



FACULTY OF PHARMACY  
IN HRADEC KRÁLOVÉ  
Charles University

# 10<sup>th</sup> Postgraduate and Postdoc Conference

22. - 23. January 2020

# Program of conference



EFSA-CDN

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MINISTRY OF EDUCATION,  
YOUTH AND SPORTS

# Wednesday 22. January 2020

Conference Registration: **8:00 – 8:30** (in front of Lecture hall A)

## Lecture hall A

**Joint session: 8:30 – 11:20**

Chairperson: Prof. Petr Solich

8:30 - 9:00		<b>CONFERENCE OPENING AND INTRODUCTION OF PROJECT EFSA-CDN</b> <i>PROF. SOLICH, PROF. PÁVEK, PROF. POUR, PROF. NOVÁKOVÁ</i>
9:00 - 9:45	<b>K1</b>	<b>POROUS POLYMER MONOLITHS: A “SWISS ARMY KNIFE” IN ANALYTICAL CHEMISTRY AND RELATED DISCIPLINES</b>  <i>PROF. FRANTIŠEK ŠVEC, CHARLES UNIVERSITY, CZECH REPUBLIC</i>
9:45 - 10:00		<b>COFFEE BREAK (S2155)</b>
10:00 - 10:30	<b>K2</b>	<b>UNDERSTANDING AND ADDRESSING NON-ADHERENCE TO MEDICINES</b>  <i>PROF. ROB HORNE, UNIVERSITY COLLEGE LONDON, UK</i>
10:40 - 11:20	<b>K3</b>	<b>ORGANOCATALYSIS IN ORGANIC SYNTHESIS</b>  <i>PROF. DANIJEL KIKELJ, UNIVERSITY OF LJUBLJANA, SLOVENIA</i>

