14. ISSN 1364-8535. Dostupné z: https://dx.doi.org/10.1186/s13054-022-04066-1.

Depth of neuromuscular blockade and the perioperative conditions in laparoscopic surgery in pediatric population: Randomized controlled pilot trial [Typ výsledku: Jimp]

KLUČKA, Jozef, Kateřina SZTURZOVÁ, Martina KOSINOVÁ, Lenka KNOPPOVA, Michaela ŤOUKÁLKOVÁ, Roman ŠTOUDEK, Milan KRATOCHVÍL, Alena TRCKOVA, Martina KLINCOVÁ, Petra KOVALČÍKOVÁ, Tomáš PAVLÍK, Ladislav PLÁNKA, Jiří TŮMA a Petr ŠTOURAČ. Depth of neuromuscular blockade and the perioperative conditions

in laparoscopic surgery in pediatric population: Randomized controlled pilot trial. JOURNAL OF CLINICAL ANESTHESIA. NEW YORK: ELSEVIER SCIENCE INC, 2020, roč. 61, MAY 2020, s. 1-3. ISSN 0952-8180. Dostupné z: https://dx.doi.org/10.1016/j.jclinane.2019.109659.

Case Report: Wound Closure Acceleration in a Patient With Toxic Epidermal Necrolysis Using a Lyophilised Amniotic Membrane [Typ výsledku: Jimp]

LIPOVÝ, Břetislav, Martin HLADÍK, Petr ŠTOURAČ a Serhij FOROSTYAK. Case Report: Wound Closure Acceleration in a Patient With Toxic Epidermal Necrolysis Using a Lyophilised Amniotic Membrane. Frontiers in bioengineering and biotechnology. Laussane: Frontiers Media S.A., 2021, roč. 9, April, s. 1-7. ISSN 2296-4185. Dostupné z: https://dx.doi.org/10.3389/fbioe.2021.649317.

Sex difference and intra-operative tidal volume Insights from the LAS VEGAS study [Typ výsledku: Jimp]

NIJBROEK, SG, L HOL, P SWART, SNT HEMMES, AS NETO, JM BINNEKADE, G HEDENSTIERNA, S JABER, M HIESMAYR, MW HOLLMANN, GH MILLS, MFV MELO, C PUTENSEN, W SCHMID, P SEVERGNINI, H WRIGGE, Abreu MG DE, P PELOSI a MJ SCHULTZ. Sex difference and intra-operative tidal volume Insights from the LAS VEGAS study. European Journal of Anaesthesiology. Philadelphia: Lippincott Williams & Wilkins, 2021, roč. 38, č. 10, s. 1034-1041. ISSN 0265-0215. Dostupné z: https://dx.doi.org/10.1097/EJA.0000000000001476.

What Can Be Achieved With Motivation-Based Teaching of Medical Students? A Monocentric Retrospective Audit of Retention Among Highly Motivated Graduates Who Underwent the Learning-by-Doing Concept in Anesthesiology and Intensive Care Medicine [Typ výsledku: Jimp]

KLINCOVÁ, Martina, Hana HARAZIM, Daniel SCHWARZ, Martina KOSINOVÁ, Olga SMÉKALOVÁ a Petr ŠTOURAČ. What Can Be Achieved With Motivation-Based Teaching of Medical Students? A Monocentric Retrospective Audit of Retention Among Highly Motivated Graduates Who Underwent the Learning-by-Doing Concept in Anesthesiology and Intensive Care Medicine. JMIR SERIOUS GAMES. TORONTO: JMIR PUBLICATIONS, INC, 2019, roč. 7, č. 2, s. 1-8, 9 s. ISSN 2291-9279. Dostupné z: https://dx.doi.org/10.2196/10155.

PharmDr. Jakub Treml, Ph.D.

Recent Advances in Metabolic Pathways of Sulfate Reduction in Intestinal Bacteria [Typ výsledku: Jimp]

KUSHKEVYCH, Ivan, Jiří CEJNAR, Jakub TREML, Dani DORDEVIĆ, Peter KOLLÁR a Monika VÍTĚZOVÁ. Recent Advances in Metabolic Pathways of Sulfate Reduction in Intestinal Bacteria. Cells. Basel: MDPI, 2020, roč. 9, č. 3, s. 1-16. ISSN 2073-4409. Dostupné z: https://dx.doi.org/10.3390/cells9030698.

Natural Products-Derived Chemicals: Breaking Barriers to Novel Anti-HSV Drug Development [Typ výsledku: Jimp]

TREML, Jakub, Markéta GAZDOVÁ, Karel ŠMEJKAL, M. SUDOMOVA, P. KUBATKA a S. T. S. HASSAN. Natural Products-Derived Chemicals: Breaking Barriers to Novel Anti-HSV Drug Development. Viruses-Basel. Basel, Switzerland: MDPI AG, 2020, roč. 12, č. 2, s. 1-42. ISSN 1999-4915. Dostupné z: https://dx.doi.org/10.3390/v12020154.

Edible Films from Carrageenan/Orange Essential Oil/Trehalose-Structure, Optical Properties, and Antimicrobial Activity [Typ výsledku: Jimp]

JANCIKOVA, S., D. DORDEVIC, P. SEDLACEK, Marcela NEJEZCHLEBOVÁ, Jakub TREML a B. TREMLOVA. Edible Films from Carrageenan/Orange Essential Oil/Trehalose-Structure, Optical Properties, and Antimicrobial Activity. Polymers. Basel: MDPI, 2021, roč. 13, č. 3, s. 1-19. ISSN 2073-4360. Dostupné z: https://dx.doi.org/10.3390/polym13030332.

Incorporation of Natural Blueberry, Red Grapes and Parsley Extract By-Products into the Production of Chitosan Edible Films [Typ výsledku: Jimp]

DORDEVIC, S., D. DORDEVIC, P. SEDLACEK, M. KALINA, K. TESIKOVA, B. ANTONIC, B. TREMLOVA, Jakub TREML, Marcela NEJEZCHLEBOVÁ, L. VAPENKA, A. RAJCHL a Monika BULÁKOVÁ. Incorporation of Natural Blueberry, Red Grapes and Parsley Extract By-Products into the Production of Chitosan Edible Films. Polymers. Basel: MDPI, 2021, roč. 13, č. 19, s. 1-21. ISSN 2073-4360. Dostupné z: https://dx.doi.org/10.3390/polym13193388.

Direct and Indirect Antioxidant Effects of Selected Plant Phenolics in Cell-Based Assays [Typ výsledku: Jimp]

TREML, Jakub, P. VEČEŘOVÁ, Petra HERCZOGOVÁ a Karel ŠMEJKAL. Direct and Indirect Antioxidant Effects of Selected Plant Phenolics in Cell-Based Assays. Molecules. Basel: MDPI, 2021, roč. 26, č. 9, s. 1-15. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules26092534.

prof. PharmDr. Mgr. David Vetchý, Ph.D.

Structure, dynamics, and functional properties of hybrid alginate-pectin gels dually crosslinked by Ca2+and Zn2+ions designed as a delivery device for self-emulsifying systems for lipophilic phytotherapeutics [Typ výsledku: Jimp]

URBANOVA, Martina, Jan MACKŮ, Kateřina KUBOVÁ, Jakub VYSLOUŽIL, Jan MUSELÍK, Miroslav SLOUF, Ivana SEDENKOVA, Olga KOCKOVA, Larisa JANISOVA, Josef MASEK, Eliska MASKOVA, Adam NOVOBILSKY, Martina PARENICOVA, Rafal KONEFAL, Jiri CZERNEK, David VETCHÝ, Miroslava PAVELKOVÁ a Jiri BRUS. Structure, dynamics, and functional properties of hybrid alginate-pectin gels dually crosslinked by Ca2+and Zn2+ions designed as a delivery device for self-emulsifying systems for lipophilic phytotherapeutics. Food Hydrocolloids. Oxford: Elsevier Science, 2024, roč. 150, May 2024, s. 1-16. ISSN 0268-005X. Dostupné z: https://dx.doi.org/10.1016/j.foodhyd.2023.109693.

Utilization of Pharmaceutical Technology Methods for the Development of Innovative Porous Metasilicate Pellets with a Very High Specific Surface Area for Chemical Warfare Agents Detection [Typ výsledku: Jimp]

ZEMAN, Jiří, Sylvie PAVLOKOVÁ, David VETCHÝ, Adam STAŇO, Zdeněk MORAVEC, Lukáš MATĚJOVSKÝ a Vladimír PITSCHMANN. Utilization of Pharmaceutical Technology Methods for the Development of Innovative Porous Metasilicate Pellets with a Very High Specific Surface Area for Chemical Warfare Agents Detection. Pharmaceutics. BASEL: MDPI, 2021, roč. 13, č. 11, s. 1-15. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13111860.

Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits [Typ výsledku: Jimp]

GAJDOŠOVÁ, Markéta, David VETCHÝ, Jan MUSELÍK, Jan GAJDZIOK, Jan JUŘICA, M. VETCHÁ, K. HAUPTMAN a V. JEKL. Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits. International Journal of Pharmaceutics. AMSTERDAM: ELSEVIER SCIENCE BV, 2021, roč. 592, JAN 5 2021, s. 1-12. ISSN 0378-5173. Dostupné z: https://dx.doi.org/10.1016/j.ijpharm.2020.120086.

Interaction Pathways and Structure-Chemical Transformations of Alginate Gels in Physiological Environments [Typ výsledku: Jimp]

URBANOVA, M., M. PAVELKOVA, J. CZERNEK, K. KUBOVA, J. VYSLOUZIL, A. PECHOVA, D. MOLINKOVA, Jan VYSLOUŽIL, D. VETCHY a J. BRUS. Interaction Pathways and Structure-Chemical Transformations of Alginate Gels in Physiological Environments. Biomacromolecules. Washington: American Chemical Society, 2019, roč. 20, č. 11, s. 4158-4170. ISSN 1525-7797. Dostupné z: https://dx.doi.org/10.1021/acs.biomac.9b01052.

Unique coated neusilin pellets with a more distinct and fast visual detection of nerve agents and other cholinesterase inhibitors [Typ výsledku: Jimp]

ZEMAN, Jiří, David VETCHÝ, Sylvie PAVLOKOVÁ, Aleš FRANC a Vladimír PITSCHMANN. Unique coated neusilin pellets with a more distinct and fast visual detection of nerve agents and other cholinesterase inhibitors. Journal of Pharmaceutical and Biomedical Analysis. Elsevier, 2020, roč. 179, February, s. 1-9. ISSN 0731-7085. Dostupné z: https://dx.doi.org/10.1016/j.jpba.2019.113004.

MUDr. Daniel Barvík

Perception, beliefs and attitudes towards simulation-based learning in health care students : Scoping review protocol [Typ výsledku: Jimp]

PLCH, Lukáš, Daniel BARVÍK a Jiří ZOUNEK. Perception, beliefs and attitudes towards simulation-based learning in health care students : Scoping review protocol. INTERNATIONAL JOURNAL OF EDUCATIONAL RESEARCH. Oxford: ELSEVIER SCI LTD, 2023, roč. 117, č. 1, s. 1-6. ISSN 0883-0355. Dostupné z: https://dx.doi.org/10.1016/j.ijer.2022.102113.

Feasibility of Mouth-to-Mouth Ventilation through FFP2 Respirator in BLS Training during COVID-19 Pandemic (MOVERESP Study): Simulation-Based Study [Typ výsledku: Jimp]

KOSINOVÁ, Martina, Petr ŠTOURAČ, Tereza PROKOPOVÁ, Tereza VAFKOVÁ, Václav VAFEK, Daniel BARVÍK, Tamara SKŘÍŠOVSKÁ, Jan DVOŘÁČEK, Jana DJAKOW, Jozef KLUČKA, Jiří JARKOVSKÝ a Pavel PLEVKA. Feasibility of Mouth-to-Mouth Ventilation through FFP2 Respirator in BLS Training during COVID-19 Pandemic (MOVERESP Study): Simulation-Based Study. Children-Basel. BASEL, SWITZERLAND: MDPI, 2022, roč. 9, č. 11, s. 1-7. ISSN 2227-9067. Dostupné z: https://dx.doi.org/10.3390/children9111751.

Perception of simulation-based first-aid training by medical students : a qualitative descriptive study [Typ výsledku: Jost]

PLCH, Lukáš, Daniel BARVÍK, Tereza PROKOPOVÁ, Aneta PILÁTOVÁ, Tereza VAFKOVÁ a Jiří ZOUNEK. Perception of simulation-based first-aid training by medical students : a qualitative descriptive study. SN Social Sciences. 2023, roč. 3, č. 121, s. 1-19. ISSN 2662-9283. Dostupné z: https://dx.doi.org/10.1007/s43545-023-00710-x.

První pomoc [Typ výsledku: b]

PROKOPOVÁ, Tereza, Tereza VAFKOVÁ, Václav VAFEK, Daniel BARVÍK, Martina KOSINOVÁ a Petr ŠTOURAČ. První pomoc. 1., elektronické vyd. Brno: Masarykova univerzita, 2022. ISBN 978-80-280-0135-3.

První pomoc [Typ výsledku: b]

PROKOPOVÁ, Tereza, Tereza VAFKOVÁ, Václav VAFEK, Daniel BARVÍK, Martina KOSINOVÁ a Petr ŠTOURAČ. První pomoc. 1. vyd. Brno: Masarykova univerzita, 2022. Elportál. ISBN 978-80-280-0135-3.

MVDr. Renata Blechová, Ph.D.

BLECHOVÁ, Renata a Pavel SUCHÝ. Dermatologika. Vydání 1. Brno: Veterinární a farmaceutická univerzita Brno, 2008. 55 stran. ISBN 9788073050351.

Mgr. Marie Brázdová, Ph.D.

Novel 1,3,5-Triazinyl Aminobenzenesulfonamides Incorporating Aminoalcohol, Aminochalcone and Aminostilbene Structural Motifs as Potent Anti-VRE Agents, and Carbonic Anhydrases I, II, VII, IX, and XII Inhibitors [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, V. GARAJ, S. MASCARETTI, A. ANGELI, Zuzana SOLDÁNOVÁ, M. KEMKA, J. MOTYČKA, Marie BRÁZDOVÁ, Jozef CSÖLLEI, J. JAMPÍLEK a C.T. SUPURAN. Novel 1,3,5-Triazinyl Aminobenzenesulfonamides Incorporating Aminoalcohol, Aminochalcone and Aminostilbene Structural Motifs as Potent Anti-VRE Agents, and Carbonic Anhydrases I, II, VII, IX, and XII Inhibitors. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2022, roč. 23, č. 1, s. 1-45. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms23010231.

p53 Binds Preferentially to Non-B DNA Structures Formed by the Pyrimidine-Rich Strands of GAA center dot TTC Trinucleotide Repeats Associated with Friedreich's Ataxia [Typ výsledku: Jimp]

HELMA, R., P. BAZANTOVA, M. PETR, M. ADAMIK, D. RENCIUK, V. TICHY, A. PASTUCHOVA, Z. SOLDANOVA, P. PECINKA, R.P. BOWATER, Miroslav FOJTA a M. BRAZDOVA. p53 Binds Preferentially to Non-B DNA Structures Formed by the Pyrimidine-Rich Strands of GAA center dot TTC Trinucleotide Repeats Associated with Friedreich's Ataxia. Molecules. BASEL: Mayer und Muller, 2019, roč. 24, č. 11, s. 2078-2091. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules24112078.

Cathodic Voltammetric Determination of a Nitro Substituted 1-Hydroxynaphthalene-2-carboxanilide in Dimethyl Sulfoxide in Electrochemical Microcell [Typ výsledku: D]

GAJDAR, J, Tomáš GONĚC, J JAMPILEK, Marie BRÁZDOVÁ, Z BÁBKOVÁ, Miroslav FOJTA, Jiří BAREK a J FISCHER. Cathodic Voltammetric Determination of a Nitro Substituted 1-Hydroxynaphthalene-2-carboxanilide in Dimethyl Sulfoxide in Electrochemical Microcell. In Navratil, T Fojta, M Schwarzova, K. PROCEEDINGS OF INTERNATIONAL CONFERENCE MODERN ELECTROCHEMICAL METHODS XXXIX. USTI NAD LABEM: LENKA SRSENOVA-BEST SERVIS, 2019, s. 70-73.

Interfacial properties of p53-DNA complexes containing various recognition elements [Typ výsledku: J]

BRÁZDOVÁ, Marie. Interfacial properties of p53-DNA complexes containing various recognition elements. JOURNAL OF ELECTROANALYTICAL CHEMISTRY. 2019. Dostupné z: https://dx.doi.org/10.1016/j.jelechem.2019.113300.

Human ARMC6 binds in vitro to both cancer genes and telomeric RNA, favoring G-quadruplex structure recognition.

Adámik M, Soldánová Z, Drotárová M, Brečková K, Petr M, Helma R, Jenner LP, Vorlíčková M, Sýkorová E, Brázdová M.

Biochim Biophys Acta Gene Regul Mech. 2024 Sep;1867(3):195050. doi: 10.1016/j.bbagrm.2024.195050. Epub 2024 Jul 17.

PMID: 39029558

PharmDr. Kateřina Brückner, Ph.D.

Formulation and Evaluation of Novel Film Wound Dressing Based on Collagen/Microfibrillated Carboxymethylcellulose Blend [Typ výsledku: Jimp]

TENOROVÁ, Kateřina, Ruta MASTEIKOVÁ, Sylvie PAVLOKOVÁ, Klára KOSTELANSKÁ, J. BERNATONIENE a David VETCHÝ. Formulation and Evaluation of Novel Film Wound Dressing Based on Collagen/Microfibrillated Carboxymethylcellulose Blend. Pharmaceutics. Basel: MDPI, 2022, roč. 14, č. 4, s. 1-15. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics14040782.

Formulation and Evaluation of Novel Collagen/carboxymethylcellulose Blend Film Wound Dressing [Typ výsledku: Jsc]

TENOROVÁ, Kateřina, Jana KURFÜRSTOVÁ, Ruta MASTEIKOVÁ, Sylvie PAVLOKOVÁ a Jurga BERNATONIENĖ. Formulation and Evaluation of Novel Collagen/carboxymethylcellulose Blend Film Wound Dressing. Česká a Slovenská Farmacie. 2022, roč. 71, č. 5, s. 190-199. ISSN 1210-7816.

Kolagen v kombinaci s kyselou formou karboxymethylcelulosy v podobě netkané textilie jako moderní krycí prostředek pro terapii ran — formulace, příprava a hodnocení [Typ výsledku: Jsc]

TENOROVÁ, Kateřina, Ruta MASTEIKOVÁ, Jana JARÁBKOVÁ, David VETCHÝ a Jurga BERNATONIENĖ. Kolagen v kombinaci s kyselou formou karboxymethylcelulosy v podobě netkané textilie jako moderní krycí prostředek pro terapii ran — formulace, příprava a hodnocení. Česká a slovenská farmacie. 2020, roč. 69, č. 4, s. 163-171. ISSN 1210-7816.

Filmové krytí na rány s dexpanthenolem — příprava a hodnocení [Typ výsledku: Jsc]

TENOROVÁ, Kateřina, Ruta MASTEIKOVÁ, Klára KOSTELANSKÁ a David VETCHÝ. Filmové krytí na rány s dexpanthenolem — příprava a hodnocení. Ceska a Slovenska farmacie. 2019, roč. 68, s. 27-33. ISSN 1210-7816.

Příprava a hodnocení dvouvrstvých filmů na bázi kolagenu a karboxymethylcelulosy za účelem terapie ran [Typ výsledku: Jsc]

TENOROVÁ, Kateřina, Ruta MASTEIKOVÁ, Nikola KOVÁROVÁ, Klára KOSTELANSKÁ, Josef PŘIKRYL, David VETCHÝ a Jurga BERNATONIENE. Příprava a hodnocení dvouvrstvých filmů na bázi kolagenu a karboxymethylcelulosy za účelem terapie ran. Ceska a Slovenska farmacie. 2019, roč. 68, s. 229-236. ISSN 1210-7816.

Mgr. Tomáš Crha

Rapid HPLC Method for Determination of Isomaltulose in the Presence of Glucose, Sucrose, and Maltodextrins in Dietary Supplements [Typ výsledku: Jimp]

CRHA, Tomáš a Jiří PAZOUREK. Rapid HPLC Method for Determination of Isomaltulose in the Presence of Glucose, Sucrose, and Maltodextrins in Dietary Supplements. FOODS. BASEL: MDPI, 2020, roč. 9, č. 9, s. 1-20. ISSN 2304-8158. Dostupné z: https://dx.doi.org/10.3390/foods9091164.

A rapid HPLC-ELSD method for separation of sugars and sugar alcohols in fruits of Czech Sorbus species [Typ výsledku: k]

MALANÍK, Milan, Tomáš CRHA a Jiří PAZOUREK. A rapid HPLC-ELSD method for separation of sugars and sugar alcohols in fruits of Czech Sorbus species. In Synthesis and Analysis of Drugs 2022, Brno, Czech Republic. 2022.

DETERMINATION OF SUGAR PROFILE IN MILK AND SPECIAL INFANT' S FORMULAS BY HPLC [Typ výsledku: k]

CRHA, Tomáš a Jiří PAZOUREK. DETERMINATION OF SUGAR PROFILE IN MILK AND SPECIAL INFANT' S FORMULAS BY HPLC. In 50th Conference SYNTHESIS AND ANALYSIS OF DRUGS. 2022. ISBN 978-80-280-0110-0.

DETERMINATION OF SUGAR PROFILE IN MILK AND SPECIAL MILK NUTRITION FOR INFANTS BY HPLC [Typ výsledku: k]

CRHA, Tomáš a Jiří PAZOUREK. DETERMINATION OF SUGAR PROFILE IN MILK AND SPECIAL MILK NUTRITION FOR INFANTS BY HPLC. In Student Scientific Conference MUNI Pharm, Doctoral Students 2022. 2022. ISBN 978-80-280-0105-6.

Rapid Determination of Isomaltulose in Food Supplements by HPLC with ELSD [Typ výsledku: D]

PAZOUREK, Jiří a Tomáš CRHA. Rapid Determination of Isomaltulose in Food Supplements by HPLC with ELSD. In Horna, A. 19th International Nutrition & Diagnostics Conference (INDC 2019), Prague. Prague: RADANAL, 2019.

prof. RNDr. Jozef Csöllei, CSc.