**LUNCH BREAK: 11:20 – 12:30**

# Lecture hall A

## Session 1 - Bioorganic and Pharmaceutical Chemistry: 12:30 – 17:15

Chairpersons: Prof. Danijel Kikelj, Prof. Pavel Kočovský, Prof. Petr Zimčík

- 12:30 - 12:45 **BPC1** **HOW TO NOT KILL MOSQUITO: CYSTEINE-TARGETED INSECTICIDES**  
*GORECKI, L., ANDRYS, R., SCHMIDT, M., KUCERA, T., PSOTKA, M., SVOBODOVA, B., HRABCOVA, V., HEPNAROVA, V., BZONEK, P., JUN, D., KUCA, K., KORABECNY, J., MUSILEK, K.*
- 12:45 - 13:00 **BPC2** **CYCLIZATION REACTIONS MEDIATED BY TRANSITION METALS**  
*MATOUŠ, P., KADANÍK, M., MAŘÍKOVÁ, J., TIMORACKÝ, M., KUNEŠ, J., POUR, M.*
- 13:00 - 13:15 **BPC3** **SYNTHESIS AND REACTIVITY OF ELECTRONICALLY TUNED [3]DENDRALENES**  
*ANTAL, R., BRŮŽA, Z., KRATOCHVÍL, O., POUR, M.*
- 13:15 - 13:30 **BPC4** **UNUSUAL 1,3-IZOMERIZATION: PREPARATION OF POLYSUBSTITUTED PYRAN-2-ONES**  
*BRŮŽA, Z., KRATOCHVIL, J., HARVEY, J. N., RULÍŠEK, L., NOVÁKOVÁ, L., KUNEŠ, J., KOČOVSKÝ, P., POUR, M.*
- 13:30 - 13:45 **BPC5** **PREPARATION, HPLC PURIFICATION, AND EVALUATION OF MODIFIED OLIGODEOXYNUCLEOTIDE PROBES**  
*KOSTELANSKY, F., HAVLINOVA, Z., MILETIN, M., ZIMCIK, P.*
- 13:45 - 14:00 **BPC6** **SYNTHESIS OF 1-AMINOADAMANTANE SUBSTITUTED PHTHALOCYANINES AND STUDYING THEIR SUPRAMOLECULAR COMPLEXES WITH CUCURBITURIL**  
*KOČIŠČÁKOVÁ, L., ZIMČÍK, P.*
- 14:00 - 14:15 **COFFEE BREAK**
- 14:15 - 14:30 **BPC7** **ANIONIC AND CATIONIC PHTHALOCYANINES FOR PHOTODYNAMIC THERAPY AND THEIR INTERACTION WITH BOVINE SERUM ALBUMIN**  
*KOLLAR, J., HALASKOVA M., MACHACEK, M., ZIMCIK P.*
- 14:30 - 14:45 **BPC8** **SYNTHETIC AND BIOLOGICAL STUDY ON RHODANINE DERIVATIVES AND THEIR OXYGEN ISOSTERES**  
*KUČEROVÁ-CHLUPÁČOVÁ, M., KONEČNÁ, K., NOVOTNÁ, S., DIEPOLTOVÁ, A., DUŠKOVÁ, A., JANĎOUREK, O., KUNEŠ, J., DOLEŽAL, M.*
- 14:45 - 15:00 **BPC9** **THE WAY FROM THE SYNTHESIS TO POTENTIAL CLINICAL TRIALS - FOCUSED ON CANDIDATE ANTIBACTERIAL DRUGS, CHALCONES**  
*KONEČNÁ, K., KUČEROVÁ-CHLUPÁČOVÁ, M., DIEPOLTOVÁ, A., TREJTNAR, F., JANĎOUREK, O., VOXOVÁ, B., DOLEŽAL, M.*
- 15:00 - 15:15 **BPC10** **DESIGN AND SYNTHESIS OF CASEIN KINASE II (CK2)/ HISTONE DEACETYLASES (HDAC) DUAL INHIBITORS**  
*BOUZ, G., ORTIN REMON, I., DE PASCUAL-TERESA, B., RAMOS, A.*
- 15:15 – 15:30 **BPC11** **DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION OF POSITIONAL DERIVATIVES OF A SERIES OF N-(PYRAZIN-2-YL)CARBOXAMIDES**  
*NAWROT, D., BOUZ, G., ZITKO, J., DOLEŽAL, M.,*

- 15:30 – 15:45 **BPC12** **SYNTHESIS OF FREE OMEGA-HYDROXY CERAMIDES AND THEIR BEHAVIOUR IN THE STRATUM CORNEUM MODEL LIPID MEMBRANES**  
*SOMMEROVÁ, V., OPÁLKA, L., SVATOŠOVÁ, L., VÁVROVÁ, K.*
- 15:45 – 16:00 **BREAK**
- 16:00 – 16:15 **BPC13** **SYNTHESIS OF NOVEL 2,3-DISUBSTITUTED PYRAZINES AS POTENTIAL ANTIMICROBIALS**  
*PALLABOTHULA, V. S. K., ZITKO, J.*
- 16:15 - 16:30 **BPC14** **N-PYRAZINOYL SUBSTITUTED AMINO ACIDS AS POTENTIAL ANTIMYCOBACTERIAL AGENTS – SYNTHESIS AND BIOLOGICAL EVALUATION OF ENANTIOMERS**  
*JUHÁS, M., KUČEROVÁ, L., DOLEŽAL, M.*
- 16:30 – 16:45 **BPC15** **SYNTHESIS OF SILICON COMPLEXES OF TETRAPYRAZINOPORPHYRAZINES**  
*KOLAROVA, M., MILETIN, M.*
- 16:45 – 17:00 **BPC16** **(E)-2-(2-ISONICOTINOYLHYDRAZINEYLIDENE)PROPANOIC ACID DERIVATIVES AS PROMISING ANTIMYCOBACTERIAL SUBSTANCES**  
*PFLÉGR, V., KRÁTKÝ, M., STOLAŘÍKOVÁ, J., VINŠOVÁ, J.*
- 17:00 – 17:15 **BPC17** **N-METHYLHYDRAZINE-1-CARBOXAMIDES AS POTENTIAL CHOLINESTERASES INHIBITORS**  
*HOUNGBEDJI, N.-H., ŠTĚPÁNKOVÁ, Š., KRÁTKÝ, M., VINŠOVÁ, J.*