Novel 1,3,5-Triazinyl Aminobenzenesulfonamides Incorporating Aminoalcohol, Aminochalcone and Aminostilbene Structural Motifs as Potent Anti-VRE Agents, and Carbonic Anhydrases I, II, VII, IX, and XII Inhibitors [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, V. GARAJ, S. MASCARETTI, A. ANGELI, Zuzana SOLDÁNOVÁ, M. KEMKA, J. MOTYČKA, Marie BRÁZDOVÁ, Jozef CSÖLLEI, J. JAMPÍLEK a C.T. SUPURAN. Novel 1,3,5-Triazinyl Aminobenzenesulfonamides Incorporating Aminoalcohol, Aminochalcone and Aminostilbene Structural Motifs as Potent Anti-VRE Agents, and Carbonic Anhydrases I, II, VII, IX, and XII Inhibitors. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2022, roč. 23, č. 1, s. 1-45. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms23010231.

Dibasic Derivatives of Phenylcarbamic Acid as Prospective Antibacterial Agents Interacting with Cytoplasmic Membrane [Typ výsledku: Jimp]

POSPISILOVA, S., Ivan MALÍK, K. BEZOUSKOVA, Tereza KAUEROVÁ, Peter KOLLÁR, Jozef CSÖLLEI, M. ORAVEC, Alois ČÍŽEK a J. JAMPILEK. Dibasic Derivatives of Phenylcarbamic Acid as Prospective Antibacterial Agents Interacting with Cytoplasmic Membrane. Antibiotics-Basel. BASEL: MDPI, 2020, roč. 9, č. 2, s. 1-22. ISSN 2079-6382. Dostupné z: https://dx.doi.org/10.3390/antibiotics9020064.

Antioxidative Activity of 1,3,5-Triazine Analogues Incorporating Aminobenzene Sulfonamide, Aminoalcohol/Phenol, Piperazine, Chalcone, or Stilbene Motifs [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, Nikola ČALKOVSKÁ, Tereza PADRTOVÁ, Jozef CSÖLLEI, Radka OPATŘILOVÁ a Pavel PAZDERA. Antioxidative Activity of 1,3,5-Triazine Analogues Incorporating Aminobenzene Sulfonamide, Aminoalcohol/Phenol, Piperazine, Chalcone, or Stilbene Motifs. Molecules. Basel: MDPI, 2020, roč. 25, č. 8, s. 1-15. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules25081787.

Arylaminopropanone Derivatives as Potential Cholinesterase Inhibitors: Synthesis, Docking Study and Biological Evaluation [Typ výsledku: Jimp]

HUDCOVÁ, Anna, Aleš KROUTIL, Renata KUBÍNOVÁ, A. D. GARRO, L. J. GUTIERREZ, D. ENRIZ, M. ORAVEC a Jozef CSÖLLEI. Arylaminopropanone Derivatives as Potential Cholinesterase Inhibitors: Synthesis, Docking Study and Biological Evaluation. Molecules. 2020, roč. 25, č. 7, s. 1751-1767. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules25071751.

Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity [Typ výsledku: Jimp]

PADRTOVÁ, Tereza, Pavlína MARVANOVÁ, Renata KUBÍNOVÁ, Jozef CSÖLLEI, Oldřich FARSA, Tomáš GONĚC, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Jiří PAZOUREK, Alice SYCHROVÁ, Karel ŠMEJKAL a Petr MOKRÝ. Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity. Current organic synthesis. Sharjah: Bentham Science Publ Ltd, 2020, roč. 17, č. 7, s. 576-587. ISSN 1570-1794. Dostupné z: https://dx.doi.org/10.2174/1570179417666200619132218.

doc. RNDr. Milan Číž, Ph.D.

The Role of Dietary Phenolic Compounds in Epigenetic Modulation Involved in Inflammatory Processes [Typ výsledku: Jimp]

ČÍŽ, Milan, Adéla DVOŘÁKOVÁ, Veronika SKOČKOVÁ a Lukáš KUBALA. The Role of Dietary Phenolic Compounds in Epigenetic Modulation Involved in Inflammatory Processes. Antioxidants. Basel: MDPI, 2020, roč. 9, č. 8, s. 1-19. ISSN 2076-3921. Dostupné z: https://dx.doi.org/10.3390/antiox9080691.

Black chokeberry (Aronia melanocarpa) polyphenols reveal different antioxidant, antimicrobial and neutrophil-modulating activities [Typ výsledku: Jimp]

DENEV, Petko, Milan ČÍŽ, Maria KRATCHANOVA a Denica BLAZHEVA. Black chokeberry (Aronia melanocarpa) polyphenols reveal different antioxidant, antimicrobial and neutrophil-modulating activities. Food Chemistry. Oxford, UK: Elsevier Science, 2019, roč. 284, JUN 30 2019, s. 108-117. ISSN 0308-8146. Dostupné z: https://dx.doi.org/10.1016/j.foodchem.2019

Obesity-induced nucleosome release predicts poor cardio-metabolic health [Typ výsledku: Jimp]

LO RE, Oriana, Andrea MAUGERI, Jana HRUŠKOVÁ, Juraj JAKUBÍK, Jan KUČERA, Julie DOBROVOLNÁ, Jude A. OBEN, Lukáš KUBALA, Adéla DVOŘÁKOVÁ, Milan ČÍŽ a Manlio VINCIGUERRA. Obesity-induced nucleosome release predicts poor cardio-metabolic health. CLINICAL EPIGENETICS. LONDON: BMC, 2019, roč. 12, č. 1, s. 1-14. ISSN 1868-7075. Dostupné z: https://dx.doi.org/10.1186/s13148-019-0797-8.

Serotonin and its metabolites reduce oxidative stress in murine RAW264.7 macrophages and prevent inflammation [Typ výsledku: Jimp]

VAŠÍČEK, Ondřej, Antonín LOJEK a Milan ČÍŽ. Serotonin and its metabolites reduce oxidative stress in murine RAW264.7 macrophages and prevent inflammation. Journal of Physiology and Biochemistry. Dordrecht: Springer, 2020, roč. 76, č. 1, s. 49-60. ISSN 1138-7548. Dostupné z: https://dx.doi.org/10.1007/s13105-019-00714-3.

Imunologie [Typ výsledku: c]

ČÍŽ, Milan. Imunologie. Online. Brno, 2021, 55 s.

PharmDr. Ivana Daňková, Ph.D.

Iridoid aglycones from the underground parts of Lathraea squamaria [Typ výsledku: Jimp]

MALANÍK, Milan, Ivana DAŇKOVÁ, Marie POKORNÁ, Markéta GAZDOVÁ, Stefano DALL'ACQUA a Karel ŠMEJKAL. Iridoid aglycones from the underground parts of Lathraea squamaria. Biochemical Systematics and Ecology. OXFORD: PERGAMON-ELSEVIER SCIENCE LTD, 2019, roč. 86, 3 s. ISSN 0305-1978. Dostupné z: https://dx.doi.org/10.1016/j.bse.201

Lachema a.s. Brno, Výzkumný ústav čistých chemikálií, Odbor léčiv, Oddělení dokumentace a klinické farmakologie; pracovní zařazení: odborný pracovník

Lékárna Na Poliklinice, Kuřim; lékárník-asistent

Lékárna Vránova, Brno; lékárník- asistent

Lékárna Mamed, Vyškov; vedoucí lékárník

PharmDr. Margita Dvorská, Ph.D.

Chromatographic separation of xanthones from Maclura pomifera [Typ výsledku: k]

DVORSKÁ, Margita, Ivana MACHALOVÁ, Jan CHMURA, Milan MALANÍK, Marie ČULENOVÁ a Emil ŠVAJDLENKA. Chromatographic separation of xanthones from Maclura pomifera. In PSE Trends in Natural Products 2024 Young Scientists' Meeting. 2024. ISBN 978-80-280-0559-7.

Okrasné rostliny jako možný zdroj biologicky aktivních látek - rod Fuchsia [Typ výsledku: d]

DVORSKÁ, Margita. Okrasné rostliny jako možný zdroj biologicky aktivních látek - rod Fuchsia. In Léčivé rostliny. Bratislava: Herba , spol. s.r.o., 2024, s. 52-53. ISSN 1335-9878.

Okrasné dřeviny jako zdroj biologicky aktivních látek [Typ výsledku: k]

DVORSKÁ, Margita. Okrasné dřeviny jako zdroj biologicky aktivních látek. In 25. ODBORNÝ SEMINÁŘ S MEZINÁRODNÍ ÚČASTÍ AKTUÁLNÍ ASPEKTY PĚSTOVÁNÍ, ZPRACOVÁNÍ A VYUŽITÍ LÉČIVÝCH, AROMATICKÝCH A KOŘENINOVÝCH ROSTLIN. 2023. Dostupné z: https://dx.doi.org/10.5281/zenodo.8316737.

Prenylated phenols with potent anti-inflammatory effects [Typ výsledku: k]

ŠMEJKAL, Karel, Lenka MOLČANOVÁ, Milan MALANÍK, Margita DVORSKÁ, Josef MAŠEK a Jakub TREML. Prenylated phenols with potent anti-inflammatory effects. In 4th Annual CNPD Conference 2023 on 'Natural Products in Cosmetics, Food and Medicine', Liverpool, England. 2023. 2023.

Biologically active xanthones from Maclura pomifera. [Typ výsledku: k]

DVORSKÁ, Margita, Marie ČULENOVÁ, Kateřina LEDEROVÁ, Ivana MACHALOVÁ a Emil ŠVAJDLENKA. Biologically active xanthones from Maclura pomifera. In Book of abstracts, 50th Conference Synthesis and Analysis of Drugs, Brno, 2022. 2022. ISBN 978-80-280-0110-0.

Mgr. Jan Dvořáček, DiS.

PharmDr. Jan Elbl, Ph.D.

Comparison of Flow and Compression Properties of Four Lactose-Based Co-Processed Excipients: Cellactose (R) 80, CombiLac (R), MicroceLac (R) 100, and StarLac (R) [Typ výsledku: Jimp]

DOMINIK, Martin, B. VRANIKOVA, P. SVACINOVA, Jan ELBL, Sylvie PAVLOKOVÁ, B. PRUDILOVA, Z. SKLUBALOVA a Aleš FRANC. Comparison of Flow and Compression Properties of Four Lactose-Based Co-Processed Excipients: Cellactose (R) 80, CombiLac (R), MicroceLac (R) 100, and StarLac (R). Pharmaceutics. BASEL: MDPI, 2021, roč. 13, č. 9, s. 1-21. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13091486.

3D printing of multilayered orodispersible films with in-process drying [Typ výsledku: Jimp]

ELBL, Jan, Jan GAJDZIOK a J. KOLARCZYK. 3D printing of multilayered orodispersible films with in-process drying. International Journal of Pharmaceutics. AMSTERDAM: ELSEVIER SCIENCE BV, 2020, roč. 575, č. 118883, s. 1-8. ISSN 0378-5173. Dostupné z: https://dx.doi.org/10.1016/j.ijpharm.2019.118883.

Effects of Various Drying Times on the Properties of 3D Printed Orodispersible Films [Typ výsledku: Jimp]

JANIGOVÁ, Natália, Jan ELBL, Sylvie PAVLOKOVÁ a Jan GAJDZIOK. Effects of Various Drying Times on the Properties of 3D Printed Orodispersible Films. Pharmaceutics. Basel: MDPI, 2022, roč. 14, č. 2, s. 1-12. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics14020250.

Development of 3D Printed Multi-Layered Orodispersible Films with Porous Structure Applicable as a Substrate for Inkjet Printing [Typ výsledku: Jimp]

ELBL, Jan, Martin VESELÝ, Dagmar BLAHÁČKOVÁ, Jaroslav ONDRUS, Pavel KULICH, Eliska MASKOVA, Josef MASEK a Jan GAJDZIOK. Development of 3D Printed Multi-Layered Orodispersible Films with Porous Structure Applicable as a Substrate for Inkjet Printing. Pharmaceutics. Basel: MDPI, 2023, roč. 15, č. 2, s. 1-15. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics15020714.

Preparation and Evaluation of a Dosage Form for Individualized Administration of Lyophilized Probiotics [Typ výsledku: Jimp]

FÜLÖPOVÁ, Nicole, Natalia CHOMOVA, Jan ELBL, Dagmar MUDRONOVA, Patrik SIVULIČ, Sylvie PAVLOKOVÁ a Aleš FRANC. Preparation and Evaluation of a Dosage Form for Individualized Administration of Lyophilized Probiotics. Pharmaceutics. Basel: MDPI, 2023, roč. 15, č. 3, s. 1-19. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics1503

doc. PharmDr. Jan Gajdziok, Ph.D.

Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits [Typ výsledku: Jimp]

GAJDOŠOVÁ, Markéta, David VETCHÝ, Jan MUSELÍK, Jan GAJDZIOK, Jan JUŘICA, M. VETCHÁ, K. HAUPTMAN a V. JEKL. Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits. International Journal of Pharmaceutics. AMSTERDAM: ELSEVIER SCIENCE BV, 2021, roč. 592, JAN 5 2021, s. 1-12. ISSN 0378-5173. Dostupné z: https://dx.doi.org/10.1016/j.ijpharm.2020.120086.

3D printing of multilayered orodispersible films with in-process drying [Typ výsledku: Jimp]

ELBL, Jan, Jan GAJDZIOK a J. KOLARCZYK. 3D printing of multilayered orodispersible films with in-process drying. International Journal of Pharmaceutics. AMSTERDAM: ELSEVIER SCIENCE BV, 2020, roč. 575, č. 118883, s. 1-8. ISSN 0378-5173. Dostupné z: https://dx.doi.org/10.1016/j.ijpharm.2019.118883.

Comparative Study of Powder Carriers Physical and Structural Properties [Typ výsledku: Jimp]

KOSTELANSKÁ, Klára, Barbora Blahova PRUDILOVA, Sylva HOLESOVA, Jakub VLCEK, David VETCHÝ a Jan GAJDZIOK. Comparative Study of Powder Carriers Physical and Structural Properties. Pharmaceutics. Basel: MDPI, 2022, roč. 14, č. 4, s. 1-18. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics14040818.

Multiple In vitro biological effects of phenolic compounds from Morus alba root bark [Typ výsledku: Jimp]

ČULENOVÁ, Marie, Alice SYCHROVÁ, S. T. S. HASSAN, K. BERCHOVA-BIMOVA, P. SVOBODOVA, A. HELCLOVA, H. MICHNOVA, J. HOSEK, H. VASILEV, Pavel SUCHÝ, Gabriela KUZMÍNOVÁ, Emil ŠVAJDLENKA, Jan GAJDZIOK, Alois ČÍŽEK, Václav SUCHÝ a Karel ŠMEJKAL. Multiple In vitro biological effects of phenolic compounds from Morus alba root bark. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2020, roč. 248, č. 112296, s. 1-12. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2019.112296.

Stabilized antioxidative plant extracts formulated by liquisolid technique [Typ výsledku: Jimp]

KURHAJEC, Slavomír, Klára KOSTELANSKÁ, Sylvie PAVLOKOVÁ, David VETCHÝ, Tomáš WOLASCHKA, Jan GAJDZIOK a Aleš FRANC. Stabilized antioxidative plant extracts formulated by liquisolid technique. JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY. AMSTERDAM: ELSEVIER, 2020, roč. 60, č. 102022, s. 1-13. ISSN 1773-2247. Dostupné z: https://dx.doi.org/10.1016/j.jddst.2020.102022.

prof. RNDr. Milan Gelnar, CSc.

Weak population structure and recent demographic expansion of the monogenean parasite Kapentagyrus spp. infecting clupeid fishes of Lake Tanganyika, East Africa [Typ výsledku: Jimp]

KMENTOVÁ, Nikol, Stephan KOBLMÜLLER, Maarten Wouter VAN STEENBERGE, Joost A. M. RAEYMAEKERS, Tom ARTOIS, Els L. R. De KEYZER, Leona MILEC, Fidel MUTEREZI BUKINGA, Théophile MULIMBWA N'SIBULA, Pascal MASILYA MULUNGULA, Gaspard NTAKIMAZI, Filip A. M. VOLCKAERT, Milan GELNAR a Maarten Pieterjan VANHOVE. Weak population structure and recent demographic expansion of the monogenean parasite Kapentagyrus spp. infecting clupeid fishes of Lake Tanganyika, East Africa. International Journal for Parasitology. Oxford: Elsevier Science, 2020, roč. 50, 6-7, s. 471-486. ISSN 0020-7519. Dostupné z: https://dx.doi.org/10.1016/j.ijpara.2020.02.002.

Uncharted digenean diversity in Lake Tanganyika: cryptogonimids (Digenea: Cryptogonimidae) infecting endemic lates perches (Actinopterygii: Latidae) [Typ výsledku: Jimp]

KMENTOVÁ, Nikol, Rodney A. BRAY, Stephan KOBLMÜLLER, Tom ARTOIS, Els Lea R. DE KEYZER, Milan GELNAR, Maarten Pieterjan VANHOVE a Simona GEORGIEVA. Uncharted digenean diversity in Lake Tanganyika: cryptogonimids (Digenea: Cryptogonimidae) infecting endemic lates perches (Actinopterygii: Latidae). Parasites & Vectors. London: BioMed Central Ltd, 2020, roč. 13, č. 221, s. 1-24. ISSN 1756-3305. Dostupné z: https://dx.doi.org/10.1186/s13071-020-3913-x.

Laser capture microdissection in combination with mass spectrometry: Approach to characterization of tissue-specific proteomes of Eudiplozoon nipponicum (Monogenea, Polyopisthocotylea) [Typ výsledku: Jimp]

ROUDNICKÝ, Pavel, David POTĚŠIL, Zbyněk ZDRÁHAL, Milan GELNAR a Martin KAŠNÝ. Laser capture microdissection in combination with mass spectrometry: Approach to characterization of tissue-specific proteomes of Eudiplozoon nipponicum (Monogenea, Polyopisthocotylea). PLOS ONE. San Francisco: Public Library of Science, 2020, roč. 15, č. 6, s. 1-15. ISSN 1932-6203. Dostupné z: https://dx.doi.org/10.1371/journal.pone.0231681.

Co-introduction success of monogeneans infecting the fisheries target Limnothrissa miodon differs between two non-native areas: the potential of parasites as tag for introduction pathway [Typ výsledku: Jimp]

KMENTOVÁ, Nikol, Maarten VAN STEENBERGE, Dirk F. E. Thys VAN DEN AUDENAERDE, Tamuka NHIWATIWA, Fidel MUTEREZI BUKINGA, Théophile MULIMBWA N SIBULA, Pascal MASILYA MULUNGULA, Milan GELNAR a Maarten Pieterjan VANHOVE. Co-introduction success of monogeneans infecting the fisheries target Limnothrissa miodon differs between two non-native areas: the potential of parasites as tag for introduction pathway. Biological Invasions. Dordrecht: Springer, 2019, roč. 21, č. 3, s. 757-773. ISSN 1387-3547. Dostupné z: https://dx.doi.org/10.1007/s10530-018-1856-3.

Species of Characidotrema Paperna & Thurston, 1968 (Monogenea: Dactylogyridae) from fishes of the Alestidae (Characiformes) in Africa: new species, host-parasite associations and first insights into the phylogeny of the genus [Typ výsledku: Jimp]

ŘEHULKOVÁ, Eva, Maria Lujza ČERVENKA KIČINJA, Zuheir N. MAHMOUD, Milan GELNAR a Mária SEIFERTOVÁ. Species of Characidotrema Paperna & Thurston, 1968 (Monogenea: Dactylogyridae) from fishes of the Alestidae

(Characiformes) in Africa: new species, host-parasite associations and first insights into the phylogeny of the genus. PARASITES & VECTORS. LONDON: BIOMED CENTRAL LTD, 2019, roč. 12, JUL, s. 1-21. ISSN 1756-3305. Dostupné z: https://dx.doi.org/10.1186/s13071-019-3580-y.

PharmDr. Dominik Grega, Ph.D.

Historical analysis of pharmacoeconomic terms [Typ výsledku: Jimp]

GREGA, Dominik a Jozef KOLÁŘ. Historical analysis of pharmacoeconomic terms. Scientometrics. DORDRECHT: Springer, 2019, roč. 119, č. 3, s. 1643-1654. ISSN 0138-9130. Dostupné z: https://dx.doi.org/10.1007/s11192-019-03093-0.

The Checklist for Standard Methodological Requirements and Reporting of Economic Evaluation of Medicines in Slovakia [Typ výsledku: Jimp]

PSENKOVA, Maria Bucek, Lucia HLAVINKOVA, Martin VISNANSKY, Dominik GREGA a Martina ONDRUSOVA. The Checklist for Standard Methodological Requirements and Reporting of Economic Evaluation of Medicines in Slovakia. Value in Health Regional Issues. AMSTERDAM: Elsevier, 2024, roč. 39, Januar, s. 14-19. ISSN 2212-1099. Dostupné z: https://dx.doi.org/10.1016/j.vhri.2023.09.003.

The Economic Burden of Biological Drugs in Rheumatoid Arthritis Treatment [Typ výsledku: Jimp]

GREGA, Dominik a Jozef KOLÁŘ. The Economic Burden of Biological Drugs in Rheumatoid Arthritis Treatment. Value in Health Regional Issues. AMSTERDAM: Elsevier, 2024, roč. 40, March, s. 13-18. ISSN 2212-1099. Dostupné z: https://dx.doi.org/10.1016/j.vhri.2023.10.001.

ANALYSIS OF THE EFFECTIVENESS OF THE PHARMACY NETWORK [Typ výsledku: Jimp]

GREGA, Dominik, Tünde AMBRUS, A. MATEJOVIC, Martina ŠUTOROVÁ a J. KOLÁŘ. ANALYSIS OF THE EFFECTIVENESS OF THE PHARMACY NETWORK. FARMACIA. BUCURESTI: SOC STIINTE FARMACEUTICE ROMANIA, 2021, roč. 69, č. 4, s. 799-805. ISSN 0014-8237. Dostupné z: https://dx.doi.org/10.31925/farmacia.2021.4.23.

Friction cost approach methodology in pharmacoeconomic analyses [Typ výsledku: Jsc]

GREGA, Dominik a Jozef KOLÁŘ. Friction cost approach methodology in pharmacoeconomic analyses. Česká a slovenská farmacie. Česká lékařská společnost J.E. Purkyně, 2021, roč. 70, č. 3, s. 107-111. ISSN 1210-7816. Dostupné z: https://dx.doi.org/10.5817/CSF2021-3-107.

Junior HTA manager, Pharm-In, spol. s r. o., Bratislava (2022-2023)

Market Access & HTA Manager, Pharm-In, spol. s r. o., Bratislava (od 2023 - do súčasnosti)

Mgr. Petra Hájková

RNDr. Eva Havránková, Ph.D.

Novel 1,3,5-Triazinyl Aminobenzenesulfonamides Incorporating Aminoalcohol, Aminochalcone and Aminostilbene Structural Motifs as Potent Anti-VRE Agents, and Carbonic Anhydrases I, II, VII, IX, and XII Inhibitors [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, V. GARAJ, S. MASCARETTI, A. ANGELI, Zuzana SOLDÁNOVÁ, M. KEMKA, J. MOTYČKA, Marie BRÁZDOVÁ, Jozef CSÖLLEI, J. JAMPÍLEK a C.T. SUPURAN. Novel 1,3,5-Triazinyl Aminobenzenesulfonamides Incorporating Aminoalcohol, Aminochalcone and Aminostilbene Structural Motifs as Potent Anti-VRE Agents, and Carbonic Anhydrases I, II, VII, IX, and XII Inhibitors. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2022, roč. 23, č. 1, s. 1-45. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms23010231.

Prediction of biological activity of compounds containing a 1,3,5-triazinyl sulfonamide scaffold by artificial neural networks using simple molecular descriptors [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, E.M. PEÑA-MÉNDEZ, Jozef CSÖLLEI a Josef HAVEL. Prediction of biological activity of compounds containing a 1,3,5-triazinyl sulfonamide scaffold by artificial neural networks using simple molecular descriptors. Bioorganic Chemistry. San Diego: Academic Press Inc Elsevier Science, 2021, roč. 107, February 2021, s. 1-15. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2020.104565.

Research in the Field of Drug Design and Development [Typ výsledku: Jimp]

BIALA, Grazyna, Ewa KEDZIERSKA, Marta KRUK-SLOMKA, Jolanta ORZELSKA-GORKA, Sara HMAIDAN, Aleksandra SKROK, Jakub KAMINSKI, Eva HAVRÁNKOVÁ, Dominika NADASKA a Ivan MALIK. Research in the Field of Drug Design and Development. Pharmaceuticals. BASEL: MDPI, 2023, roč. 16, č. 9, s. 1-23. ISSN 1424-8247. Dostupné z: https://dx.doi.org/10.3390/ph16091283.

Antioxidative Activity of 1,3,5-Triazine Analogues Incorporating Aminobenzene Sulfonamide, Aminoalcohol/Phenol, Piperazine, Chalcone, or Stilbene Motifs [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, Nikola ČALKOVSKÁ, Tereza PADRTOVÁ, Jozef CSÖLLEI, Radka OPATŘILOVÁ a Pavel PAZDERA. Antioxidative Activity of 1,3,5-Triazine Analogues Incorporating Aminobenzene Sulfonamide, Aminoalcohol/Phenol, Piperazine, Chalcone, or Stilbene Motifs. Molecules. Basel: MDPI, 2020, roč. 25, č. 8, s. 1-15. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules25081787.

New Approach for the One-Pot Synthesis of 1,3,5-Triazine Derivatives: Application of Cu(I) Supported on a Weakly Acidic Cation-Exchanger Resin in a Comparative Study [Typ výsledku: Jimp]

HAVRÁNKOVÁ, Eva, Jozef CSÖLLEI a Pavel PAZDERA. New Approach for the One-Pot Synthesis of 1,3,5-Triazine Derivatives: Application of Cu(I) Supported on a Weakly Acidic Cation-Exchanger Resin in a Comparative Study. Molecules. Basel: MDPI, 2019, roč. 24, č. 19, s. 1-10. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules24193586.

Mgr. Petra Herczogová

Antioxidant and Anti-Inflammatory Activity of Five Medicinal Mushrooms of the Genus Pleurotus [Typ výsledku: Jimp]

STASTNY, J.., P. MARSIK, J. TAUCHEN, M. BOZIK, A. MASCELLANI, J. HAVLIK, P. LANDA, I. JABLONSKY, Jakub TREML, Petra HERCZOGOVÁ, R. BLEHA, A. SYNYTSYA a P. KLOUCEK. Antioxidant and Anti-Inflammatory Activity of Five Medicinal Mushrooms of the Genus Pleurotus. Antioxidants. Basel: MDPI, 2022, roč. 11, č. 8, s. 1-16. ISSN 2076-3921. Dostupné z: https://dx.doi.org/10.3390/antiox11081569.

Direct and Indirect Antioxidant Effects of Selected Plant Phenolics in Cell-Based Assays [Typ výsledku: Jimp]

TREML, Jakub, P. VEČEŘOVÁ, Petra HERCZOGOVÁ a Karel ŠMEJKAL. Direct and Indirect Antioxidant Effects of Selected Plant Phenolics in Cell-Based Assays. Molecules. Basel: MDPI, 2021, roč. 26, č. 9, s. 1-15. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules26092534.

MVDr. Jana Hložková, Ph.D.

Thrombus Imaging Using 3D Printed Middle Cerebral Artery Model and Preclinical Imaging Techniques: Application to Thrombus Targeting and Thrombolytic Studies [Typ výsledku: Jimp]

WUNSCHOVA, A.V., A. NOVOBILSKY, Jana HLOŽKOVÁ, Peter SCHEER, H. PETROKOVA, R. JIRIK, P. KULICH, E. BARTHELDYOVA, F. HUBATKA, V. JONAS, R. MIKULIK, P. MALY, J. TURANEK a J. MASEK. Thrombus Imaging Using 3D Printed Middle Cerebral Artery Model and Preclinical Imaging Techniques: Application to Thrombus Targeting and Thrombolytic Studies. European Journal of Pharmaceutics and Biopharmaceutics. BASEL: Elsevier, 2020, roč. 12, č. 12, s. 1-16. ISSN 0939-6411. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics12121207.

BIOIMAGING OF ELEMENTS AND PROTEINS BY LA-ICP-MS IN MEDICINE AND PHARMACEUTICAL RESEARCH [Typ výsledku: k]

KUCHYNKA, Michaela, Marcela VLČNOVSKÁ, Jana HLOŽKOVÁ, Peter SCHEER, Radka OPATŘILOVÁ, Markéta VACULOVIČOVÁ, Viktor KANICKÝ, Michal MASAŘÍK a Tomáš VACULOVIČ. BIOIMAGING OF ELEMENTS AND PROTEINS BY LA-ICP-MS IN MEDICINE AND PHARMACEUTICAL RESEARCH. In ESAS 2022. 2022. ISBN 978-80-88195-41-2.

IMAGING OF ELEMENTS AND PROTEINS IN BIOLOGICAL TISSUES: MEDICAL AND PHARMACEUTICAL APPLICATIONS [Typ výsledku: k]

KUCHYNKA, Michaela, Peter SCHEER, Jana HLOŽKOVÁ, Marcela VLČNOVSKÁ, Radka OPATŘILOVÁ, Viktor KANICKÝ, Michal MASAŘÍK, Tomáš VACULOVIČ a Tereza PADRTOVÁ. IMAGING OF ELEMENTS AND PROTEINS IN BIOLOGICAL TISSUES: MEDICAL AND PHARMACEUTICAL APPLICATIONS. 2022. ISBN 978-80-280-0110-0.

02451 IDENTIFICATION OF ALTERED MICRORNAS IN RAT STROKE MODELS - POTENTIAL BIOMARKERS OF ISCHEMIC STROKE [Typ výsledku: a]

BÁŤKOVÁ, Tereza, B DVORAKOVA, Jana HLOŽKOVÁ, P SCHEER, I KREPELKOVA, E BACE, M HLOZANKOVA a Robert MIKULÍK. 02451 IDENTIFICATION OF ALTERED MICRORNAS IN RAT STROKE MODELS - POTENTIAL BIOMARKERS OF ISCHEMIC STROKE. In INTERNATIONAL JOURNAL OF STROKE. 2020. ISSN 1747-4930.

Brief analysis of the frequency of use and spectrum of animal models in stroke research [Typ výsledku: J]

HLOŽKOVÁ, Jana, Peter SCHEER a Pavel SUCHÝ. Brief analysis of the frequency of use and spectrum of animal models in stroke research. CESKA A SLOVENSKA NEUROLOGIE A NEUROCHIRURGIE. 2019. Dostupné z: https://dx.doi.org/10.14735/amcsnn2019274.

PharmDr. Bc. Kateřina Horská, Ph.D.

GLP-1 agonists: superior for mind and body in antipsychotic-treated patients? [Typ výsledku: Jimp]

HORSKÁ, Kateřina, Jana RUDÁ a Silje SKREDE. GLP-1 agonists: superior for mind and body in antipsychotic-treated patients? TRENDS IN ENDOCRINOLOGY AND METABOLISM. LONDON: ELSEVIER SCIENCE LONDON, 2022, roč. 33, č. 9, s. 628-638. ISSN 1043-2760. Dostupné z: https://dx.doi.org/10.1016/j.tem.2022.06.005.

Potent synergistic effects of dulaglutide and food restriction in prevention of olanzapine-induced metabolic adverse effects in a rodent model [Typ výsledku: Jimp]

HORSKÁ, Kateřina, Jan KUČERA, Eva DRAŽANOVÁ, Gabriela KUZMÍNOVÁ, Petra AMCHOVÁ, Mária HRICKOVÁ, Jana RUDÁ a Silje SKREDE. Potent synergistic effects of dulaglutide and food restriction in prevention of olanzapine-induced metabolic adverse effects in a rodent model. Biomedicine and Pharmacotherapy. ISSY-LES-MOULINEAUX: Elsevier, 2024, roč. 176, July 2024, s. 1-11. ISSN 0753-3322. Dostupné z: https://dx.doi.org/10.1016/j.biopha.2024.116763.

Interacting effects of the MAM model of schizophrenia and antipsychotic treatment: Untargeted proteomics approach in adipose tissue [Typ výsledku: Jimp]

KUČERA, Jan, Kateřina HORSKÁ, Pavel HRUŠKA, Daniela KURUCZOVÁ, Vincenzo MICALE, Jana RUDÁ a Julie DOBROVOLNÁ. Interacting effects of the MAM model of schizophrenia and antipsychotic treatment: Untargeted proteomics approach in adipose tissue. Progress in Neuro-Psychopharmacology & Biological Psychiatry. Oxford: PERGAMON-ELSEVIER SCIENCE LTD, 2021, roč. 2021, č. 108, s. 1-15. ISSN 0278-5846. Dostupné z: https://dx.doi.org/10.1016/j.p

Metabolic profile of methylazoxymethanol model of schizophrenia in rats and effects of three antipsychotics in long-acting formulation [Typ výsledku: Jimp]

HORSKÁ, Kateřina, Hana KOTOLOVÁ, Michal KARPÍŠEK, Zuzana BABINSKÁ, Tomáš HAMMER, Jiří PROCHÁZKA, Tibor ŠTARK, Vincenzo MICALE a Jana RUDÁ. Metabolic profile of methylazoxymethanol model of schizophrenia in rats and effects of three antipsychotics in long-acting formulation. Toxicology and applied pharmacology. San Diego: Elsevier, 2020, roč. 406, November 2020, s. 1-14. ISSN 0041-008X. Dostupné z: https://dx.doi.org/10.1016/j.taap.2020.115214.

Hemodynamic and white blood cells parameters in patients with first-episode psychosis: a pilot longitudinal study [Typ výsledku: Jimp]

USTOHAL, Libor, Michaela MAYEROVÁ, Kateřina HORSKÁ, Marie OBDRŽÁLKOVÁ, Hana CRHOVÁ, Hana PŘIKRYLOVÁ KUČEROVÁ, Eva ČEŠKOVÁ a Tomáš KAŠPÁREK. Hemodynamic and white blood cells parameters in patients with first-episode psychosis: a pilot longitudinal study. International Journal of Psychiatry in Clinical Practice. ABINGDON: TAYLOR & FRANCIS LTD, 2022, roč. 26, č. 2, s. 213-216. ISSN 1365-1501. Dostupné z: https://dx.doi.org/10.1080/13651501.2

PharmDr. Hana Hořavová

Optimization of Spray Drying Process Parameters for the Preparation of Inhalable Mannitol-Based Microparticles Using a Box-Behnken Experimental Design [Typ výsledku: Jimp]

KARAS, Jakub, Sylvie PAVLOKOVÁ, Hana HOŘAVOVÁ a Jan GAJDZIOK. Optimization of Spray Drying Process Parameters for the Preparation of Inhalable Mannitol-Based Microparticles Using a Box-Behnken Experimental Design. Pharmaceutics. Basel: MDPI, 2023, roč. 15, č. 2, s. 1-16. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics150

Typy a příprava lipozomálních přípravků pro plicní podání [Typ výsledku: Jimp]

HOŘAVOVÁ, Hana, Jan GAJDZIOK a David VETCHÝ. Typy a příprava lipozomálních přípravků pro plicní podání. CHEMICKÉ LISTY. Praha: Česká společnost chemická, 2020, roč. 114, č. 5, s. 322-328. ISSN 0009-2770.

Optimalizace přípravy sprejově sušených porézních mikročástic pro podání do plic [Typ výsledku: Jsc]

PEŠTÁLOVÁ, Andrea, Hana HOŘAVOVÁ a Jan GAJDZIOK. Optimalizace přípravy sprejově sušených porézních mikročástic pro podání do plic. Česká a slovenská farmacie. 2023, roč. 72, č. 3, s. 132-140. ISSN 1210-7816.

Preparation and spray drying of liposomes - different protectants evaluation [Typ výsledku: k]

HOŘAVOVÁ, Hana, Barbara STERLE ZOREC a Alenka ZVONAR POBIRK. Preparation and spray drying of liposomes - different protectants evaluation. In 18th Warsaw International Medical Congress. 2023.

Pulmonary delivery of solid particles and their preparation with a focus on spry drying technology [Typ výsledku: k]

HOŘAVOVÁ, Hana a Andrea PEŠTÁLOVÁ. Pulmonary delivery of solid particles and their preparation with a focus on spry drying technology. In 39th Technology Days. 2023. Dostupné z: https://dx.doi.org/10.2478/afpuc-2023-0017.

PharmDr. Dagmar Jankovská, Ph.D.

Anticholinesterase Activity of Methanolic Extract of Amorpha fruticosa Flowers and Isolation of Rotenoids and Putrescine and Spermidine Derivatives [Typ výsledku: Jimp]

JANKOVSKÁ, Dagmar, Nikol JURČOVÁ, Renata KUBÍNOVÁ, Jiří VÁCLAVÍK, Emil ŠVAJDLENKA, Anna MASCELLANI, Petr MARSIK, Kateřina BOUZKOVÁ a Milan MALANÍK. Anticholinesterase Activity of Methanolic Extract of Amorpha fruticosa Flowers and Isolation of Rotenoids and Putrescine and Spermidine Derivatives. PLANTS-BASEL. BASEL: MDPI, 2024, roč. 13, č. 9, s. Neuvedeno, 10 s. ISSN 2223-7747. Dostupné z: https://dx.doi.org/10.3390/plants13091181.

Flavonoid Glycosides from Endemic Bulgarian Astragalus aitosensis (Ivanisch.) [Typ výsledku: Jimp]

VASILEV, H., S. ROSS, Karel ŠMEJKAL, P. MARSIK, Dagmar JANKOVSKÁ, J. HAVLIK a O. VESELY. Flavonoid Glycosides from Endemic Bulgarian Astragalus aitosensis (Ivanisch.). Molecules. BASEL: Mayer und Muller, 2019, roč. 24, č. 7, 13 s. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules24071419.

Flavonol glycosides from aerial parts of Astragalus thracicus Griseb [Typ výsledku: Jimp]

VASILEV, H., Karel ŠMEJKAL, C.S. GRONOVER, Y.H. CHOI, D. PRUFER, Dagmar JANKOVSKÁ a I. IONKOVA. Flavonol glycosides from aerial parts of Astragalus thracicus Griseb. PHYTOCHEMISTRY LETTERS. AMSTERDAM: ELSEVIER, 2021, roč. 41, č. 2, s. 119-122. ISSN 1874-3900. Dostupné z: https://dx.doi.org/10.1016/j.phytol.2020.11.012.

Antiproliferační a proapoptotický potenciál nově izolovaných seskviterpenových laktonů z rostliny Schkuhria pinnata u nádorových buněčných linií [Typ výsledku: k]

MELICHAROVÁ, Jana, Martina DVOŘÁKOVÁ, Tereza KAUEROVÁ, Dagmar JANKOVSKÁ a Peter KOLLÁR. Antiproliferační a proapoptotický potenciál nově izolovaných seskviterpenových laktonů z rostliny Schkuhria pinnata u nádorových buněčných linií. In I. společná konference farmakologických společností 2024. 2024.

Antioxidant Activity of Selected Stilbenoid Derivatives in a Cellular Model System [Typ výsledku: Jimp]

TREML, Jakub, Veronika LELÁKOVÁ, Karel ŠMEJKAL, T PAULICKOVA, S LABUDA, S GRANICA, J HAVLIK, Dagmar JANKOVSKÁ, Tereza PADRTOVÁ a J HOSEK. Antioxidant Activity of Selected Stilbenoid Derivatives in a Cellular Model System. Biomolecules. BASEL: MDPI, 2019, roč. 9, č. 9, 16 s. ISSN 0066-605X. Dostupné z: https://dx.doi.org/10.3390/biom9090

Jankovská D., Jurčová N., Malaník M., Švajdlenka E., Kubínová R. Derivatives of putrescine and spermidine from flowers of Amorpha fruticosa L., Fabaceae. in Book of Abstracts. 50 th Conference Synthesis and Analysis of Drugs, Brno, 2022, p.52, ISBN 978-80-280-0110-0.

Jankovská D., Kunovská R., Malaník M. Terapeutický potenciál Schkuhria pinnata, Asteraceae. 25. odborný seminář s mezinárodní účastí. Aktuální aspekty pěstování, zpracování a využití léčivých, aromatických a kořeninových rostlin, 6.-7. září 2023, Praha, Česká republika

2010-doposud: Oddělení klinické farmacie Nemocnice Na Homolce Praha; klinický farmaceut

Ing. Ondřej Jurček, Ph.D. et Ph.D.

Flipping hosts in hyperfine fields of paramagnetic guests [Typ výsledku: Jimp]

NOVOTNÝ, Jan, Jan CHYBA, Anna HRUZÍKOVÁ, Petra PIKULOVÁ, Aliaksandra KURSIT, Michal KNOR, Kateřina MARKOVÁ, Jaromír MAREK, Pia Yasmine JURČEK, Ondřej JURČEK a Radek MAREK. Flipping hosts in hyperfine fields of paramagnetic guests. Cell Reports Physical Science. Cell Press, 2023, roč. 4, č. 7, s. 101461-101475. ISSN 2666-3864. Dostupné z: https://dx.doi.org/10.1016/j.xcrp.2023.101461.

Hexagonal Microparticles from Hierarchical Self-Organization of Chiral Trigonal Pd3L6 Macrotetracycles [Typ výsledku: Jimp]

JURČEK, Ondřej, N. NONAPPA, Elina KALENIUS, Pia Yasmine JURČEK, Juha M. LINNANTO, Rakesh PUTTREDDY, Hennie VALKENIER, Nikolay HOUBENOV, Michal BABIAK, Miroslav PETEREK, Anthony P. DAVIS, Radek MAREK a Kari RISSANEN. Hexagonal Microparticles from Hierarchical Self-Organization of Chiral Trigonal Pd3L6 Macrotetracycles. Cell Reports Physical Science. Cell Press, 2021, roč. 2, č. 1, s. 100303-100321. ISSN 2666-3864. Dostupné z: https://dx.doi.org/10.1016/j.xcrp.2020.100303.

Bile Acids Transporters of Enterohepatic Circulation for Targeted Drug Delivery [Typ výsledku: Jimp]

DURNÍK, Robin, Lenka ŠINDLEROVÁ, Pavel BABICA a Ondřej JURČEK. Bile Acids Transporters of Enterohepatic Circulation for Targeted Drug Delivery. Molecules. MDPI, 2022, roč. 27, č. 9, s. 1-24. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules27092961.

Heads or Tails? Sandwich-Type Metallocomplexes of Hexakis(2,3-di-O-methyl)-alpha-cyclodextrin [Typ výsledku: Jimp]

JURČEK, Ondřej, Rahesh PUTTREDDY, Filip TOPIĆ, Pia Yasmine JURČEK, Pezhman ZARABADI POOR, Hendrik V. SCHRÖDER, Radek MAREK a Kari RISSANEN. Heads or Tails? Sandwich-Type Metallocomplexes of Hexakis(2,3-di-O-methyl)-alpha-cyclodextrin. Crystal Growth Design. American Chemical Society, 2020, roč. 20, č. 6, s. 4193-4199. ISSN 1528-7483. Dostupné z: https://dx.doi.org/10.1021/acs.cgd.0c00532.

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doc. PharmDr. Jan Juřica, Ph.D.

Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits [Typ výsledku: Jimp]

GAJDOŠOVÁ, Markéta, David VETCHÝ, Jan MUSELÍK, Jan GAJDZIOK, Jan JUŘICA, M. VETCHÁ, K. HAUPTMAN a V. JEKL. Bilayer mucoadhesive buccal films with prolonged release of ciclopirox olamine for the treatment of oral candidiasis: In vitro development, ex vivo permeation testing, pharmacokinetic and efficacy study in rabbits. International Journal of Pharmaceutics. AMSTERDAM: ELSEVIER SCIENCE BV, 2021, roč. 592, JAN 5 2021, s. 1-12. ISSN 0378-5173. Dostupné z: https://dx.doi.org/10.1016/j.ijpharm.2020.120086.

Drug interaction profile of TKI alectinib allows effective and safe treatment of ALK plus lung cancer in the kidney transplant recipient [Typ výsledku: Jimp]

BÍLEK, Ondřej, Miloš HOLÁNEK, Jan JUŘICA, Sona STEPANKOVA, Jiri VASINA, Iveta SELINGEROVÁ, Alexandr POPRACH, Simona BOŘILOVÁ, Tomáš KAZDA, Igor KISS a Lenka ZDRAŽILOVÁ DUBSKÁ. Drug interaction profile of TKI alectinib allows effective and safe treatment of ALK plus lung cancer in the kidney transplant recipient. International Immunopharmacology. AMSTERDAM: ELSEVIER, 2021, roč. 99, October 2021, s. 1-6. ISSN 1567-5769. Dostupné z: https://dx.doi.org/10.1016/j.intimp.2021.108012.

Lycopene increases metabolic activity of rat liver CYP2B, CYP2D and CYP3A. [Typ výsledku: Jimp]

NOSKOVÁ, Kristýna, Gabriela PŘIBYL DOVRTĚLOVÁ, Ondřej ZENDULKA, Markéta STRAKOŠOVÁ, Ondřej PEŠ a Jan JUŘICA. Lycopene increases metabolic activity of rat liver CYP2B, CYP2D and CYP3A. Pharmacological Reports. Heidelberg: Springer, 2020, roč. 72, č. 1, s. 156-165. ISSN 1734-1140. Dostupné z: https://dx.doi.org/10.1007/s43440-019-00007-y.