# Lecture hall B

## Session 2 - Clinical and Social Pharmacy: 12:30 – 15:30

Chairpersons: Prof. Rob Horne and Prof. Jiří Vlček

- 12:30 - 12:45 **CSP1** **ANALYSIS AND MANAGEMENT OF NURSES' MEDICATION ERRORS DURING DRUG ADMINISTRATION**  
*MERKOVA, V., MALA-LADOVA, K., MALY, J., KUBENA, A., DOSEDEL, M., VLCEK, J.*
- 12:45 - 13:00 **CSP2** **DRUG-RELATED HOSPITAL ADMISSIONS FOLLOWING EMERGENCY DEPARTMENT VISIT: A CROSS-SECTIONAL STUDY**  
*OČOVSKÁ, Z., MAŘÍKOVÁ, M., VLČEK, J.,*
- 13:00 - 13:15 **CSP3** **MATERNAL NUTRITIONAL INTAKE IN RELATIONSHIP WITH PREGNANCY OUTCOMES IN CZECH PREGNANT WOMEN**  
*NAJPAVEROVA, S., KOVARIK, M., KACEROVSKY, M., HRONEK, M.*
- 13:15 - 13:30 **CSP4** **DEVELOPMENT, IMPLEMENTATION AND TESTING OF MEDICATION ADHERENCE ENHANCING INTERVENTION IN KIDNEY TRANSPLANT OUTPATIENTS: EFFECTIVENESS–IMPLEMENTATION STUDY (TAKTIS)**  
*VANKOVA, B., MALA-LADOVA, K., DUSILOVA-SULKOVA, S., MALY, J.*
- 13:30 - 13:45 **CSP5** **ANALYSIS OF DRUG-RELATED PROBLEMS IN PATIENTS AFTER KIDNEY TRANSPLANTATION**  
*DVOŘÁČKOVÁ, S., VAŇKOVÁ, B., MALÁ-LÁDOVÁ, K., DUSILOVÁ-SULKOVÁ, S., MALÝ, J.*
- 13:45 - 14:00 **CSP6** **POTENTIALLY INAPPROPRIATE PRESCRIBING IN OLDER ADULTS IN CENTRAL AND EASTERN EUROPE AND ASSOCIATED RISK FACTORS - PRELIMINARY RESULTS OF TWO SYSTEMATIC LITERATURE REVIEWS**  
*BRKIĆ, J., KUMMER I., POULÍKOVÁ K., FIALOVÁ, D.*
- 14:00 - 14:15 **COFFEE BREAK**
- 14:15 - 14:30 **CSP7** **INITIAL EXPERIMENT WITH THE LEFT ATRIAL APPENDAGE OCCLUSION WITH THE AMPLATZER AMULET™**  
*KOBLISKOVA, Z., HARAMIOVA, Z., TESAR, T.*
- 14:30 - 14:45 **CSP8** **IMPACT OF A COMPUTERIZED PROTOCOL ON THROMBOPROPHYLAXIS USE IN GENERAL SURGERY: STUDY DESIGN**  
*GAMBACORTA, J., HORÁK, P., VLČEK, J.*
- 14:45 - 15:00 **CSP9** **NEUTROPHIL-TO-LYMPHOCYTE RATIO AND PROGNOSTIC INFLAMMATORY AND NUTRITIONAL INDEX AS THE PREDICTORS OF POSTOPERATIVE INFECTION AFTER KNEE OR HIP ARTHROPLASTY**  
*DOMECKY, P., PATKOVA, A., KUCERA, T., PATEROVA, P., SPONER P., MALY, J.*
- 15:00 - 15:15 **CSP10** **AVAILABILITY OF INFORMATION ON LOWER GERIATRIC DOSING OF POTENTIALLY INAPPROPRIATE MEDICATIONS (PIM<sub>s</sub>) IN NATIONAL DRUG FORMULARIES AND SUMMARY OF PRODUCT CHARACTERISTICS (SPC<sub>s</sub>)**  
*APOSTOLI, P., MANFREDI, R., GREŠÁKOVÁ, S., BRKIĆ, J., FIALOVÁ, D.*
- 15:15 – 15:30 **CSP11** **SPECIFICITY OF THE EU(7)-PIM LIST OF POTENTIALLY INAPPROPRIATE MEDICATIONS FOR THE EVALUATION OF RATIONALITY OF DRUG PRESCRIBING IN OLDER ADULTS IN EUROPEAN COUNTRIES**  
*GRESAKOVA, S., BRKIC, J., APOSTOLI, P., REISSIGOVÁ, J., FIALOVA, D.*

# Lecture hall C

## Session 3 - Pharmaceutical Technology: 12:30 – 15:30

Chairpersons: Prof. Daniel Scherman, Assoc. Prof. Zdeňka Šklubalová, Dr. Jitka Mužíková,

- 12:30 - 12:45 **FT1** **IMPROVING THE DISSOLUTION RATE OF POORLY SOLUBLE MELOXICAM BY CO-MILLING**  
*BROKEŠOVÁ, J., TRPĚLKOVÁ, Ž., KOKTAN, J., ŠKLUBALOVÁ, Z.*
- 12:45 - 13:00 **FT2** **AVALANCHE TESTING AND ITS RELATIONSHIP TO COHESION OF POWDERS**  
*TRPĚLKOVÁ, Ž., ŠKLUBALOVÁ, Z.*
- 13:00 - 13:15 **FT3** **CHARACTERIZATION OF RHEOLOGICAL PROPERTIES OF POLYMERS FOR FORMULATION OF LIQUISOLID SYSTEMS TARGETED TO THE COLON**  
*OGADAH, C., VRANIKOVA, B., SKLUBALOVA, Z.*
- 13:15 - 13:30 **FT4** **IN VITRO MODELS OF SKIN LIPID BARRIER**  
*SAGRAFENA, I., PARASKEVOPOULOS, G., VÁVROVÁ, K.*
- 13:30 - 13:45 **FT5** **DELIVERY OF SKIN BARRIER LIPIDS TO RECONSTRUCTED HUMAN EPIDERMIS**  
*NOVÁČKOVÁ, A., OPÁLKA, L., VÁVROVÁ, K., JONCA, N.*
- 13:45 - 14:00 **FT6** **SNEDDS FOR TARGETED OLIGONUCLEOTIDE DELIVERY TO INFLAMED INTESTINAL TISSUE**  
*KUBACKOVA, J., HOLAS, O., ZBYTOVSKA J., PAVEK, P., MULLERTZ, A.*
- 14:00 - 14:15 **COFFEE BREAK**
- 14:15 - 14:30 **FT7** **POLYMERIC PARTICLES: A TOOL FOR TARGETED INFLAMMATION MANAGEMENT**  
*BOLTAROVÁ, B., KUBAČKOVÁ, J., HOLAS, O., PÁVEK, P.*
- 14:30 - 14:45 **FT8** **IMIQUIMOD CONTAINING LIPOSOMES FOR DERMAL DELIVERY**  
*PANOUSOPOULOU, E., PARASKEVOPOULOS, G., SAGRAFENA, I., NOVÁČKOVÁ, A., VÁVROVÁ, K., ZBYTOVSKÁ, J.*
- 14:45 - 15:00 **FT9** **OPTIMIZATION OF RIFAMPICIN-LOADED NANOPARTICLES PREPARATION**  
*COSTA, P., ŠNEJDROVÁ, E., MARTIŠKA, J., DITTRICH, M.*
- 15:00 - 15:15 **FT10** **A STUDY OF COMPRESSIBILITY AND COMPACTABILITY OF TABLETING MATERIALS WITH CHITOSAN**  
*DOUBKOVÁ, B., MUŽÍKOVÁ, J.*
- 15:15 – 15:30 **FT11** **INTRODUCTION INTO THE MAIN IDEAS OF PCA WITH ILLUSTRATIONS FROM PHARMACEUTICAL TECHNOLOGY AND PHARMACOLOGY**  
*MARUSHKA, J., DUINTJER TEBBENS, J., KARAHODA, R., ŠTAUD, F.*