Longitudinal monitoring of hair cortisol using liquid chromatography-mass spectrometry to prevent hypercortisolism in patients undergoing glucocorticoid replacement therapy [Typ výsledku: Jimp]

KOSTOLANSKÁ, Katarína, Helena ŠIPROVÁ, Elis BARTEČKŮ, Jan JUŘICA, Ivan ŘIHÁČEK, Eva TÁBORSKÁ, Miroslav SOUČEK a Ondřej PEŠ. Longitudinal monitoring of hair cortisol using liquid chromatography-mass spectrometry to prevent hypercortisolism in patients undergoing glucocorticoid replacement therapy. THERAPEUTIC DRUG MONITORING. PHILADELPHIA: LIPPINCOTT WILLIAMS & WILKINS, 2022, roč. 44, č. 3, s. 438-447. ISSN 0163-4356. Dostupné z: https://dx.doi.org/10.1097/FTD.0000000000000946.

Assessment of Delta-9-Tetrahydrocannabinol (THC) in Saliva and Blood After Oral Administration of Medical Cannabis With Respect to its Effect on Driving Abilities [Typ výsledku: Jimp]

TROJAN, Vaclav, Leoš LANDA, Radovan HRIB, Jan JUŘICA, Jitka RYCHLÍČKOVÁ, Vaclav ZVONICEK, Lenka HALAMKOVA, Jan HALAMEK, Regina DEMLOVÁ, Silvie BĚLAŠKOVÁ a Jiri SLIVA. Assessment of Delta-9-Tetrahydrocannabinol (THC) in Saliva and Blood After Oral Administration of Medical Cannabis With Respect to its Effect on Driving Abilities. Physiological Research. Praha: Akademie Ved Ceske Republiky, 2022, roč. 71, č. 5, s. 703-712. ISSN 0862-8408. Dostupné z: https://dx.doi.org/10.33549/physiolres.934907.

PharmDr. Tereza Kauerová, Ph.D.

Ring-Substituted 1-Hydroxynaphthalene-2-Carboxanilides Inhibit Proliferation and Trigger Mitochondria-Mediated Apoptosis [Typ výsledku: Jimp]

KAUEROVÁ, Tereza, Tomáš GONĚC, Josef JAMPÍLEK, Susanne HAFNER, Ann-Kathrin GAISER, Tatiana SYROVETS, Radek FEDR, Karel SOUČEK a Peter KOLLÁR. Ring-Substituted 1-Hydroxynaphthalene-2-Carboxanilides Inhibit Proliferation and Trigger Mitochondria-Mediated Apoptosis. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2020, roč. 21, č. 10, s. 1-17. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms

Salicylanilides and Their Anticancer Properties [Typ výsledku: Jimp]

KAUEROVÁ, Tereza, Maria-Jesus PEREZ-PEREZ a Peter KOLLÁR. Salicylanilides and Their Anticancer Properties. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2023, roč. 24, č. 2, s. 1-22. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms24021728.

Antiproliferative and cytotoxic activities of C-Geranylated flavonoids from Paulownia tomentosa Steud. Fruit [Typ výsledku: Jimp]

MOLČANOVÁ, Lenka, Tereza KAUEROVÁ, S. DALL'ACQUA, P. MARSIK, Peter KOLLÁR a Karel ŠMEJKAL. Antiproliferative and cytotoxic activities of C-Geranylated flavonoids from Paulownia tomentosa Steud. Fruit. Bioorganic Chemistry. SAN DIEGO: ACADEMIC PRESS INC ELSEVIER SCIENCE, 2021, roč. 111, č. 104797, s. 1-12. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2021.104797.

Hybridization Approach to Identify Salicylanilides as Inhibitors of Tubulin Polymerization and Signal Transducers and Activators of Transcription 3 (STAT3) [Typ výsledku: Jimp]

GARGANTILLA, Marta, Leentje PERSOONS, Tereza KAUEROVÁ, Natalia DEL RIO, Dirk DAELEMANS, Eva-Maria PRIEGO, Peter KOLLÁR a Maria-Jesus PEREZ-PEREZ. Hybridization Approach to Identify Salicylanilides as Inhibitors of Tubulin Polymerization and Signal Transducers and Activators of Transcription 3 (STAT3). Pharmaceuticals. BASEL: MDPI, 2022, roč. 15, č. 7, s. 1-18. ISSN 1424-8247. Dostupné z: https://dx.doi.org/10.3390/ph15070835.

1. místo v Biologické sekci Nadnárodního kola studentské vědecké konference [Typ výsledku: o]

DVOŘÁKOVÁ, Martina, Peter KOLLÁR, Magdaléna ONUŠČÁKOVÁ, Pavel BOBÁĽ a Tereza KAUEROVÁ. 1. místo v Biologické sekci Nadnárodního kola studentské vědecké konference. 2022.

Mgr. Bc. Michal Koščík, Ph.D.

Side Effects of mRNA-Based COVID-19 Vaccines among Young Adults (18 — 30 Years Old): An Independent Post-Marketing Study [Typ výsledku: Jimp]

RIAD, Abanoub, Andrea POKORNÁ, Jitka KLUGAROVÁ, Natália ANTALOVÁ, Lucia KANTOROVÁ, Michal KOŠČÍK a Miloslav KLUGAR. Side Effects of mRNA-Based COVID-19 Vaccines among Young Adults (18 — 30 Years Old): An Independent Post-Marketing Study. Pharmaceuticals. Basel: MDPI, 2021, roč. 14, č. 10, s. 1-16. ISSN 1424-8247. Dostupné z: https://dx.doi.org/10.3390/ph14101049.

Prevalence of COVID-19 Vaccine Side Effects among Healthcare Workers in the Czech Republic [Typ výsledku: Jimp]

RIAD, Abanoub, Andrea POKORNÁ, Sameh ATTIA, Jitka KLUGAROVÁ, Michal KOŠČÍK a Miloslav KLUGAR. Prevalence of COVID-19 Vaccine Side Effects among Healthcare Workers in the Czech Republic. Journal of Clinical Medicine. Basel: MDPI, 2021, roč. 10, č. 7, s. 1-18. ISSN 2077-0383. Dostupné z: https://dx.doi.org/10.3390/jcm10071428.

Global Prevalence and Drivers of Dental Students' COVID-19 Vaccine Hesitancy [Typ výsledku: Jimp]

RIAD, Abanoub, Huthaifa ABDULQADER, Mariana MORGADO, Silvi DOMNORI, Michal KOŠČÍK, José João MENDES, Miloslav KLUGAR a Elham KATEEB. Global Prevalence and Drivers of Dental Students' COVID-19 Vaccine Hesitancy. Vaccines. Basel: MDPI, 2021, roč. 9, č. 6, s. 1-20. ISSN 2076-393X. Dostupné z: https://dx.doi.org/10.3390/vaccines90605

Exceptions for Cultural Heritage Institutions under the Copyright Directive in the Digital Single Market [Typ výsledku: Jsc]

KOŠČÍK, Michal. Exceptions for Cultural Heritage Institutions under the Copyright Directive in the Digital Single Market. The Grey journal. Amsterdam: TextRelease, 2020, roč. 16, Special Winter Issue, s. 80-85. ISSN 1574-180X.

PharmDr. Mgr. Alžběta Kružicová, Ph.D.

Květinův den — Mezioborová konference mladých farmakologů a toxikologů, Brno 2021, sborník abstraktů [Typ výsledku: M]

CHALUPOVÁ, Marta, Pavel SUCHÝ a Alžběta KRUŽICOVÁ. Květinův den — Mezioborová konference mladých farmakologů a toxikologů, Brno 2021, sborník abstraktů. 2021.

Květinův den — Mezioborová konference mladých farmakologů a toxikologů, Praha 2020, sborník abstraktů [Typ výsledku: M]

CHALUPOVÁ, Marta, Pavel SUCHÝ a Alžběta KRUŽICOVÁ. Květinův den — Mezioborová konference mladých farmakologů a toxikologů, Praha 2020, sborník abstraktů. 2020.

Nové krycí materiály v terapii akutní rány u laboratorního potkana [Typ výsledku: a]

KRUŽICOVÁ, Alžběta, Pavel SUCHÝ, Marta CHALUPOVÁ, Gabriela KUZMÍNOVÁ, Jarmila KLUSÁKOVÁ a Tomáš SOPUCH. Nové krycí materiály v terapii akutní rány u laboratorního potkana. In Květinův den — Mezioborová konference mladých farmakologů a toxikologů, Praha 2020, sborník abstraktů. 2020.

doc. Mgr. Lukáš Kubala, Ph.D.

Convergent Assembly of the Tricyclic Labdane Core Enables Synthesis of Diverse Forskolin-like Molecules [Typ výsledku: Jimp]

SZCZEPANIK, Pawel Marcin, Andrey MIKHAYLOV, Ondřej HYLSE, Roman KUČERA, Petra DAĎOVÁ, Marek NEČAS, Lukáš KUBALA, Kamil PARUCH a Jakub ŠVENDA. Convergent Assembly of the Tricyclic Labdane Core Enables Synthesis of Diverse Forskolin-like Molecules. Angewandte Chemie International Edition. Wiley, 2023, roč. 62, č. 1, s. 1-7. ISSN 1433-7851. Dostupné z: https://dx.doi.org/10.1002/anie.202213183.

An in vitro model that mimics the foreign body response in the peritoneum: Study of the bioadhesive properties of HA-based materials [Typ výsledku: Jimp]

LEHKÁ, Kateřina, Jana STARIGAZDOVÁ, Jiří MRÁZEK, Kristina NEŠPOROVÁ, Matěj ŠIMEK, Vojtěch PAVLÍK, Josef CHMELAŘ, Martin ČEPA, Martin Eugenio BARRIOS-LLERENA, Anna KOCURKOVÁ, Eva KRIVÁKOVÁ, Ludmila

KOUKALOVÁ, Lukáš KUBALA a Vladimír VELEBNÝ. An in vitro model that mimics the foreign body response in the peritoneum: Study of the bioadhesive properties of HA-based materials. Carbohydrate Polymers. Elsevier Ltd, 2023, roč. 310, June, s. 1-10. ISSN 0144-8617. Dostupné z: https://dx.doi.org/10.1016/j.carbpol.2023.120701.

Intraperitoneally administered native and lauroyl-modified hyaluronan films: Pharmacokinetic and metabolism studies [Typ výsledku: Jimp]

BRTKOVÁ, Barbora, Martina HERMANNOVÁ, Josef CHMELAŘ, Kristina NEŠPOROVÁ, Anna KOCURKOVÁ, Lukáš KUBALA, Gabriela AMBROŽOVÁ, Vladimír VELEBNÝ a Matěj ŠIMEK. Intraperitoneally administered native and lauroyl-modified hyaluronan films: Pharmacokinetic and metabolism studies. Carbohydrate Polymers. Elsevier, 2023, roč. 299, January, s. 1-9. ISSN 0144-8617. Dostupné z: https://dx.doi.org/10.1016/j.carbpol.2022.120201.

Molecular weight and gut microbiota determine the bioavailability of orally administered hyaluronic acid [Typ výsledku: Jimp]

ŠIMEK, Matěj, Kristýna TURKOVÁ, Martin SCHWARZER, Kristina NEŠPOROVÁ, Lukáš KUBALA, Martina HERMANNOVÁ, Tereza FOGLOVÁ, Barbora ŠAFRÁNKOVÁ, Martin ŠINDELÁŘ, Dagmar ŠRŮTKOVÁ, Sofia CHATZIGEORGIOU, Tereza NOVOTNÁ, Tomáš HUDCOVIC a Vladimír VELEBNÝ. Molecular weight and gut microbiota determine the bioavailability of orally administered hyaluronic acid. Carbohydrate Polymers. Elsevier, 2023, roč. 313, August, s. 1-13. ISSN 0144-8617. Dostupné z: https://dx.doi.org/10.1016/j.carbpol.2023.120880.

How the molecular weight affects the in vivo fate of exogenous hyaluronan delivered intravenously: A stable-isotope labelling strategy [Typ výsledku: Jimp]

ŠIMEK, Matěj, Kristina NEŠPOROVÁ, Anna KOCURKOVÁ, Tereza FOGLOVÁ, Gabriela AMBROŽOVÁ, Vladimír VELEBNÝ, Lukáš KUBALA a Martina HERMANNOVÁ. How the molecular weight affects the in vivo fate of exogenous hyaluronan delivered intravenously: A stable-isotope labelling strategy. Carbohydrate Polymers. Oxford: Elsevier Ltd., 2021, roč. 263, July, s. "117927", 10 s. ISSN 0144-8617. Dostupné z: https://dx.doi.org/10.1016/j.carbpol.2021.117927.

doc. PharmDr. Renata Kubínová, Ph.D.

Abietane diterpenes of the genus plectranthus sensu lato [Typ výsledku: Jimp]

GÁBOROVÁ, Mária, Karel ŠMEJKAL a Renata KUBÍNOVÁ. Abietane diterpenes of the genus plectranthus sensu lato. Molecules. Basel: MDPI, 2022, roč. 27, č. 1, s. 1-64. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules27010166.

Arylaminopropanone Derivatives as Potential Cholinesterase Inhibitors: Synthesis, Docking Study and Biological Evaluation [Typ výsledku: Jimp]

HUDCOVÁ, Anna, Aleš KROUTIL, Renata KUBÍNOVÁ, A. D. GARRO, L. J. GUTIERREZ, D. ENRIZ, M. ORAVEC a Jozef CSÖLLEI. Arylaminopropanone Derivatives as Potential Cholinesterase Inhibitors: Synthesis, Docking Study and Biological Evaluation. Molecules. 2020, roč. 25, č. 7, s. 1751-1767. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules25071751.

Anti-MRSA activity of abietane diterpenes from Coleus blumei Benth. [Typ výsledku: J]

JURKANINOVÁ, Sabína, Renata KUBÍNOVÁ, Marcela NEJEZCHLEBOVÁ, Markéta GAZDOVÁ, Zuzana HANAKOVA a Stefano DALL ACQUA. Anti-MRSA activity of abietane diterpenes from Coleus blumei Benth. NATURAL PRODUCT RESEARCH. ABINGDON: TAYLOR & FRANCIS LTD, 2019, 7 s. ISSN 1478-6419. Dostupné z: https://dx.doi.org/10.1080/14786419.2

Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity [Typ výsledku: Jimp]

PADRTOVÁ, Tereza, Pavlína MARVANOVÁ, Renata KUBÍNOVÁ, Jozef CSÖLLEI, Oldřich FARSA, Tomáš GONĚC, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Jiří PAZOUREK, Alice SYCHROVÁ, Karel ŠMEJKAL a Petr MOKRÝ. Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity. Current organic synthesis. Sharjah: Bentham Science Publ Ltd, 2020, roč. 17, č. 7, s. 576-587. ISSN 1570-1794. Dostupné z: https://dx.doi.org/10.2174/1570179417666200619132218.

New diterpenoid glucoside and flavonoids from Plectranthus scutellarioides (L.) R. Br. [Typ výsledku: Jimp]

KUBÍNOVÁ, Renata, Markéta GAZDOVÁ, Zuzana HANÁKOVÁ, S. JURKANINOVA, Acqua S DALL, Josef CVAČKA a Otakar HUMPA. New diterpenoid glucoside and flavonoids from Plectranthus scutellarioides (L.) R. Br. SOUTH AFRICAN JOURNAL OF BOTANY. AMSTERDAM: ELSEVIER SCIENCE BV, 2019, roč. 120, 0254-6299, s. 286-290. ISSN 0254-6299. Dostupné z: https://dx.doi.org/10.1016/j.sajb.2018.08.023.

Mgr. Adéla Lamaczová

Graphene oxide interaction with Lemna minor: Root barrier strong enough to prevent nanoblade-morphology-induced toxicity [Typ výsledku: J]

MALINA, Tomáš, Adéla LAMACZOVÁ, Eliška MARŠÁLKOVÁ, Radek ZBOŘIL a Blahoslav MARŠÁLEK. Graphene oxide interaction with Lemna minor: Root barrier strong enough to prevent nanoblade-morphology-induced toxicity. Chemosphere. OXFORD: PERGAMON-ELSEVIER SCIENCE LTD, 2021. ISSN 0045-6535. Dostupné z: https://dx.doi.org/10.1016/j.c

Anxiety in Duckweed — Metabolism and Effect of Diazepam on Lemna minor [Typ výsledku: Jimp]

LAMACZOVÁ, Adéla, Tomáš MALINA, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Petra PŘIBILOVÁ, Štěpán ZEZULKA, Blahoslav MARŠÁLEK a Eliška MARŠÁLKOVÁ. Anxiety in Duckweed — Metabolism and Effect of Diazepam on Lemna minor. WATER. Basel: MDPI, 2022, roč. 14, č. 9, s. 1-12. ISSN 2073-4441. Dostupné z: https://dx.doi.org/10.3390/w140914

Student Scientific Conference MUNI Pharm. Doctoral Students 2023, The Book of Abstracts [Typ výsledku: s]

BOBÁĽ, Pavel, Eva HAVRÁNKOVÁ, Veronika BALLAYOVÁ, David ŠVESTKA a Adéla LAMACZOVÁ. Student Scientific Conference MUNI Pharm. Doctoral Students 2023, The Book of Abstracts. 1., elektronické vyd. Brno: Masarykova univerzita, 2023. ISBN 978-80-280-0324-1.

Student Scientific Conference MUNI Pharm. Master Students 2023, The Book of Abstracts [Typ výsledku: s]

BOBÁĽ, Pavel, Petr MOKRÝ, Adéla LAMACZOVÁ a Veronika BALLAYOVÁ. Student Scientific Conference MUNI Pharm. Master Students 2023, The Book of Abstracts. 1., elektronické vyd. Brno: Masarykova univerzita, 2023, 19 s. ISBN 978-80-280-0323-4.

Student Scientific Conference MUNI Pharm. Doctorals Students 2022, The Book of Abstracts [Typ výsledku: s]

BOBÁĽ, Pavel, Eva HAVRÁNKOVÁ, Adéla LAMACZOVÁ, Veronika BALLAYOVÁ a David ŠVESTKA. Student Scientific Conference MUNI Pharm. Doctorals Students 2022, The Book of Abstracts. 1., elektronické vyd. Brno: Masarykova univerzita, 2022. ISBN 978-80-280-0105-6.

PharmDr. Milan Malaník, Ph.D.

Berberine in Cardiovascular and Metabolic Diseases: From Mechanisms to Therapeutics [Typ výsledku: Jimp]

FENG, XJ, A SUREDA, S JAFARI, Z MEMARIANI, D TEWARI, G ANNUNZIATA, L BARREA, STS HASSAN, Karel ŠMEJKAL, Milan MALANÍK, Alice SYCHROVÁ, D BARRECA, L ZIBERNA, MF MAHOMOODALLY, G ZENGIN, SW XU, SM NABAVI a AZ SHEN. Berberine in Cardiovascular and Metabolic Diseases: From Mechanisms to Therapeutics. Theranostics. Lake Haven: Ivyspring International Publisher, 2019, roč. 9, č. 7, s. 1923-1951. ISSN 1838-7640. Dostupné z: https://dx.doi.org/10.7150/thno.30787.

Polyketide Derivatives in the Resistance of Gerbera hybrida to Powdery Mildew [Typ výsledku: Jimp]

MASCELLANI, Anna, Kirsten LEISS, Johanna BAC-MOLENAAR, Milan MALANÍK, Petr MARSIK, Hernandez Olesinski ESTUARDO, Jan TAUCHEN, Pavel KLOUCEK, Karel ŠMEJKAL a Jaroslav HAVLIK. Polyketide Derivatives in the Resistance of Gerbera hybrida to Powdery Mildew. Frontiers in Plant Science. Lausanne: FRONTIERS MEDIA SA, 2022, roč. 12, Januar, s. 1-11. ISSN 1664-462X. Dostupné z: https://dx.doi.org/10.3389/fpls.2021.790907.

Anti-inflammatory and antioxidant properties of chemical constituents of Broussonetia papyrifera [Typ výsledku: Jimp]

MALANÍK, Milan, Jakub TREML, Veronika LELÁKOVÁ, Daniela NYKODÝMOVÁ, Michal ORAVEC, Jaromír MAREK a Karel ŠMEJKAL. Anti-inflammatory and antioxidant properties of chemical constituents of Broussonetia papyrifera. Bioorganic Chemistry. SAN DIEGO: ACADEMIC PRESS INC ELSEVIER SCIENCE, 2020, roč. 104, NOV, s. 104298-104304. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2020.104298.

Comparison of Metabolic Profiles of Fruits of Arctium lappa, Arctium minus, and Arctium tomentosum [Typ výsledku: Jimp]

MALANÍK, Milan, Veronika FARKOVÁ, Jitka KŘÍŽOVÁ, Alice KRESOVÁ, Karel ŠMEJKAL, Tomáš KAŠPAROVSKÝ a Kateřina DADÁKOVÁ. Comparison of Metabolic Profiles of Fruits of Arctium lappa, Arctium minus, and Arctium tomentosum. Plant Foods for Human Nutrition. DORDRECHT: SPRINGER, 2024, roč. 79, č. 2, s. 497-502. ISSN 0921-9668. Dostupné z: https://dx.doi.org/10.1007/s11130-024-01175-w.

Prenylated Stilbenoids Affect Inflammation by Inhibiting the NF-kappa B/AP-1 Signaling Pathway and Cyclooxygenases and Lipoxygenase [Typ výsledku: Jimp]

HOŠEK, Jan, Veronika LELÁKOVÁ, Pavel BOBÁĽ, Hana PÍŽOVÁ, Markéta GAZDOVÁ, Milan MALANÍK, K JAKUBCZYK, O. VESELY, P. LANDA, V. TEMML, D. SCHUSTER, V. PRACHYAWARAKORN, P. PAILEE, G. REN, F. ZPURNY, M. ORAVEC a Karel ŠMEJKAL. Prenylated Stilbenoids Affect Inflammation by Inhibiting the NF-kappa B/AP-1 Signaling Pathway and Cyclooxygenases and Lipoxygenase. Journal of Natural Products. Washington: American Chemical Society, 2019, roč. 82, č. 7, s. 1839-1848. ISSN 0163-3864. Dostupné z: https://dx.doi.org/10.1021/acs.jnatprod.9b0008

PharmDr. Pavlína Marvanová, Ph.D.

Targeting defective sphingosine kinase 1 in Niemann?Pick type C disease with an activator mitigates cholesterol accumulation [Typ výsledku: Jimp]

NEWTON, J., E. N. D. PALLADINO, C. WEIGEL, M. MACEYKA, M. H. GRALER, C. E. SENKAL, R. D. ENRIZ, Pavlína MARVANOVÁ, J. JAMPILEK, S. LIMA, S. MILSTIEN a S. SPIEGEL. Targeting defective sphingosine kinase 1 in Niemann?Pick type C disease with an activator mitigates cholesterol accumulation. Journal of Biological Chemistry. Bethesda, USA: Amer. Soc. Biochem. Mol. Biol., 2020, roč. 295, č. 27, s. 9121-9133. ISSN 0021-9258. Dostupné z: https://dx.doi.org/10.1074/jbc.RA120.012659.

(Hetero)Aryloxyaminopropanols with N-Phenylpiperazine Structural Fragment - Review of Cardiovascular Activity [Typ výsledku: Jimp]

MARVANOVÁ, Pavlína, Tereza PADRTOVÁ a Petr MOKRÝ. (Hetero)Aryloxyaminopropanols with N-Phenylpiperazine Structural Fragment - Review of Cardiovascular Activity. Mini-reviews in medicinal chemistry. Sharjah: Betham Science Publ Ltd., 2020, roč. 20, č. 17, s. 1719-1731. ISSN 1389-5575. Dostupné z: https://dx.doi.org/10.2174/1389557520666200624192859

Activity of N-Phenylpiperazine Derivatives Against Bacterial and Fungal Pathogens [Typ výsledku: Jimp]

POSPÍŠILOVÁ, Šárka, Pavlína MARVANOVÁ, Jakub TREML, Agnes M. MORICZ, Peter G. OTT, Petr MOKRÝ, Klára ODEHNALOVÁ, Ondrej ŠEDO, Alois ČÍŽEK a Josef JAMPÍLEK. Activity of N-Phenylpiperazine Derivatives Against Bacterial and Fungal Pathogens. CURRENT PROTEIN & PEPTIDE SCIENCE. Bentham Science Publishers, 2019, roč. 20, č. 11, s. 1119-1129. ISSN 1389-2037. Dostupné z: https://dx.doi.org/10.2174/1389203720666190913114041.

Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity [Typ výsledku: Jimp]

PADRTOVÁ, Tereza, Pavlína MARVANOVÁ, Renata KUBÍNOVÁ, Jozef CSÖLLEI, Oldřich FARSA, Tomáš GONĚC, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Jiří PAZOUREK, Alice SYCHROVÁ, Karel ŠMEJKAL a Petr MOKRÝ. Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting

Activity. Current organic synthesis. Sharjah: Bentham Science Publ Ltd, 2020, roč. 17, č. 7, s. 576-587. ISSN 1570-1794. Dostupné z: https://dx.doi.org/10.2174/1570179417666200619132218.

doc. PharmDr. Ruta Masteiková, CSc.

Cannabis sativa L. Bioactive Compounds and Their Protective Role in Oxidative Stress and Inflammation [Typ výsledku: Jimp]

KOPUSTINSKIENE, Dalia M, Ruta MASTEIKOVÁ, Robertas LAZAUSKAS a Jurga BERNATONIENE. Cannabis sativa L. Bioactive Compounds and Their Protective Role in Oxidative Stress and Inflammation. Antioxidants. Basel: MDPI, 2022, roč. 11, č. 4, s. 1-12. ISSN 2076-3921. Dostupné z: https://dx.doi.org/10.3390/antiox11040660.

Anti-Cancer Properties of Resveratrol: A Focus on Its Impact on Mitochondrial Functions [Typ výsledku: Jimp]

KURSVIETIENE, Lolita, Dalia M KOPUSTINSKIENE, Inga STANEVICIENE, Ausra MONGIRDIENE, Kateřina KUBOVÁ, Ruta MASTEIKOVÁ a Jurga BERNATONIENE. Anti-Cancer Properties of Resveratrol: A Focus on Its Impact on Mitochondrial Functions. Antioxidants. Basel: MDPI, 2023, roč. 12, č. 12, s. 1-24. ISSN 2076-3921. Dostupné z: https://dx.doi.org/10.3390/antiox12122056.

Formulation and Evaluation of Novel Film Wound Dressing Based on Collagen/Microfibrillated Carboxymethylcellulose Blend [Typ výsledku: Jimp]

TENOROVÁ, Kateřina, Ruta MASTEIKOVÁ, Sylvie PAVLOKOVÁ, Klára KOSTELANSKÁ, J. BERNATONIENE a David VETCHÝ. Formulation and Evaluation of Novel Film Wound Dressing Based on Collagen/Microfibrillated Carboxymethylcellulose Blend. Pharmaceutics. Basel: MDPI, 2022, roč. 14, č. 4, s. 1-15. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics14040782.

Natural Compounds Rosmarinic Acid and Carvacrol Counteract Aluminium-Induced Oxidative Stress [Typ výsledku: Jimp]

BARANAUSKAITE, J., I. SADAUSKIENE, A. LIEKIS, A. KASAUSKAS, R. LAZAUSKAS, U. ZLABIENE, Ruta MASTEIKOVÁ, D. M. KOPUSTINSKIENE a J. BERNATONIENE. Natural Compounds Rosmarinic Acid and Carvacrol Counteract Aluminium-Induced Oxidative Stress. Molecules. Orlando, Florida: Academic Press, 2020, roč. 25, č. 8, s. 1-13. ISSN 1079-9796. Dostupné z: https://dx.doi.org/10.3390/molecules25081807.

Formulation and Evaluation of Novel Collagen/carboxymethylcellulose Blend Film Wound Dressing [Typ výsledku: Jsc]

TENOROVÁ, Kateřina, Jana KURFÜRSTOVÁ, Ruta MASTEIKOVÁ, Sylvie PAVLOKOVÁ a Jurga BERNATONIENĖ. Formulation and Evaluation of Novel Collagen/carboxymethylcellulose Blend Film Wound Dressing. Česká a Slovenská Farmacie. 2022, roč. 71, č. 5, s. 190-199. ISSN 1210-7816.

Mgr. Petr Mokrý, Ph.D.

Searching new structural scaffolds for BRAF inhibitors. An integrative study using theoretical and experimental techniques [Typ výsledku: J]

CAMPOS, LE, FM GARIBOTTO, E ANGELINA, J KOS, T TOMASIC, N ZIDER, D KIKELJ, Tomáš GONĚC, Pavlína MARVANOVÁ, Petr MOKRÝ, J JAMPILEK, SE ALVAREZ a RD ENRIZ. Searching new structural scaffolds for BRAF inhibitors. An integrative study using theoretical and experimental techniques. Bioorganic Chemistry. SAN DIEGO: ACADEMIC PRESS INC ELSEVIER SCIENCE, 2019, roč. 91, 19 s. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2

(Hetero)Aryloxyaminopropanols with N-Phenylpiperazine Structural Fragment - Review of Cardiovascular Activity [Typ výsledku: Jimp]

MARVANOVÁ, Pavlína, Tereza PADRTOVÁ a Petr MOKRÝ. (Hetero)Aryloxyaminopropanols with N-Phenylpiperazine Structural Fragment - Review of Cardiovascular Activity. Mini-reviews in medicinal chemistry. Sharjah: Betham Science Publ Ltd., 2020, roč. 20, č. 17, s. 1719-1731. ISSN 1389-5575. Dostupné z: https://dx.doi.org/10.2174/1389557520666200624192859

Activity of N-Phenylpiperazine Derivatives Against Bacterial and Fungal Pathogens [Typ výsledku: Jimp]

POSPÍŠILOVÁ, Šárka, Pavlína MARVANOVÁ, Jakub TREML, Agnes M. MORICZ, Peter G. OTT, Petr MOKRÝ, Klára ODEHNALOVÁ, Ondrej ŠEDO, Alois ČÍŽEK a Josef JAMPÍLEK. Activity of N-Phenylpiperazine Derivatives Against Bacterial and Fungal Pathogens. CURRENT PROTEIN & PEPTIDE SCIENCE. Bentham Science Publishers, 2019, roč. 20, č. 11, s. 1119-1129. ISSN 1389-2037. Dostupné z: https://dx.doi.org/10.2174/1389203720666190913114041.

Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity [Typ výsledku: Jimp]

PADRTOVÁ, Tereza, Pavlína MARVANOVÁ, Renata KUBÍNOVÁ, Jozef CSÖLLEI, Oldřich FARSA, Tomáš GONĚC, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Jiří PAZOUREK, Alice SYCHROVÁ, Karel ŠMEJKAL a Petr MOKRÝ. Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity. Current organic synthesis. Sharjah: Bentham Science Publ Ltd, 2020, roč. 17, č. 7, s. 576-587. ISSN 1570-1794. Dostupné z: https://dx.doi.org/10.2174/1570179417666200619132218.

SYNTHESIS AND STUDY OF BIOLOGICAL PROPERTIES OF NEW CARBAMATES WITH A MODIFIED BASIC FRAGMENT IN THE ARYLOXYAMINOPROPANOL CHAIN [Typ výsledku: a]

UNGVARSKÁ MAĽUČKÁ, Lucia, Jozef CSÖLLEI a Petr MOKRÝ. SYNTHESIS AND STUDY OF BIOLOGICAL PROPERTIES OF NEW CARBAMATES WITH A MODIFIED BASIC FRAGMENT IN THE ARYLOXYAMINOPROPANOL CHAIN. In 51st Conference, Synthesis and Analysis of Drugs, Bratislava, 7 - 8. 9. 2023. 2023.

PharmDr. Lenka Molčanová, Ph.D.

C-geranylated flavonoids from Paulownia tomentosa Steud. fruit as potential anti-inflammatory agents [Typ výsledku: Jimp]

MOLČANOVÁ, Lenka, Jakub TREML, Veronika BREZANI, Petr MARSIK, Sebnem KURHAN, Zdenek TRAVNICEK, Pavel UHRIN a Karel ŠMEJKAL. C-geranylated flavonoids from Paulownia tomentosa Steud. fruit as potential anti-inflammatory agents. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2022, roč. 296, October, s. 1-14. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2022.115509.

Perspectives on antimicrobial properties of Paulownia tomentosa Steud. fruit products in the control of Staphylococcus aureus infections [Typ výsledku: Jimp]

ŠKOVRANOVÁ, Gabriela, Lenka MOLČANOVÁ, Blaž JUG, Dina JUG, Anja KLANČNIK, Sonja SMOLE-MOŽINA, Jakub TREML, Magda TUŠEK ŽNIDARIČ a Alice SYCHROVÁ. Perspectives on antimicrobial properties of Paulownia tomentosa Steud. fruit products in the control of Staphylococcus aureus infections. JOURNAL OF ETHNOPHARMACOLOGY. IRELAND: ELSEVIER IRELAND LTD, 2024, roč. 2024, March, s. 117461. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2023.117461.

Antiproliferative and cytotoxic activities of C-Geranylated flavonoids from Paulownia tomentosa Steud. Fruit [Typ výsledku: Jimp]

MOLČANOVÁ, Lenka, Tereza KAUEROVÁ, S. DALL'ACQUA, P. MARSIK, Peter KOLLÁR a Karel ŠMEJKAL. Antiproliferative and cytotoxic activities of C-Geranylated flavonoids from Paulownia tomentosa Steud. Fruit. Bioorganic Chemistry. SAN DIEGO: ACADEMIC PRESS INC ELSEVIER SCIENCE, 2021, roč. 111, č. 104797, s. 1-12. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2021.104797.

Screening of Natural Compounds as P-Glycoprotein Inhibitors against Multidrug Resistance [Typ výsledku: Jimp]

MARQUES, Sérgio Manuel, Lucie ŠUPOLÍKOVÁ, Lenka MOLČANOVÁ, Karel ŠMEJKAL, David BEDNÁŘ a Iva SLANINOVÁ. Screening of Natural Compounds as P-Glycoprotein Inhibitors against Multidrug Resistance. BIOMEDICINES. BASEL: MDPI, 2021, roč. 9, č. 4, s. 1-22. ISSN 2227-9059. Dostupné z: https://dx.doi.org/10.3390/biomedicines9040357.

C-prenylated flavonoids with potential cytotoxic activity against solid tumor cell lines [Typ výsledku: J]

MOLČANOVÁ, Lenka, Dominika JANOŠÍKOVÁ, Stefano DALL´ACQUA a Karel ŠMEJKAL. C-prenylated flavonoids with potential cytotoxic activity against solid tumor cell lines. Phytochemistry Reviews. 2019.

Mgr. Veronika Murgašová

Aminopeptidase N Inhibitors as Pointers for Overcoming Antitumor Treatment Resistance [Typ výsledku: Jimp]

FARSA, Oldřich, Veronika BALLAYOVÁ, Radka ŽÁČKOVÁ, Peter KOLLÁR, Tereza KAUEROVÁ a Peter ZUBÁČ. Aminopeptidase N Inhibitors as Pointers for Overcoming Antitumor Treatment Resistance. International Journal of Molecular Sciences. Basel: Multidisciplinary Digital Publishing Institute, 2022, roč. 23, č. 17, s. 1-15. ISSN 1422-0067. Dostupné z: https://dx.doi.org/10.3390/ijms23179813.

C(sp3)-H cyclizations of 2-(2-vinyl)phenoxy-tert-anilines [Typ výsledku: Jimp]

DUNKEL, Petra, Dora BOGDÁN, Ruth DEME, Adam ZIMBER, Veronika BALLAYOVÁ, Eszter CSIZMADIA, Bence KONTRA, Eszter KALYDI, Attila BENYEI, Peter MATYUS a Zoltan MUCSI. C(sp3)-H cyclizations of 2-(2-vinyl)phenoxy-tert-anilines. RSC Advances. Cambridge: Royal Society of Chemistry, 2024, roč. 14, č. 24, s. 16784-16800. ISSN 2046-2069. Dostupné z: https://dx.doi.org/10.1039/d3ra08974f.

Student Scientific Conference MUNI Pharm. Doctoral Students 2023, The Book of Abstracts [Typ výsledku: s]

BOBÁĽ, Pavel, Eva HAVRÁNKOVÁ, Veronika BALLAYOVÁ, David ŠVESTKA a Adéla LAMACZOVÁ. Student Scientific Conference MUNI Pharm. Doctoral Students 2023, The Book of Abstracts. 1., elektronické vyd. Brno: Masarykova univerzita, 2023. ISBN 978-80-280-0324-1.

Student Scientific Conference MUNI Pharm. Master Students 2023, The Book of Abstracts [Typ výsledku: s]

BOBÁĽ, Pavel, Petr MOKRÝ, Adéla LAMACZOVÁ a Veronika BALLAYOVÁ. Student Scientific Conference MUNI Pharm. Master Students 2023, The Book of Abstracts. 1., elektronické vyd. Brno: Masarykova univerzita, 2023, 19 s. ISBN 978-80-280-0323-4.

Aromatic Schiff bases as aminopeptidase N inhibitors [Typ výsledku: a]

FARSA, Oldřich, Veronika BALLAYOVÁ, Radka ŽÁČKOVÁ, Peter KOLLÁR, Tereza KAUEROVÁ a Peter ZUBÁČ. Aromatic Schiff bases as aminopeptidase N inhibitors. In 50th conference Syntesis and Analysis of Drugs. 2022. ISBN 978-80-280-0110-0.

Ing. Marcela Nejezchlebová

Edible Films from Carrageenan/Orange Essential Oil/Trehalose-Structure, Optical Properties, and Antimicrobial Activity [Typ výsledku: Jimp]

JANCIKOVA, S., D. DORDEVIC, P. SEDLACEK, Marcela NEJEZCHLEBOVÁ, Jakub TREML a B. TREMLOVA. Edible Films from Carrageenan/Orange Essential Oil/Trehalose-Structure, Optical Properties, and Antimicrobial Activity. Polymers. Basel: MDPI, 2021, roč. 13, č. 3, s. 1-19. ISSN 2073-4360. Dostupné z: https://dx.doi.org/10.3390/polym13030332.

Incorporation of Natural Blueberry, Red Grapes and Parsley Extract By-Products into the Production of Chitosan Edible Films [Typ výsledku: Jimp]

DORDEVIC, S., D. DORDEVIC, P. SEDLACEK, M. KALINA, K. TESIKOVA, B. ANTONIC, B. TREMLOVA, Jakub TREML, Marcela NEJEZCHLEBOVÁ, L. VAPENKA, A. RAJCHL a Monika BULÁKOVÁ. Incorporation of Natural Blueberry, Red Grapes and Parsley Extract By-Products into the Production of Chitosan Edible Films. Polymers. Basel: MDPI, 2021, roč. 13, č. 19, s. 1-21. ISSN 2073-4360. Dostupné z: https://dx.doi.org/10.3390/polym13193388.

Reused Plant Fried Oil: A Case Study with Home-Made Soaps [Typ výsledku: Jimp]

ANTONIC, B., D. DORDEVIC, S. JANCIKOVA, B. TREMLOVA, Marcela NEJEZCHLEBOVÁ, Kristýna GOLDOVÁ a Jakub TREML. Reused Plant Fried Oil: A Case Study with Home-Made Soaps. PROCESSES. BASEL: MDPI, 2021, roč. 9, č. 3, s. 443-451, 12 s. ISSN 2227-9717. Dostupné z: https://dx.doi.org/10.3390/pr9030529.

Anti-MRSA activity of abietane diterpenes from Coleus blumei Benth. [Typ výsledku: J]

JURKANINOVÁ, Sabína, Renata KUBÍNOVÁ, Marcela NEJEZCHLEBOVÁ, Markéta GAZDOVÁ, Zuzana HANAKOVA a Stefano DALL ACQUA. Anti-MRSA activity of abietane diterpenes from Coleus blumei Benth. NATURAL PRODUCT RESEARCH. ABINGDON: TAYLOR & FRANCIS LTD, 2019, 7 s. ISSN 1478-6419. Dostupné z: https://dx.doi.org/10.1080/14786419.2

PFenylpropanoidy a flavonoid z Helichrysum petiolare Hilliard & B. L. Burtt. [Typ výsledku: Jsc]

KUBÍNOVÁ, Renata, Marcela NEJEZCHLEBOVÁ, Markéta GAZDOVÁ, Mária GÁBOROVÁ, I VÁRADY a Lenka MOLČANOVÁ. PFenylpropanoidy a flavonoid z Helichrysum petiolare Hilliard & B. L. Burtt. Ceska a slovenska farmacie. 2021, roč. 70, s. 206-209. ISSN 1210-7816.

Mgr. Bc. Daniela Nykodýmová

Anti-inflammatory and antioxidant properties of chemical constituents of Broussonetia papyrifera [Typ výsledku: Jimp]

MALANÍK, Milan, Jakub TREML, Veronika LELÁKOVÁ, Daniela NYKODÝMOVÁ, Michal ORAVEC, Jaromír MAREK a Karel ŠMEJKAL. Anti-inflammatory and antioxidant properties of chemical constituents of Broussonetia papyrifera. Bioorganic Chemistry. SAN DIEGO: ACADEMIC PRESS INC ELSEVIER SCIENCE, 2020, roč. 104, NOV, s. 104298-104304. ISSN 0045-2068. Dostupné z: https://dx.doi.org/10.1016/j.bioorg.2020.104298.

Determination of PPAR gamma agonistic activity of mimulone and diplacone in nanoparticle formulations [Typ výsledku: k]

NYKODÝMOVÁ, Daniela, Lenka MOLČANOVÁ, Jan KOTOUČEK, Josef MAŠEK a Jakub TREML. Determination of PPAR gamma agonistic activity of mimulone and diplacone in nanoparticle formulations. In PSE Trends in Natural Products 2024 Young Scientists' Meeting. 2024. ISBN 978-80-280-0559-7.

Anti-inflammatory potential of selected phenolic compounds isolated from Morus alba [Typ výsledku: k]

NYKODÝMOVÁ, Daniela, Michaela MÁTLOVÁ, Marie ČULENOVÁ a Jakub TREML. Anti-inflammatory potential of selected phenolic compounds isolated from Morus alba. In Synthesis and Analysis of Drugs (SAL) 2022. 2022. ISBN 978-80-280-0110-0.

Anti-inflammatory and antioxidant properties of chemical constituents of Broussonetia papyrifera [Typ výsledku: k]

MALANÍK, Milan, Jakub TREML, Veronika LELÁKOVÁ, Daniela NYKODÝMOVÁ, Michal ORAVEC, Jaromír MAREK a Karel ŠMEJKAL. Anti-inflammatory and antioxidant properties of chemical constituents of Broussonetia papyrifera. In PSE E-CONGRESS 2020 "Plant Derived Natural Products as Pharmacological and Nutraceutical Tools" (online). 2020.

Ing. Klára Odehnalová, Ph.D.

Extension of the Internal Standard Method for Determination of Thermodynamic Acidity Constants of Compounds Sparingly Soluble in Water by Capillary Zone Electrophoresis [Typ výsledku: Jimp]

PAZOUREK, Jiří, Lucie NYTROVÁ a Klára ODEHNALOVÁ. Extension of the Internal Standard Method for Determination of Thermodynamic Acidity Constants of Compounds Sparingly Soluble in Water by Capillary Zone Electrophoresis. ACS Omega. WASHINGTON: AMER CHEMICAL SOC, 2021, roč. 7, č. 1, s. 1477-1482. ISSN 2470-1343. Dostupné z: https://dx.doi.org/10.1021/acsomega.1c06224.

Anxiety in Duckweed — Metabolism and Effect of Diazepam on Lemna minor [Typ výsledku: Jimp]

LAMACZOVÁ, Adéla, Tomáš MALINA, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Petra PŘIBILOVÁ, Štěpán ZEZULKA, Blahoslav MARŠÁLEK a Eliška MARŠÁLKOVÁ. Anxiety in Duckweed — Metabolism and Effect of Diazepam on Lemna minor. WATER. Basel: MDPI, 2022, roč. 14, č. 9, s. 1-12. ISSN 2073-4441. Dostupné z: https://dx.doi.org/10.3390/w140914

Removal of Microcystis aeruginosa through the Combined Effect of Plasma Discharge and Hydrodynamic Cavitation [Typ výsledku: Jimp]

MARŠÁLEK, Blahoslav, Eliška MARŠÁLKOVÁ, Klára ODEHNALOVÁ, František POCHYLÝ, Pavel RUDOLF, Pavel SŤAHEL, Jozef RÁHEĽ, Jan ČECH, Simona FIALOVÁ a Štěpán ZEZULKA. Removal of Microcystis aeruginosa through the Combined Effect of Plasma Discharge and Hydrodynamic Cavitation. Water. Basel: MDPI, 2020, roč. 12, č. 1, s. 1-14. ISSN 2073-4441. Dostupné z: https://dx.doi.org/10.3390/w12010008.

Activity of N-Phenylpiperazine Derivatives Against Bacterial and Fungal Pathogens [Typ výsledku: Jimp]

POSPÍŠILOVÁ, Šárka, Pavlína MARVANOVÁ, Jakub TREML, Agnes M. MORICZ, Peter G. OTT, Petr MOKRÝ, Klára ODEHNALOVÁ, Ondrej ŠEDO, Alois ČÍŽEK a Josef JAMPÍLEK. Activity of N-Phenylpiperazine Derivatives Against Bacterial and Fungal Pathogens. CURRENT PROTEIN & PEPTIDE SCIENCE. Bentham Science Publishers, 2019, roč. 20, č. 11, s. 1119-1129. ISSN 1389-2037. Dostupné z: https://dx.doi.org/10.2174/1389203720666190913114041.

Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity [Typ výsledku: Jimp]

PADRTOVÁ, Tereza, Pavlína MARVANOVÁ, Renata KUBÍNOVÁ, Jozef CSÖLLEI, Oldřich FARSA, Tomáš GONĚC, Klára ODEHNALOVÁ, Radka OPATŘILOVÁ, Jiří PAZOUREK, Alice SYCHROVÁ, Karel ŠMEJKAL a Petr MOKRÝ. Indol-2-Carboxylic Acid Esters Containing N-Phenylpiperazine Moiety - Preparation and Cholinesterase-inhibiting Activity. Current organic synthesis. Sharjah: Bentham Science Publ Ltd, 2020, roč. 17, č. 7, s. 576-587. ISSN 1570-1794. Dostupné z: https://dx.doi.org/10.2174/1570179417666200619132218.

PharmDr. Magdaléna Onuščáková

DESIGN AND SYNTHESIS OF N-HYDROXY-CINNAMAMIDE DERIVATES AS NOVEL HDAC INHIBITORS: EVALUATION OF BIOLOGICAL ACTIVITY IN CANCER CELLS [Typ výsledku: D]

ONUŠČÁKOVÁ, Magdaléna, Hana PÍŽOVÁ, Tereza KAUEROVÁ, Marie HAMŠÍKOVÁ, David BEDNÁŘ, Peter KOLLÁR a Pavel BOBÁĽ. DESIGN AND SYNTHESIS OF N-HYDROXY-CINNAMAMIDE DERIVATES AS NOVEL HDAC INHIBITORS: EVALUATION OF BIOLOGICAL ACTIVITY IN CANCER CELLS. Online. In Radmila Řápková, Martin Fusek, Pavel Drašar. Czech Chemical Society Symposium Series. Pague, Czech republic: Czech Chemical Society, 2022, s. 28-29. ISSN 2336-7202.

LINEAR AND CONVERGENT SYNTHESIS OF HYDROXAMATE-BASED HISTONE DEACETYLASE INHIBITORS — A COMPARATIVE STUDIES [Typ výsledku: k]

ONUŠČÁKOVÁ, Magdaléna, Hana PÍŽOVÁ, Tereza KAUEROVÁ, Peter KOLLÁR a Pavel BOBÁĽ. LINEAR AND CONVERGENT SYNTHESIS OF HYDROXAMATE-BASED HISTONE DEACETYLASE INHIBITORS — A COMPARATIVE STUDIES. In Student Scientific Conference PHARM MUNI 2022. 2022. ISBN 978-80-280-0105-6.

TARGETING METALLOENZYMES WITH NEWLY DESIGNED INHIBITORS FOR POTENTIAL THERAPEUTIC INTERVENTION [Typ výsledku: k]

ONUŠČÁKOVÁ, Magdaléna, Hana PÍŽOVÁ, Miroslav KEMKA, Vladimír GARAJ a Pavel BOBÁĽ. TARGETING METALLOENZYMES WITH NEWLY DESIGNED INHIBITORS FOR POTENTIAL THERAPEUTIC INTERVENTION. In SAL 2022 Brno. 2022.

Design, synthesis and antiproliferative activity of newly designed derivatives of N-hydroxycinnamide [Typ výsledku: k]

ONUŠČÁKOVÁ, Magdaléna, Hana PÍŽOVÁ, Tereza KAUEROVÁ, Peter KOLLÁR a Pavel BOBÁĽ. Design, synthesis and antiproliferative activity of newly designed derivatives of N-hydroxycinnamide. In Student scientific conference MUNI PHARM 2021. 2021. ISBN 978-80-210-9870-1.

Synthesis and antiproliferative activity of selected N-hydroxycinnamamide derivates [Typ výsledku: k]

ONUŠČÁKOVÁ, Magdaléna, Hana PÍŽOVÁ, Tereza KAUEROVÁ, Peter KOLLÁR a Pavel BOBÁĽ. Synthesis and antiproliferative activity of selected N-hydroxycinnamamide derivates. In 49th Conference Synthesis and Analysis of Drugs. 2021.

PharmDr. Jan Otevřel, Ph.D.

Enantioconvergent 6π Electrocyclization Enabled by Photoredox Racemization [Typ výsledku: J]

RIČKO, Sebastijan, René Slot BITSCH, Mikk KAASIK, Jan OTEVŘEL, Mikkel Højgaard MADSEN, Anna KEIMER a Karl Anker JØRGENSEN. Enantioconvergent 6π Electrocyclization Enabled by Photoredox Racemization. Journal of American Chemical Society. Washington, DC: American Chemical Society, 2023, roč. 145, č. 38, s. 20913 — 20926. ISSN 0002-7863. Dostupné z: https://dx.doi.org/10.1021/jacs.3c06227.

Enantioselective Bifunctional Ammonium Salt-Catalyzed Syntheses of 3-CF3S-, 3-RS-, and 3-F-Substituted Isoindolinones [Typ výsledku: Jimp]

EITZINGER, A., Jan OTEVŘEL, V. HAIDER, A. MACCHIA, A. MASSA, K. FAUST, B. SPINGLER, A. BERKESSEL a M. WASER. Enantioselective Bifunctional Ammonium Salt-Catalyzed Syntheses of 3-CF3S-, 3-RS-, and 3-F-Substituted Isoindolinones. ADVANCED SYNTHESIS & CATALYSIS. WEINHEIM: WILEY-V C H VERLAG GMBH, 2021, roč. 363, č. 363, s. 1955-1963. ISSN 1615-4150. Dostupné z: https://dx.doi.org/10.1002/adsc.202100029.

Asymmetric Organocatalyzed Friedel-Crafts Reaction of Trihaloacetaldehydes and Phenols [Typ výsledku: Jimp]

ŠVESTKA, David, Jan OTEVŘEL a Pavel BOBÁĽ. Asymmetric Organocatalyzed Friedel-Crafts Reaction of Trihaloacetaldehydes and Phenols. Advanced Synthesis and Catalysis. Weinheim: Wiley-VCH GmbH., 2022, roč. 364, č. 13, s. 2174-2183. ISSN 1615-4150. Dostupné z: https://dx.doi.org/10.1002/adsc.202200180.

Asymmetric Organocatalyzed Transfer Hydroxymethylation of Isoindolinones Using Formaldehyde Surrogates [Typ výsledku: Jimp]

ŠVESTKA, David, Pavel BOBÁĽ, Jan OTEVŘEL a Mario WASER. Asymmetric Organocatalyzed Transfer Hydroxymethylation of Isoindolinones Using Formaldehyde Surrogates. Organic Letters. Spojené státy: American Chemical Society, 2024, roč. 12, č. 26, s. 2505-2510. ISSN 1523-7060. Dostupné z: https://dx.doi.org/10.1021/acs.orglett.4c00818.

Enantioselective organocatalytic cycloadditions for the synthesis of medium-sized rings [Typ výsledku: Jimp]

OTEVŘEL, Jan, Macarena EUGUI, Sebastijan RIČKO a Karl Anker JØRGENSEN. Enantioselective organocatalytic cycloadditions for the synthesis of medium-sized rings. Nature Synthesis. Nature Publishing Group, 2023, roč. 2, č. 12, s. 1142-1158. ISSN 2731-0582. Dostupné z: https://dx.doi.org/10.1038/s44160-023-00416-1.

PharmDr. Lenka Paráková, Ph.D.

Composites of yeast glucan particles and curcumin lead to improvement of dextran sulfate sodium-induced acute bowel inflammation in rats [Typ výsledku: Jimp]

ROTREKL, Dominik, P. SALAMUNOVA, Lenka PARÁKOVÁ, Ondrej BAĎO, I. SALON, F. STEPANEK, J. HANUS a J. HOSEK. Composites of yeast glucan particles and curcumin lead to improvement of dextran sulfate sodium-induced acute bowel inflammation in rats. Carbohydrate Polymers. Oxford: ELSEVIER SCI LTD, 2021, roč. 252, č. 117142, s. 1-9. ISSN 0144-8617. Dostupné z: https://dx.doi.org/10.1016/j.carbpol.2020.117142.

ANTIPHLOGISTIC EFFECT OF POTENTILLA ARGENTEA EXTRACT IN A DEXTRAN SULFATE-INDUCED COLITIS RAT MODEL [Typ výsledku: a]

SUCHÝ, Pavel, Marta CHALUPOVÁ, Alžběta KRUŽICOVÁ, Tomáš PARÁK, Lenka PARÁKOVÁ, Gabriela KUZMÍNOVÁ, Michal BELEJKANIČ, Karel ŠMEJKAL, Jarmila KLUSÁKOVÁ a Alfred HERA. ANTIPHLOGISTIC EFFECT OF POTENTILLA ARGENTEA EXTRACT IN A DEXTRAN SULFATE-INDUCED COLITIS RAT MODEL. In 28th Interdisciplinary Toxicological Conference - Toxcon 2023. 2023. ISSN 1337-6853.

Ověření protizánětlivé účinnosti extraktu mochny stříbrné (Potentilla argentea) na modelu dextransulfátové kolitidy u laboratorních potkanů [Typ výsledku: k]

BELEJKANIČ, Michal, Alfred HERA, Alžběta KRUŽICOVÁ, Lenka PARÁKOVÁ, Marta CHALUPOVÁ, Jarmila KLUSÁKOVÁ, Tomáš PARÁK, Karel ŠMEJKAL a Pavel SUCHÝ. Ověření protizánětlivé účinnosti extraktu mochny stříbrné (Potentilla argentea) na modelu dextransulfátové kolitidy u laboratorních potkanů. In Květinův den, Mezioborová konference mladých farmakologů a toxikologů. 2023. ISBN 978-80-280-0305-0.

PharmDr. Miroslava Pavelková, Ph.D.

Interaction Pathways and Structure-Chemical Transformations of Alginate Gels in Physiological Environments [Typ výsledku: Jimp]

URBANOVA, M., M. PAVELKOVA, J. CZERNEK, K. KUBOVA, J. VYSLOUZIL, A. PECHOVA, D. MOLINKOVA, Jan VYSLOUŽIL, D. VETCHY a J. BRUS. Interaction Pathways and Structure-Chemical Transformations of Alginate Gels in Physiological Environments. Biomacromolecules. Washington: American Chemical Society, 2019, roč. 20, č. 11, s. 4158-4170. ISSN 1525-7797. Dostupné z: https://dx.doi.org/10.1021/acs.biomac.9b01052.

Assessment of Antimicrobic, Antivirotic and Cytotoxic Potential of Alginate Beads Cross-Linked by Bivalent Ions for Vaginal Administration [Typ výsledku: Jimp]

PAVELKOVÁ, Miroslava, Jakub VYSLOUŽIL, Kateřina KUBOVÁ, Sylvie PAVLOKOVÁ, D. MOLINKOVA, V. CELER, A. PECHOVA, J. MASEK a David VETCHÝ. Assessment of Antimicrobic, Antivirotic and Cytotoxic Potential of Alginate Beads Cross-Linked by Bivalent Ions for Vaginal Administration. Pharmaceutics. BASEL: Elsevier, 2021, roč. 13, č. 2, s. 1-20. ISSN 0939-6411. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13020165.

Exploration of Neusilin® US2 as an Acceptable Filler in HPMC Matrix Systems—Comparison of Pharmacopoeial and Dynamic Biorelevant Dissolution Study [Typ výsledku: Jimp]

BÍLIK, Tomáš, Jakub VYSLOUŽIL, Martina NAISEROVÁ, Jan MUSELÍK, Miroslava PAVELKOVÁ, Josef MAŠEK, D. ČOPOVÁ a Kateřina KUBOVÁ. Exploration of Neusilin® US2 as an Acceptable Filler in HPMC Matrix Systems—Comparison of Pharmacopoeial and Dynamic Biorelevant Dissolution Study. Pharmaceutics. BASEL: MDPI, 2022, roč. 14, č. 1, s. 1-18. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics14010127.

Rational Design of Self-Emulsifying Pellet Formulation of Thymol: Technology Development Guided by Molecular-Level Structure Characterization and Ex Vivo Testing [Typ výsledku: Jimp]

MACKŮ, Jan, Kateřina KUBOVÁ, Martina URBANOVA, Jan MUSELÍK, Aleš FRANC, Gabriela KOUTNÁ, Miroslava PAVELKOVÁ, David VETCHÝ, Josef MASEK, Eliska MASKOVA a Jiri BRUS. Rational Design of Self-Emulsifying Pellet Formulation of Thymol: Technology Development Guided by Molecular-Level Structure Characterization and Ex Vivo Testing. Pharmaceutics. Basel: MDPI, 2022, roč. 14, č. 8, s. 1-21. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharm

Preformulation design of PLGA particulate system for multi-day drug delivery of the antidepressant mirtazapine [Typ výsledku: Jsc]

HOLICKÁ, Martina, Jan MUSELÍK, Martina KEJDUŠOVÁ, Miroslava PAVELKOVÁ, Kateřina KUBOVÁ, Petr DOLEŽEL, David VETCHÝ, Vratislav KOŠŤÁL, Jakub VYSLOUŽIL a Josef MAŠEK. Preformulation design of PLGA particulate system for multi-day drug delivery of the antidepressant mirtazapine. Česká a slovenská farmacie. Česká lékařská společnost J.E. Purkyně, 2021, roč. 70, č. 6, s. 210-219. ISSN 1210-7816.

Mgr. Sylvie Pavloková, Ph.D.

Non-steroidal anti-inflammatory drugs caused an outbreak of inflammation and oxidative stress with changes in the gut microbiota in rainbow trout (Onconhytichus mykiss) [Typ výsledku: Jimp]

HODKOVICOVA, N., A. HOLLEROVA, J. BLAHOVA, P. MIKULA, M. CRHANOVA, D. KARASOVA, Aleš FRANC, Sylvie PAVLOKOVÁ, J. MARES, E. POSTULKOVA, F. TICHY, P. MARSALEK, J. LANIKOVA, M. FALDYNA a Z. SVOBODOVA. Non-steroidal anti-inflammatory drugs caused an outbreak of inflammation and oxidative stress with changes in the gut microbiota in rainbow trout (Onconhytichus mykiss). Science of the Total Environment. Amsterdam: Elsevier, 2022, roč. 849, November, s. 1-16. ISSN 0048-9697. Dostupné z: https://dx.doi.org/10.1016/j.scitotenv.2022.157921.

Polystyrene microparticles can affect the health status of freshwater fish-Threat of oral microplastics intake [Typ výsledku: Jimp]

HOLLEROVA, A., N. HODKOVICOVA, J. BLAHOVA, M. FALDYNA, Aleš FRANC, Sylvie PAVLOKOVÁ, F. TICHY, E. POSTULKOVA, J. MARES, D. MEDKOVA, M. KYLLAR a Z. SVOBODOVA. Polystyrene microparticles can affect the health status of freshwater fish-Threat of oral microplastics intake. Science of the Total Environment. Amsterdam: Elsevier, 2023, roč. 858, č. 3, s. 1-12. ISSN 0048-9697. Dostupné z: https://dx.doi.org/10.1016/j.scitotenv.2022.159976.

Utilization of Pharmaceutical Technology Methods for the Development of Innovative Porous Metasilicate Pellets with a Very High Specific Surface Area for Chemical Warfare Agents Detection [Typ výsledku: Jimp]

ZEMAN, Jiří, Sylvie PAVLOKOVÁ, David VETCHÝ, Adam STAŇO, Zdeněk MORAVEC, Lukáš MATĚJOVSKÝ a Vladimír PITSCHMANN. Utilization of Pharmaceutical Technology Methods for the Development of Innovative Porous Metasilicate Pellets with a Very High Specific Surface Area for Chemical Warfare Agents Detection. Pharmaceutics. BASEL: MDPI, 2021, roč. 13, č. 11, s. 1-15. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13111860.

Optimization of Spray Drying Process Parameters for the Preparation of Inhalable Mannitol-Based Microparticles Using a Box-Behnken Experimental Design [Typ výsledku: Jimp]

KARAS, Jakub, Sylvie PAVLOKOVÁ, Hana HOŘAVOVÁ a Jan GAJDZIOK. Optimization of Spray Drying Process Parameters for the Preparation of Inhalable Mannitol-Based Microparticles Using a Box-Behnken Experimental Design. Pharmaceutics. Basel: MDPI, 2023, roč. 15, č. 2, s. 1-16. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics150

The effect of different types of lactose monohydrate on the stability of acetylcholinesterase immobilized on carriers designed to detect nerve agents [Typ výsledku: Jimp]

ZEMAN, Jiří, Sylvie PAVLOKOVÁ, David VETCHÝ a Vladimír PITSCHMANN. The effect of different types of lactose monohydrate on the stability of acetylcholinesterase immobilized on carriers designed to detect nerve agents. JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY. HOBOKEN, NJ USA: WILEY, 2021, roč. 96, č. 6, s. 1758-1769. ISSN 0268-2575. Dostupné z: https://dx.doi.org/10.1002/jctb.6700.

Mgr. Hana Pížová, Ph.D.

Parallel in vitro and in silico investigations into anti-inflammatory effects of non-prenylated stilbenoids [Typ výsledku: Jimp]

LELÁKOVÁ, Veronika, Karel ŠMEJKAL, K. JAKUBCZYK, O. VESELY, P. LANDA, Jiří VÁCLAVÍK, Pavel BOBÁĽ, Hana PÍŽOVÁ, V. TEMML, T. STEINACHER, D. SCHUSTER, S. GRANICA, Z. HANAKOVA a J. HOSEK. Parallel in vitro and in silico investigations into anti-inflammatory effects of non-prenylated stilbenoids. Food Chemistry. Oxford, UK: Elsevier Science, 2019, roč. 285, s. 431-440. ISSN 0308-8146. Dostupné z: https://dx.doi.org/10.1016/j.foodchem.2019.01.128.

Synthesis and application of BODIPY-based fluorescent labeling tag for oligosaccharide and N-linked glycan analysis by high-performance liquid chromatography with fluorescence detection [Typ výsledku: Jimp]

SMOLKOVÁ, Denisa, Michal GREGUŠ, Hubert VESELÝ, Richard CMELIK, Hana PÍŽOVÁ, Pavel BOBÁĽ a Jana LAVICKA. Synthesis and application of BODIPY-based fluorescent labeling tag for oligosaccharide and N-linked glycan analysis by high-performance liquid chromatography with fluorescence detection. Analytica Chimica Acta. Amsterdam: Elsevier Science publishers, 2024, roč. 1285, č. 342032, s. 1-8. ISSN 0003-2670. Dostupné z: https://dx.doi.org/10.1016/j.aca.2

Synthesis of C-prenylated analogues of stilbenoid methyl ethers and their cyclic dihydrobenzopyranyl derivatives as potential anti-inflammatory agents [Typ výsledku: Jimp]

PÍŽOVÁ, Hana, Milan MALANÍK, Karel ŠMEJKAL, Michal ORAVEC a Pavel BOBÁĽ. Synthesis of C-prenylated analogues of stilbenoid methyl ethers and their cyclic dihydrobenzopyranyl derivatives as potential anti-inflammatory agents. RSC Advances. Cambridge: Royal Society of Chemistry, 2022, roč. 12, č. 13, s. 8188-8192. ISSN 2046-2069. Dostupné z: https://dx.doi.org/10.1039/d2ra00441k.

Prenylated Stilbenoids Affect Inflammation by Inhibiting the NF-kappa B/AP-1 Signaling Pathway and Cyclooxygenases and Lipoxygenase [Typ výsledku: Jimp]

HOŠEK, Jan, Veronika LELÁKOVÁ, Pavel BOBÁĽ, Hana PÍŽOVÁ, Markéta GAZDOVÁ, Milan MALANÍK, K JAKUBCZYK, O. VESELY, P. LANDA, V. TEMML, D. SCHUSTER, V. PRACHYAWARAKORN, P. PAILEE, G. REN, F. ZPURNY, M. ORAVEC a Karel ŠMEJKAL. Prenylated Stilbenoids Affect Inflammation by Inhibiting the NF-kappa B/AP-1 Signaling Pathway and Cyclooxygenases and Lipoxygenase. Journal of Natural Products. Washington: American Chemical Society, 2019, roč. 82, č. 7, s. 1839-1848. ISSN 0163-3864. Dostupné z: https://dx.doi.org/10.1021/acs.jnatprod.9b0008

SAR-mediated similarity assessment of the property profile for new, silicon-based AChE/BChE Inhibitors [Typ výsledku: J]

PÍŽOVÁ, Hana. SAR-mediated similarity assessment of the property profile for new, silicon-based AChE/BChE Inhibitors. International Journal of Molecular Sciences. 2019. Dostupné z: https://dx.doi.org/10.3390/ijms2021538.

PhDr. Renata Prucklová

- lektorka AJ a LJ

PharmDr. Jitka Rychlíčková, Ph.D.

Pharmacokinetics of colistin during extracorporeal membrane oxygenation [Typ výsledku: Jimp]

SUK, Pavel a Jitka RYCHLÍČKOVÁ. Pharmacokinetics of colistin during extracorporeal membrane oxygenation. Journal of Antimicrobial Chemotherapy. OXFORD: Oxford University Press, 2022, roč. 77, č. 8, s. 2298-2300. ISSN 0305-7453. Dostupné z: https://dx.doi.org/10.1093/jac/dkac163.

Challenges of Colistin Use in ICU and Therapeutic Drug Monitoring: A Literature Review [Typ výsledku: Jimp]

RYCHLÍČKOVÁ, Jitka, Vendula KUBICKOVA, Pavel SUK a Karel URBANEK. Challenges of Colistin Use in ICU and Therapeutic Drug Monitoring: A Literature Review. Antibiotics-Basel. BASEL: MDPI, 2023, roč. 12, č. 3, s. 1-17. ISSN 2079-6382. Dostupné z: https://dx.doi.org/10.3390/antibiotics12030437.

Use of fondaparinux in patients with heparin-induced thrombocytopenia on veno-venous extracorporeal membrane oxygenation: A three-patient case series report [Typ výsledku: Jimp]

RYCHLÍČKOVÁ, Jitka, Vladimír ŠRÁMEK a Pavel SUK. Use of fondaparinux in patients with heparin-induced thrombocytopenia on veno-venous extracorporeal membrane oxygenation: A three-patient case series report. Frontiers in Medicine. Lausanne: FRONTIERS MEDIA SA, 2023, roč. 10, February 2023, s. 1-7. ISSN 2296-858X. Dostupné z: https://dx.doi.org/10.3389/fmed.2023.1112770.

Changes of colistin pharmacokinetics in critically ill patients due to the extracorporeal membrane oxygenation: protocol for the COL-ECMO2022 trial - a prospective, non-randomised, open-label phase IV pharmacokinetic clinical trial [Typ výsledku: Jimp]

SUK, Pavel, Jitka RYCHLÍČKOVÁ, Lenka SOUČKOVÁ, Vendula KUBICKOVA a Karel URBANEK. Changes of colistin pharmacokinetics in critically ill patients due to the extracorporeal membrane oxygenation: protocol for the COL-ECMO2022 trial - a prospective, non-randomised, open-label phase IV pharmacokinetic clinical trial. BMJ Open. London: BMJ Publishing Group, 2023, roč. 13, č. 7, s. 1-8. ISSN 2044-6055. Dostupné z: https://dx.doi.org/10.1136/bmjopen-2023-071649.

Training clinical trial teams of the future: open online teaching programs [Typ výsledku: Jimp]

RYCHLÍČKOVÁ, Jitka, Viktoria NAGY, Frances SHIELY, Zora ČECHOVÁ, Kateřina NEBESKÁ, Stephane MOULY, Gabor Laszlo KOVACS, Annamaria NEMETH, Tiago OLIVEIRA, Sara MAIA a Joana BATUCA. Training clinical trial teams of the future: open online teaching programs. EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY. HEIDELBERG: SPRINGER HEIDELBERG, 2023, roč. 79, č. 1, s. 181-182. ISSN 0031-6970. Dostupné z: https://dx.doi.org/10.1007/s002022-03426-8.

MVDr. Peter Scheer, Ph.D.

Thrombus Imaging Using 3D Printed Middle Cerebral Artery Model and Preclinical Imaging Techniques: Application to Thrombus Targeting and Thrombolytic Studies [Typ výsledku: Jimp]

WUNSCHOVA, A.V., A. NOVOBILSKY, Jana HLOŽKOVÁ, Peter SCHEER, H. PETROKOVA, R. JIRIK, P. KULICH, E. BARTHELDYOVA, F. HUBATKA, V. JONAS, R. MIKULIK, P. MALY, J. TURANEK a J. MASEK. Thrombus Imaging Using 3D Printed Middle Cerebral Artery Model and Preclinical Imaging Techniques: Application to Thrombus Targeting and Thrombolytic Studies. European Journal of Pharmaceutics and Biopharmaceutics. BASEL: Elsevier, 2020, roč. 12, č. 12, s. 1-16. ISSN 0939-6411. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics12121207.

BIOIMAGING OF ELEMENTS AND PROTEINS BY LA-ICP-MS IN MEDICINE AND PHARMACEUTICAL RESEARCH [Typ výsledku: k]

KUCHYNKA, Michaela, Marcela VLČNOVSKÁ, Jana HLOŽKOVÁ, Peter SCHEER, Radka OPATŘILOVÁ, Markéta VACULOVIČOVÁ, Viktor KANICKÝ, Michal MASAŘÍK a Tomáš VACULOVIČ. BIOIMAGING OF ELEMENTS AND PROTEINS BY LA-ICP-MS IN MEDICINE AND PHARMACEUTICAL RESEARCH. In ESAS 2022. 2022. ISBN 978-80-88195-41-2.

IMAGING OF ELEMENTS AND PROTEINS IN BIOLOGICAL TISSUES: MEDICAL AND PHARMACEUTICAL APPLICATIONS [Typ výsledku: k]

KUCHYNKA, Michaela, Peter SCHEER, Jana HLOŽKOVÁ, Marcela VLČNOVSKÁ, Radka OPATŘILOVÁ, Viktor KANICKÝ, Michal MASAŘÍK, Tomáš VACULOVIČ a Tereza PADRTOVÁ. IMAGING OF ELEMENTS AND PROTEINS IN BIOLOGICAL TISSUES: MEDICAL AND PHARMACEUTICAL APPLICATIONS. 2022. ISBN 978-80-280-0110-0.

IMPACT OF CALCIUM INFUSION ON THE INCIDENCE OF VENTRICULAR FIBRILLATION IN COMPARISON WITH CATECHOLAMINE-INDUCED VENTRICULAR FIBRILLATION IN REPERFUSION PERIOD ON RAT HEART [Typ výsledku: k]

DAVUT AKSU, Ahmet, Jana HLOŽKOVÁ, Peter SCHEER a Eliška BRHELOVÁ. IMPACT OF CALCIUM INFUSION ON THE INCIDENCE OF VENTRICULAR FIBRILLATION IN COMPARISON WITH CATECHOLAMINE-INDUCED VENTRICULAR FIBRILLATION IN REPERFUSION PERIOD ON RAT HEART. In 49. pracovná konferencia Komisie experimentálnej kardiológie 2022. 2022.

Brief analysis of the frequency of use and spectrum of animal models in stroke research [Typ výsledku: J]

HLOŽKOVÁ, Jana, Peter SCHEER a Pavel SUCHÝ. Brief analysis of the frequency of use and spectrum of animal models in stroke research. CESKA A SLOVENSKA NEUROLOGIE A NEUROCHIRURGIE. 2019. Dostupné z: https://dx.doi.org/10.14735/amcsnn2019274.

RNDr. Pavel Slanina

Koordinace a řízení výzkumných a vývojových projektů na lokální i mezinárodní úrovni ve farmaceutické firmě Synthon. Zastávaná funkce - ředitel výzkumu a vývoje.

PharmDr. Lenka Součková, Ph.D.

VACCELERATE Volunteer Registry: A European study participant database to facilitate clinical trial enrolment [Typ výsledku: Jimp]

SALMANTON-GARCIA, Jon, Fiona A STEWART, Sarah HERINGER, Markela KONIORDOU, Elena ALVAREZ-BARCO, Christos D ARGYROPOULOS, Sophia C THEMISTOCLEOUS, Paula VALLE-SIMON, Orly SPIVAK, Lenka SOUČKOVÁ, Christina MERAKOU, Maria Amelia MENDONCA, Ruth Joanna DAVIS, Anna Maria AZZINI, Helena H ASKLING, Sirkka VENE, Van Damme PIERRE, Angela STEINBACH, George SHIAMAKKIDES, Danila SEIDEL, Ole F OLESEN, Evgenia NOULA, Alan MACKEN, Catarina LUIS, Janina LECKLER, Odile LAUNAY, Catherine ISITT, Margot HELLEMANS, Jesus FRIAS-INIESTA, Di Marzo ROMINA, Antonio J CARCAS, George BOUSTRAS, Alberto M BOROBIA, Imre BARTA, Kerstin ALBUS, Murat AKOVA, Jordi OCHANDO, Miriam COHEN-KANDLI, Rebecca Jane COX, Petr HUSA, Ligita JANCORIENE, Patrick MALLON, Laura MARQUES, Sibylle C MELLINGHOFF, Pontus NAUCLER, Evelina TACCONELLI, Krisztina TOTH, Theoklis E ZAOUTIS, Markus ZEITLINGER, Oliver A CORNELY a Zoi-Dorothea PANA. VACCELERATE Volunteer Registry: A European study participant database to facilitate clinical trial enrolment. Vaccine. OXFORD: ELSEVIER SCI LTD, 2022, roč. 40, č. 31, s. 4090-4097. ISSN 0264-410X. Dostupné z: https://dx.doi.org/10.1016/j.vaccine.2022.05.022.

Dendritic Cell-Based Immunotherapy in Advanced Sarcoma and Neuroblastoma Pediatric Patients: Anticancer Treatment Preceding Monocyte Harvest Impairs the Immunostimulatory and Antigen-Presenting Behavior of DCs and Manufacturing Process Outcome [Typ výsledku: Jimp]

HLAVÁČKOVÁ, Eva, Kateřina PILÁTOVÁ, Dáša ČERNÁ, Iveta SELINGEROVA, Peter MÚDRY, Pavel MAZÁNEK, Lenka FĚDOROVÁ, Jana MERHAUTOVÁ, Lucie JUREČKOVÁ, Lukáš SEMERÁD, Rita PACASOVA, Lucie FLAJŠAROVÁ, Lenka SOUČKOVÁ, Regina DEMLOVÁ, Jaroslav ŠTĚRBA, Dalibor VALÍK a Lenka ZDRAŽILOVÁ DUBSKÁ. Dendritic Cell-Based Immunotherapy in Advanced Sarcoma and Neuroblastoma Pediatric Patients: Anti-cancer Treatment Preceding Monocyte Harvest Impairs the Immunostimulatory and Antigen-Presenting Behavior of DCs and Manufacturing Process Outcome. Frontiers in Oncology. Lausanne: Frontiers Media S.A., 2019, roč. 9, OCT 25 2019, s. 1-15. ISSN 2234-943X. Dostupné z: https://dx.doi.org/10.3389/fonc.2019.01034.

Identifying obstacles hindering the conduct of academic-sponsored trials for drug repurposing on rare-diseases: an analysis of six use cases [Typ výsledku: Jimp]

DEL ÁLAMO, Marta, Christoph BÜHRER, Dirk FISHER, Matthias GRIESE, Paul LINGOR, Giovanni PALLADINI, Nicolas SIREAU, Virginie HIVERT, Luca SANGIORGI, Florence GUILLOT, Juliane HALFTERMEYER, Lenka SOUČKOVÁ, Kristýna NOSKOVÁ a Regina DEMLOVÁ. Identifying obstacles hindering the conduct of academic-sponsored trials for drug repurposing on rare-diseases: an analysis of six use cases. TRIALS. ENGLAND: LONDON, 2022, roč. 23, č. 1, s. 1-10. ISSN 1745-6215. Dostupné z: https://dx.doi.org/10.1186/s13063-022-06713-y.

Comparison of continuous versus intermittent enteral nutrition in critically ill patients (COINN): study protocol for a randomized comparative effectiveness trial [Typ výsledku: Jimp]

HRDÝ, Ondřej, Kamil VRBICA, Eva STRAŽEVSKÁ, Petr SUK, Lenka SOUČKOVÁ, Radka ŠTĚPÁNOVÁ, Igor SAS a Roman GÁL. Comparison of continuous versus intermittent enteral nutrition in critically ill patients (COINN): study protocol for a randomized comparative effectiveness trial. Trials. London: BioMed Central, 2020, roč. 21, č. 1, s. 1-10. ISSN 1745-6215. Dostupné z: https://dx.doi.org/10.1186/s13063-020-04866-2.

Sunitinib in the Pediatric Clinical Practice [Typ výsledku: C]

MERHAUTOVÁ, Jana, Lenka SOUČKOVÁ, Kateřina NEBESKÁ, Jaroslav ŠTĚRBA a Regina DEMLOVÁ. Sunitinib in the Pediatric Clinical Practice. In Vasso Anastasia. Sunitinib: Mechanisms, Interactions and Side Effects. 1st ed. New York (USA): Nova Science Publishers, 2019, s. 49-94. ISBN 978-1-5361-4239-6.

PharmDr. Alice Sychrová, Ph.D.

Berberine in Cardiovascular and Metabolic Diseases: From Mechanisms to Therapeutics [Typ výsledku: Jimp]

FENG, XJ, A SUREDA, S JAFARI, Z MEMARIANI, D TEWARI, G ANNUNZIATA, L BARREA, STS HASSAN, Karel ŠMEJKAL, Milan MALANÍK, Alice SYCHROVÁ, D BARRECA, L ZIBERNA, MF MAHOMOODALLY, G ZENGIN, SW XU, SM NABAVI a AZ SHEN. Berberine in Cardiovascular and Metabolic Diseases: From Mechanisms to Therapeutics. Theranostics. Lake Haven: Ivyspring International Publisher, 2019, roč. 9, č. 7, s. 1923-1951. ISSN 1838-7640. Dostupné z: https://dx.doi.org/10.7150/thno.30787.

Prenylated phenolics from Morus alba against MRSA infections as a strategy for wound healing [Typ výsledku: Jimp]

ŠKOVRANOVÁ, Gabriela, Marie ČULENOVÁ, Jakub TREML, Lucia DZURICKA, Ivana MAROVA a Alice SYCHROVÁ. Prenylated phenolics from Morus alba against MRSA infections as a strategy for wound healing. Frontiers in Pharmacology. Lausanne: Frontiers Media SA, 2022, roč. 13, November, s. 1-13. ISSN 1663-9812. Dostupné z: https://dx.doi.org/10.3389/fphar.2022.1068371.

Natural compounds with dual antimicrobial and anti-inflammatory effects [Typ výsledku: Jimp]

SYCHROVÁ, Alice, Ivana KOLÁRIKOVÁ, Milan ŽEMLIČKA a Karel ŠMEJKAL. Natural compounds with dual antimicrobial and anti-inflammatory effects. Phytochemistry reviews. Dordrecht: Springer, 2020, roč. 19, č. 6, s. 1471-1502. ISSN 1568-7767. Dostupné z: https://dx.doi.org/10.1007/s11101-020-09694-5.

Prenylated Flavonoids in Topical Infections and Wound Healing [Typ výsledku: Jimp]

SYCHROVÁ, Alice, Gabriela ŠKOVRANOVÁ, Marie ČULENOVÁ a Silvia BITTNER FIALOVÁ. Prenylated Flavonoids in Topical Infections and Wound Healing. Molecules. Basel: MDPI, 2022, roč. 27, č. 14, s. 1-49. ISSN 1420-3049. Dostupné z: https://dx.doi.org/10.3390/molecules27144491.

Multiple In vitro biological effects of phenolic compounds from Morus alba root bark [Typ výsledku: Jimp]

ČULENOVÁ, Marie, Alice SYCHROVÁ, S. T. S. HASSAN, K. BERCHOVA-BIMOVA, P. SVOBODOVA, A. HELCLOVA, H. MICHNOVA, J. HOSEK, H. VASILEV, Pavel SUCHÝ, Gabriela KUZMÍNOVÁ, Emil ŠVAJDLENKA, Jan GAJDZIOK, Alois ČÍŽEK, Václav SUCHÝ a Karel ŠMEJKAL. Multiple In vitro biological effects of phenolic compounds from Morus alba root bark. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2020, roč. 248, č. 112296, s. 1-12. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2019.112296.

PharmDr. Zuzana Široká, Ph.D.

Afiliace VETUNI Brno:

Siroka, Z. Toxicity of House Plants to Pet Animals. Toxins, 2023, 15: 346. DOI: 10.3390/toxins15050346

Kruzikova Novotna, K., Siroka, Z., Jurajda, P., Harustiakova, D., Smolikova, Z., Kubicek, M., Svobodova, Z. Mercury content in fish from drinking-water reservoirs in the Morava River Basin (Czech Republic). Environmental Science and Pollution Research, 2022, 29: 17394-17405. DOI: 10.1007/s11356-021-16763-5

Ferencik, M., Blahova, J., Schovankova, J., Siroka, Z., Svobodova, Z., Kodes, V., Stepankova, K., Lakdawala, P. Residues of Selected Anticonvulsive Drugs in Surface Waters of the Elbe River Basin (Czech Republic). Water, 2022, 14: 4122. DOI: 10.3390/w14244122

Siroka, Z., Melka, R., Honzlova, A., Dobsikova, R., Svobodova, Z. Suspected alimentary poisoning by aluminium phosphide in horses - a case report. Acta Veterinaria Brno, 2020, 89: 231-237. DOI: 10.2754/avb202089030231

Hodkovicova, N., Chmelova, L., Sehonova, P., Blahova, J., Doubkova, V., Plhalova, L., Fiorino, E., Vojtek, L., Vicenova, M., Siroka, Z., Enevova, V., Dobsikova, R., Faldyna, M., Svobodova, Z., Faggio, C. The effects of a therapeutic formalin bath on selected immunological and oxidative stress parameters in common carp (Cyprinus carpio). Science of the Total Environment, 2019, 653: 1120-1127. DOI: 10.1016/j.scitotenv.2018.11.035.

PharmDr. Martina Šutorová

ANALYSIS OF THE EFFECTIVENESS OF THE PHARMACY NETWORK [Typ výsledku: Jimp]

GREGA, Dominik, Tünde AMBRUS, A. MATEJOVIC, Martina ŠUTOROVÁ a J. KOLÁŘ. ANALYSIS OF THE EFFECTIVENESS OF THE PHARMACY NETWORK. FARMACIA. BUCURESTI: SOC STIINTE FARMACEUTICE ROMANIA, 2021, roč. 69, č. 4, s. 799-805. ISSN 0014-8237. Dostupné z: https://dx.doi.org/10.31925/farmacia.2021.4.23.

POTENCIÁLNE NEVHODNÉ LIEČIVÁ UŽÍVANÉ V TERAPII KARDIOVASKULÁRNYCH OCHORENÍ U MUŽOV VO VYŠŠOM VEKU [Typ výsledku: Jost]

KRÍŽOVÁ, Veronika, Martina ŠUTOROVÁ a Miriam BAČKOROVÁ. POTENCIÁLNE NEVHODNÉ LIEČIVÁ UŽÍVANÉ V TERAPII KARDIOVASKULÁRNYCH OCHORENÍ U MUŽOV VO VYŠŠOM VEKU. FOLIA PHARMACEUTICA CASSOVIENSIA. Košice, Slovensko: Univerzita veterinárskeho lekárstva a farmácie v Košiciach, 2023, V., č. 4, s. 41-49. ISSN 2585-9609.

Financial demands on pharmacotherapy in the elderly outpatients—a cross-sectional study [Typ výsledku: a]

ŠUTOROVÁ, Martina, Dominik GREGA, Tünde AMBRUS a Jozef KOLÁŘ. Financial demands on pharmacotherapy in the elderly outpatients—a cross-sectional study. In 50th ESCP Symposium on Clinical Pharmacy. 2022. ISSN 2210-7711. Dostupné z: https://dx.doi.org/10.1007/s11096-022-01521-5.

Providing Cross-Border Healthcare [Typ výsledku: a]

ŠUTOROVÁ, Martina, Slavomír KURHAJEC a Jozef KOLÁŘ. Providing Cross-Border Healthcare. In 2022 EAFP Conference: Towards Pharmacy 5.0 Education. 2022.

Opatrenia pre zabezpečenie dostupnosti lekárenskej starostlivosti [Typ výsledku: Jost]

KOLÁŘ, Jozef, Dominik GREGA, Martina ŠUTOROVÁ a Tünde AMBRUS. Opatrenia pre zabezpečenie dostupnosti lekárenskej starostlivosti. Praktické lekárnictvo. Bratislava: SOLEN, s. r. o., 2021, roč. 11, č. 1, s. 28-31. ISSN 1338-3132.

Mgr. David Švestka

Asymmetric Organocatalyzed Friedel-Crafts Reaction of Trihaloacetaldehydes and Phenols [Typ výsledku: Jimp]

ŠVESTKA, David, Jan OTEVŘEL a Pavel BOBÁĽ. Asymmetric Organocatalyzed Friedel-Crafts Reaction of Trihaloacetaldehydes and Phenols. Advanced Synthesis and Catalysis. Weinheim: Wiley-VCH GmbH., 2022, roč. 364, č. 13, s. 2174-2183. ISSN 1615-4150. Dostupné z: https://dx.doi.org/10.1002/adsc.202200180.

Asymmetric Organocatalyzed Transfer Hydroxymethylation of Isoindolinones Using Formaldehyde Surrogates [Typ výsledku: Jimp]

ŠVESTKA, David, Pavel BOBÁĽ, Jan OTEVŘEL a Mario WASER. Asymmetric Organocatalyzed Transfer Hydroxymethylation of Isoindolinones Using Formaldehyde Surrogates. Organic Letters. Spojené státy: American Chemical Society, 2024, roč. 12, č. 26, s. 2505-2510. ISSN 1523-7060. Dostupné z: https://dx.doi.org/10.1021/acs.orglett.4c00818.

Bianthryl-based organocatalysts for the asymmetric Henry reaction of fluoroketones [Typ výsledku: Jimp]

OTEVŘEL, Jan, David ŠVESTKA a Pavel BOBÁĽ. Bianthryl-based organocatalysts for the asymmetric Henry reaction of fluoroketones. ORGANIC & BIOMOLECULAR CHEMISTRY. CAMBRIDGE: ROYAL SOC CHEMISTRY, 2019, roč. 17, č. 21, s. 5244-5248. ISSN 1477-0520. Dostupné z: https://dx.doi.org/10.1039/c9ob00884e.

One-pot method for the synthesis of 1-aryl-2-aminoalkanol derivatives from the corresponding amides or nitriles [Typ výsledku: Jimp]

OTEVŘEL, Jan, David ŠVESTKA a Pavel BOBÁĽ. One-pot method for the synthesis of 1-aryl-2-aminoalkanol derivatives from the corresponding amides or nitriles. RSC Advances. Cambridge: Royal Society of Chemistry, 2020, roč. 10, č. 42, s. 25029-25045. ISSN 2046-2069. Dostupné z: https://dx.doi.org/10.1039/d0ra04359a.

MVDr. Lada Tlučhořová

prof. MUDr. Bc. Libor Ustohal, Ph.D.

The association of matrix metalloproteinase 9 (MMP9) with hippocampal volume in schizophrenia: a preliminary MRI study [Typ výsledku: Jimp]

SEITZ-HOLLAND, Johanna, Magdalena SEETHALER, Nikos MAKRIS, Jarrett RUSHMORE, Kang-Ik K. CHO, Elizabeth RIZZONI, Mark VANGEL, Olcay Senay SAHIN, Carina HELLER, Ofer PASTERNAK, Filip SZCZEPANKIEWICZ, Carl-Fredrik WESTIN, Jan LOŠÁK, Libor USTOHAL, Josef TOMANDL, Lubomír VOJTÍŠEK, Petr KUDLIČKA, Martin JÁNI, T. Wilson WOO, Tomáš KAŠPÁREK, Zora KIKINIS a Marek KUBICKI. The association of matrix metalloproteinase 9 (MMP9) with hippocampal volume in schizophrenia: a preliminary MRI study. Neuropsychopharmacology. London: Springer-Nature, 2022, roč. 47, č. 2, s. 524-530. ISSN 0893-133X. Dostupné z: https://dx.doi.org/10.1038/s41386-021-00997-5.

Emotional Awareness in Schizophrenia Is Associated With Gray Matter Volume of Right Precuneus [Typ výsledku: Jimp]

JÁNI, Martin, Zora KIKINIS, Jan LOŠÁK, Ofer PASTERNAK, Filip SZCZEPANKIEWICZ, Karina HELLER, Sophia SWAGO, Annelise SILVA, Sylvain BOUIX, Marek KUBICKI, Libor USTOHAL, Petr KUDLIČKA, Lubomír VOJTÍŠEK, Carl-Frederik WESTIN a Tomáš KAŠPÁREK. Emotional Awareness in Schizophrenia Is Associated With Gray Matter Volume of Right Precuneus. Frontiers in Psychiatry. Lausanne: Frontiers, 2021, roč. 12, April 2021, s. 1-8. ISSN 1664-0640. Dostupné z: https://dx.doi.org/10.3389/fpsyt.2021.601742.

Retinal arteriolar and venular diameters are widened in patients with schizophrenia [Typ výsledku: Jimp]

HOSÁK, Ladislav, Tomáš ZEMAN, Jan STUDNIČKA, Alexandr STEPANOV, Libor USTOHAL, Marek MICHALEC, Jan LOCHMAN, Tomáš JURČEČKA, Evgenii SADYKOV, Nandu GOSWAMI, Patrick DE BOEVER, Vladimír Josef BALCAR a Omar ŠERÝ. Retinal arteriolar and venular diameters are widened in patients with schizophrenia. Psychiatry and Clinical Neurosciences. Hoboken: Wiley, 2020, roč. 74, č. 11, s. 619-621. ISSN 1323-1316. Dostupné z: https://dx.doi.org/10.1111/pcn.13123.

Clozapine-Associated Myocarditis in a Patient With Poor Metabolism During Fast Titration [Typ výsledku: Jimp]

MAYEROVÁ, Michaela, Helena MASLAŇÁKOVÁ, Libor USTOHAL a Kateřina HORSKÁ. Clozapine-Associated Myocarditis in a Patient With Poor Metabolism During Fast Titration. Journal of Clinical Psychopharmacology. PHILADELPHIA: LIPPINCOTT WILLIAMS & WILKINS, 2023, roč. 43, č. 2, s. 186-187. ISSN 0271-0749. Dostupné z: https://dx.doi.org/10.1097/JCP.0000000000001666.

Accelerated Repetitive Transcranial Magnetic Stimulation in the Treatment of Negative Symptoms of Schizophrenia An Open-Label Study [Typ výsledku: Jimp]

SVĚRÁK, Tomáš, Michaela MAYEROVÁ, Marie OBDRŽÁLKOVÁ a Libor USTOHAL. Accelerated Repetitive Transcranial Magnetic Stimulation in the Treatment of Negative Symptoms of Schizophrenia An Open-Label Study. Journal of ECT. Philadelphia: Lippincott Williams & Wilkins, 2022, roč. 38, č. 2, s. "E24"-"E25", 2 s. ISSN 1095-0680. Dostupné z: https://dx.doi.org/10.1097/YCT.0000000000000826.

Mgr. Ing. Jiří Václavík, Ph.D.

Parallel in vitro and in silico investigations into anti-inflammatory effects of non-prenylated stilbenoids [Typ výsledku: Jimp]

LELÁKOVÁ, Veronika, Karel ŠMEJKAL, K. JAKUBCZYK, O. VESELY, P. LANDA, Jiří VÁCLAVÍK, Pavel BOBÁĽ, Hana PÍŽOVÁ, V. TEMML, T. STEINACHER, D. SCHUSTER, S. GRANICA, Z. HANAKOVA a J. HOSEK. Parallel in vitro and in silico investigations into anti-inflammatory effects of non-prenylated stilbenoids. Food Chemistry. Oxford, UK: Elsevier Science, 2019, roč. 285, s. 431-440. ISSN 0308-8146. Dostupné z: https://dx.doi.org/10.1016/j.foodchem.2019.01.128.

Anticholinesterase Activity of Methanolic Extract of Amorpha fruticosa Flowers and Isolation of Rotenoids and Putrescine and Spermidine Derivatives [Typ výsledku: Jimp]

JANKOVSKÁ, Dagmar, Nikol JURČOVÁ, Renata KUBÍNOVÁ, Jiří VÁCLAVÍK, Emil ŠVAJDLENKA, Anna MASCELLANI, Petr MARSIK, Kateřina BOUZKOVÁ a Milan MALANÍK. Anticholinesterase Activity of Methanolic Extract of Amorpha fruticosa Flowers and Isolation of Rotenoids and Putrescine and Spermidine Derivatives. PLANTS-BASEL. BASEL: MDPI, 2024, roč. 13, č. 9, s. Neuvedeno, 10 s. ISSN 2223-7747. Dostupné z: https://dx.doi.org/10.3390/plants13091181.

Therapeutic potential of prenylated stilbenoid macasiamenene F through its anti-inflammatory and cytoprotective effects on LPS-challenged monocytes and microglia [Typ výsledku: Jimp]

LELÁKOVÁ, Veronika, Sophie BÉRAUD-DUFOUR, Jan HOŠEK, Karel ŠMEJKAL, Vilailak PRACHYAWARAKORN, Phanruethai PAILEE, Catherine WIDMANN, Jiří VÁCLAVÍK, Thierry COPPOLA, Jean MAZELLA, Nicolas BLONDEAU a Catherine HEURTEAUX. Therapeutic potential of prenylated stilbenoid macasiamenene F through its anti-inflammatory and cytoprotective effects on LPS-challenged monocytes and microglia. JOURNAL OF ETHNOPHARMACOLOGY. CLARE: ELSEVIER IRELAND LTD, 2020, roč. 263, č. 263, s. 1-14. ISSN 0378-8741. Dostupné z: https://dx.doi.org/10.1016/j.jep.2020.113147.

Five New Tamarixetin Glycosides from Astragalus thracicus Griseb. Including Some Substituted with the Rare 3-Hydroxy-3-methylglutaric Acid and Their Collagenase Inhibitory Effects In Vitro [Typ výsledku: Jimp]

VASILEV, Hristo, Karel ŠMEJKAL, Sabína JUSKOVÁ, Jiří VÁCLAVÍK a Jakub TREML. Five New Tamarixetin Glycosides from Astragalus thracicus Griseb. Including Some Substituted with the Rare 3-Hydroxy-3-methylglutaric Acid and Their Collagenase Inhibitory Effects In Vitro. ACS Omega. WASHINGTON: American Chemical Society, 2024, roč. 9, č. 16, s. 18023-18031. ISSN 2470-1343. Dostupné z: https://dx.doi.org/10.1021/acsomega.3c09677.

Cholinesterase and Tyrosinase Inhibitory Potential and Antioxidant Capacity of Lysimachia verticillaris L. and Isolation of the Major Compounds [Typ výsledku: Jimp]

OZGEN, U., S. O. SENER, Karel ŠMEJKAL, Jiří VÁCLAVÍK, D. F. SENOL, Orhan I ERDOGAN, Emil ŠVAJDLENKA, A. C. GOREN a Milan ŽEMLIČKA. Cholinesterase and Tyrosinase Inhibitory Potential and Antioxidant Capacity of Lysimachia verticillaris L. and Isolation of the Major Compounds. TURKISH JOURNAL OF PHARMACEUTICAL SCIENCES. CANKAYA-ANKARA: TURKISH PHARMACISTS ASSOC, 2020, roč. 17, č. 5, s. 528-534. ISSN 1304-530X. Dostupné z: https://dx.doi.org/10.4274/tjps.galenos.2019.71598.

PharmDr. Karel Vašut, Ph.D.

Inclusion of medication-related fall risk in fall risk assessment tool in geriatric care units [Typ výsledku: Jimp]

MICHALCOVÁ, Jana, Karel VAŠUT, M. AIRAKSINEN a K. BIELAKOVA. Inclusion of medication-related fall risk in fall risk assessment tool in geriatric care units. BMC GERIATRICS. LONDON: BMC, 2020, roč. 20, č. 1, s. 1-11. ISSN 1471-2318. Dostupné z: https://dx.doi.org/10.1186/s12877-020-01845-9.

Inhalační technika a správné použití inhalátorů při léčbě asthma bronchiale a chronické obstrukční plicní nemoci I. - inhalátory s tekutou lékovou formou [Typ výsledku: Jost]

BÁRKOVÁ, Veronika, Dana MAZÁNKOVÁ a Karel VAŠUT. Inhalační technika a správné použití inhalátorů při léčbě asthma bronchiale a chronické obstrukční plicní nemoci I. - inhalátory s tekutou lékovou formou. Praktické lékárenství. Olomouc: Solen s.r.o., 2022, roč. 18, č. 1, s. 21-26. ISSN 1801-2434. Dostupné z: https://dx.doi.org/10.36290/lek.2022.003.

Farmakoterapeutické možnosti ovlivnění kašle - možnosti fytofarmak a jiných látek přírodního původu v léčbě kašle u dětí [Typ výsledku: Jsc]

VRANOVÁ, Vilma a Karel VAŠUT. Farmakoterapeutické možnosti ovlivnění kašle - možnosti fytofarmak a jiných látek přírodního původu v léčbě kašle u dětí. Pediatrie pro praxi. SOLEN s.r.o., 2021, roč. 22, č. 5, s. 319-324. ISSN 1213-0494.

Léky jako významný rizikový faktor pádu u geriatrických pacientů [Typ výsledku: Jost]

BIELAKOVÁ, Katarína, Jana MICHALCOVÁ, Katarína BIELAKOVÁ a Karel VAŠUT. Léky jako významný rizikový faktor pádu u geriatrických pacientů. Geriatrie a gerontologie. Praha: Česká lékařská společnost J.E. Purkyně, 2021, roč. 10, č. 2, s. 68-73. ISSN 1805-4684.

Koronavirus COVID-19 [Typ výsledku: Jost]

VAŠUT, Karel a Vilma VRANOVÁ. Koronavirus COVID-19. Via practica. Bratislava: SOLEN, 2020, roč. 17, č. 4, s. 185-188. ISSN 1336-4790.

vedoucí lékárník, odborný zástupce, Moje Distribuce, s.r.o.

RNDr. Veronika Vaverková, Ph.D.

prof. MUDr. Jiří Vítovec, CSc.

Heart rate as an independent predictor of long term mortality of acute heart failure patients in sinus rhythm according to their ejection fraction: data from the AHEAD registry [Typ výsledku: Jimp]

JARKOVSKÝ, Jiří, Jindřich ŠPINAR, Benoit TYL, Francoise FOUGEROUSSE, Jiří VÍTOVEC, Ales LINHART, Petr WIDIMSKY, Roman MIKLÍK, Lenka ŠPINAROVÁ, Jan BELOHLAVEK, Filip MALEK, Marián FELŠŐCI, Jiri KETTNER, Petr OSTADAL, Jan VACLAVIK, Ladislav DUŠEK, Petr LOKAJ, Alexandre MEBAZAA, Alain Cohen SOLAL a Jiří PAŘENICA. Heart rate as an independent predictor of long term mortality of acute heart failure patients in sinus rhythm according to their ejection fraction: data from the AHEAD registry. European Journal of Internal Medicine. AMSTERDAM: ELSEVIER, 2020, roč. 78, AUG 2020, s. 88-94. ISSN 0953-6205. Dostupné z: https://dx.doi.org/10.1016/j.ejim.2020.04.022.

Trends in the treatment and survival of heart failure patients: a nationwide population-based study in the Czech Republic [Typ výsledku: Jimp]

TABORSKY, Milos, Tomas SKALA, Marie LAZAROVA, Renata AIGLOVA, Jindřich ŠPINAR, Lenka ŠPINAROVÁ, Jiří VÍTOVEC, Josef KAUTZNER, Vojtech MELENOVSKY, Filip MALEK, Ladislav DUŠEK, Jiří JARKOVSKÝ, Klára BENEŠOVÁ, Marek VICHA a Ales LINHART. Trends in the treatment and survival of heart failure patients: a nationwide population-based study in the Czech Republic. ESC Heart Failure. San Francisco: Wiley Periodicals, 2021, roč. 8, č. 5, s. 3800-3808. ISSN 2055-5822. Dostupné z: https://dx.doi.org/10.1002/ehf2.13559.

Betablokátory v léčbě kardiovaskulárních onemocnění [Typ výsledku: B]

VÍTOVEC, Jiří, Peter KOLLÁR a Karel LÁBR. Betablokátory v léčbě kardiovaskulárních onemocnění. 1. vyd. Praha: Grada Publishing, a.s., 2023, 136 s. Farmakoterapie pro klinickou praxi. ISBN 978-80-271-3220-1.

Farmakologická léčba srdečního selhání [Typ výsledku: C]

VÍTOVEC, Jiří, Jindřich ŠPINAR a Lenka ŠPINAROVÁ. Farmakologická léčba srdečního selhání. In Miloš Táborský, Josef Kautzner, Aleš Linhart, Robert Hatala, Eva Gonçalvesová, Peter Hlivák. Kardiologie. Svazek I-V. Praha: Česká kardiologická společnost, 2021, s. 693-712. svazek IV. ISBN 978-80-271-1439-9.

Propedeutika kardiovaskulárních onemocnění [Typ výsledku: C]

VÍTOVEC, Jiří a Jindřich ŠPINAR. Propedeutika kardiovaskulárních onemocnění. In Miloš Táborský, Josef Kautzner, Aleš Linhart, Robert Hatala, Eva Gonçalvesová, Peter Hlivák. Kardiologie. Svazek I-V. Praha: Česká kardiologická společnost, 2021, s. 73-84. svazek II. ISBN 978-80-271-1439-9.

I. interní kardioangiologická klinika - FN u sv. Anny v Brně (profesor)

PharmDr. MVDr. Vilma Vranová, Ph.D.

Co by měla obsahovat lékárnička první pomoci na cesty [Typ výsledku: Jsc]

VRANOVÁ, Vilma. Co by měla obsahovat lékárnička první pomoci na cesty. Pediatrie pro Praxi. 2023, roč. 24, č. 2, s. 124-126. ISSN 1213-0494. Dostupné z: https://dx.doi.org/10.36290/ped.2023.036.

Otravy jedovatými rostlinami v neurologii - záměny za jedlé nebo léčivé rostliny [Typ výsledku: Jost]

VRANOVÁ, Vilma, Pavel RESSNER, Petra BÁRTOVÁ a Milan BRÁZDIL. Otravy jedovatými rostlinami v neurologii - záměny za jedlé nebo léčivé rostliny. Neurologie pro praxi. Olomouc: SOLEN s.r.o., 2023, roč. 24, č. 1, s. 54-58. ISSN 1213-1814. Dostupné z: https://dx.doi.org/10.36290/neu.2022.052.

Co nového u standardizovaného extraktu listů Ginkgo biloba EGb 761 [Typ výsledku: Jost]

VRANOVÁ, Vilma. Co nového u standardizovaného extraktu listů Ginkgo biloba EGb 761. Praktické lékárenství. Olomouc: Solen s.r.o., 2022, roč. 18, č. 4, s. 252-255. ISSN 1801-2434. Dostupné z: https://dx.doi.org/10.36290/lek.2022.051.

Fytofarmaka v onkologické léčbě - 1. díl [Typ výsledku: Jsc]

VRANOVÁ, Vilma a Jan ŠALOUN. Fytofarmaka v onkologické léčbě - 1. díl. Onkologie. 2021, roč. 15, č. 5, s. 247-251. ISSN 1802-4475. Dostupné z: https://dx.doi.org/10.36290/xon.2021.047.

Možnosti fytofarmak v prevenci a terapii komplikací protinádorové léčby - 2. díl [Typ výsledku: Jsc]

VRANOVÁ, Vilma a Jan ŠALOUN. Možnosti fytofarmak v prevenci a terapii komplikací protinádorové léčby - 2. díl. Onkologie. Solen s.r.o., 2021, roč. 15, č. 6, s. 289-292. ISSN 1802-4475.

PharmDr. Jakub Vysloužil, Ph.D.

Assessment of Antimicrobic, Antivirotic and Cytotoxic Potential of Alginate Beads Cross-Linked by Bivalent Ions for Vaginal Administration [Typ výsledku: Jimp]

PAVELKOVÁ, Miroslava, Jakub VYSLOUŽIL, Kateřina KUBOVÁ, Sylvie PAVLOKOVÁ, D. MOLINKOVA, V. CELER, A. PECHOVA, J. MASEK a David VETCHÝ. Assessment of Antimicrobic, Antivirotic and Cytotoxic Potential of Alginate Beads Cross-Linked by Bivalent Ions for Vaginal Administration. Pharmaceutics. BASEL: Elsevier, 2021, roč. 13, č. 2, s. 1-20. ISSN 0939-6411. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13020165.

The Acute Immune Responses of the Common Carp Cyprinus carpio to PLGA Microparticles-The Interactions of a Teleost Fish with a Foreign Material [Typ výsledku: Jimp]

MONTERO, Ruth, Justin Tze Ho CHAN, Bernd KOELLNER, Roman KUCHTA, Jakub VYSLOUŽIL, Peter PODHOREC, Astrid Sibylle HOLZER a Tomas KORYTAR. The Acute Immune Responses of the Common Carp Cyprinus carpio to PLGA Microparticles-The Interactions of a Teleost Fish with a Foreign Material. Biomolecules. Basel: MDPI, 2022, roč. 12, č. 2, s. 1-17. ISSN 2218-273X. Dostupné z: https://dx.doi.org/10.3390/biom12020326.

Exploration of Neusilin® US2 as an Acceptable Filler in HPMC Matrix Systems—Comparison of Pharmacopoeial and Dynamic Biorelevant Dissolution Study [Typ výsledku: Jimp]

BÍLIK, Tomáš, Jakub VYSLOUŽIL, Martina NAISEROVÁ, Jan MUSELÍK, Miroslava PAVELKOVÁ, Josef MAŠEK, D. ČOPOVÁ a Kateřina KUBOVÁ. Exploration of Neusilin® US2 as an Acceptable Filler in HPMC Matrix Systems—Comparison of Pharmacopoeial and Dynamic Biorelevant Dissolution Study. Pharmaceutics. BASEL: MDPI, 2022, roč. 14, č. 1, s. 1-18. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics14010127.

Effects of gonadotropin-releasing hormone agonist administered in microparticles on sperm quality and quantity, and plasma sex steroid levels in northern pike [Typ výsledku: Jimp]

KNOWLES, J., S. BORYSHPOLETS, V. KHOLODNYY, D. RAHI, Jakub VYSLOUŽIL, Jan MUSELÍK, V. STEJSKAL, J. KOURIL a P. PODHOREC. Effects of gonadotropin-releasing hormone agonist administered in microparticles on sperm quality and quantity, and plasma sex steroid levels in northern pike. ANIMAL. Amsterdam: Elsevier, 2022, roč. 16, č. 1, s. 1-8. ISSN 1751-7311. Dostupné z: https://dx.doi.org/10.1016/j.animal.2021.100430.

Matrix Vaginal Rings for Female Dogs-Effect of Altering Dimensions on Mechanical Properties and Dissolution Characteristics, and In vivo Safety Study [Typ výsledku: Jimp]

NOVÁKOVÁ TKADLEČKOVÁ, Veronika, V. PITRONOVA, Kateřina KUBOVÁ, Sylvie PAVLOKOVÁ, Jan ELBL, R. NOVOTNY, David VETCHÝ a Jakub VYSLOUŽIL. Matrix Vaginal Rings for Female Dogs-Effect of Altering Dimensions on Mechanical Properties and Dissolution Characteristics, and In vivo Safety Study. AAPS PHARMSCITECH. NEW YORK: SPRINGER, 2020, roč. 21, č. 6, s. 1-12. ISSN 1530-9932. Dostupné z: https://dx.doi.org/10.1208/s12249-020-01770-5.

PharmDr. Jiří Zeman, Ph.D.

Utilization of Pharmaceutical Technology Methods for the Development of Innovative Porous Metasilicate Pellets with a Very High Specific Surface Area for Chemical Warfare Agents Detection [Typ výsledku: Jimp]

ZEMAN, Jiří, Sylvie PAVLOKOVÁ, David VETCHÝ, Adam STAŇO, Zdeněk MORAVEC, Lukáš MATĚJOVSKÝ a Vladimír PITSCHMANN. Utilization of Pharmaceutical Technology Methods for the Development of Innovative Porous Metasilicate Pellets with a Very High Specific Surface Area for Chemical Warfare Agents Detection. Pharmaceutics. BASEL: MDPI, 2021, roč. 13, č. 11, s. 1-15. ISSN 1999-4923. Dostupné z: https://dx.doi.org/10.3390/pharmaceutics13111860.

Unique coated neusilin pellets with a more distinct and fast visual detection of nerve agents and other cholinesterase inhibitors [Typ výsledku: Jimp]

ZEMAN, Jiří, David VETCHÝ, Sylvie PAVLOKOVÁ, Aleš FRANC a Vladimír PITSCHMANN. Unique coated neusilin pellets with a more distinct and fast visual detection of nerve agents and other cholinesterase inhibitors. Journal of Pharmaceutical and Biomedical Analysis. Elsevier, 2020, roč. 179, February, s. 1-9. ISSN 0731-7085. Dostupné z: https://dx.doi.org/10.1016/j.jpba.2019.113004.

The effect of different types of lactose monohydrate on the stability of acetylcholinesterase immobilized on carriers designed to detect nerve agents [Typ výsledku: Jimp]

ZEMAN, Jiří, Sylvie PAVLOKOVÁ, David VETCHÝ a Vladimír PITSCHMANN. The effect of different types of lactose monohydrate on the stability of acetylcholinesterase immobilized on carriers designed to detect nerve agents. JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY. HOBOKEN, NJ USA: WILEY, 2021, roč. 96, č. 6, s. 1758-1769. ISSN 0268-2575. Dostupné z: https://dx.doi.org/10.1002/jctb.6700.

Tubes for detection of cholinesterase inhibitors-Unique effects of Neusilin on the stability of butyrylcholinesterase-impregnated carriers [Typ výsledku: Jimp]

ZEMAN, Jiří, David VETCHÝ, Sylvie PAVLOKOVÁ, Aleš FRANC, Vladimír PITSCHMANN, Martin DOMINIK, Martina ČUBOVÁ URBANOVÁ a Ivana ŠEDĚNKOVÁ. Tubes for detection of cholinesterase inhibitors-Unique effects of Neusilin on the stability of butyrylcholinesterase-impregnated carriers. Enzyme Microbiology and Technology. 2019, roč. 128, s. 26-33. ISSN 0141-0229. Dostupné z: https://dx.doi.org/10.1016/j.enzmictec.2019.05.002.

Způsob přípravy indikační náplně do detekčních trubiček k detekci fosgenu a difosgenu [Typ výsledku: P]

PITSCHMANN, Vladimír, Lukáš MATĚJOVSKÝ, David VETCHÝ, Jiří ZEMAN a Aleš FRANC. Způsob přípravy indikační náplně do detekčních trubiček k detekci fosgenu a difosgenu. 2021. Patent. Číslo: 309085. Název vlastníka: ORITEST spol. s r.o.; Masarykova univerzita. Datum přijetí: 9. 12. 2021.