# Thursday 23. January 2020

Conference Registration: 8:00 – 8:15 (in front of Lecture hall A)

## Lecture hall C

### Session 4 - Pharmaceutical Analysis and Bioanalytical Chemistry: 8:30 – 16:30

Chairpersons: Prof. Marcela Segundo, Prof. Spas Kolev, Prof. Lucie Nováková, Assoc. Prof. Hana Sklenářová

8:30 - 8:45	<b>IL1</b>	<b>REQUIMTE: RECENT RESEARCH TOPICS</b> <i>SEGUNDO, M.</i>
8:45 - 9:00	<b>IL2</b>	<b>THE POTENTIAL OF POLYMER INCLUSION MEMBRANES FOR SEPARATION AND PRECONCENTRATION IN CHEMICAL ANALYSIS</b> <i>KOLEV, S.D.</i>
9:00 - 9:15	<b>PBA1</b>	<b>DETERMINATION OF URINARY RETINOL AS A NEW POTENTIAL BIOMARKER</b> <i>KUČEROVÁ, K., KUJOVSKÁ KRČMOVÁ, L., MATYSOVÁ, L.</i>
9:15 - 9:30	<b>PBA2</b>	<b>MITOCHONDRIAL ANALYSIS OF HUMAN PLATELETS: COMPARISON OF DIFFERENTIAL CENTRIFUGATION AND CONTINUOUS FLOW APHERESIS</b> <i>VERNEROVÁ, A., GARCIA-SOUZA, L. F., GNAIGER, E., KUJOVSKÁ KRČMOVÁ, L., SOBOTKA, O.</i>
9:30 - 9:45	<b>PBA3</b>	<b>THE METHOD DEVELOPMENT FOR THE DETERMINATION OF CISPLATIN IN HUMAN PLASMA</b> <i>TUROŇOVÁ, D., KUJOVSKÁ KRČMOVÁ, L.</i>
9:45 - 10:00	<b>PBA4</b>	<b>DEVELOPMENT AND VALIDATION OF UHPLC METHOD FOR THE MONITORING OF TARGET ACTIVE SUBSTANCES AND THEIR RELEASING FROM SOLID DISPERSIONS</b> <i>ARNOLTOVÁ, K., KUJOVSKÁ KRČMOVÁ, L., MATYSOVÁ, L.</i>
10:00 - 10:15		<b>COFFEE BREAK</b>
10:15 - 10:30	<b>PBA5</b>	<b>IDENTIFICATIONS OF ARTIFICIAL MODIFICATIONS INDUCED IN THE COURSE OF LC-MS ANALYSES OF PEPTIDES</b> <i>LENČO, J.</i>
10:30 - 10:45	<b>PBA6</b>	<b>AUTOMATION OF ON-LINE SAMPLE PREPARATION FOR THE PEPTIDE MAPPING ANALYSIS OF BIOPHARMACEUTICALS</b> <i>KHALIKOVA, M., LENČO, J., FAISTAUEROVÁ, K., ŠVEC, F.</i>
10:45 - 11:00	<b>PBA7</b>	<b>ELECTROCHEMICAL STUDY OF OLIGONUCLEOTIDE PROBES LABELED BY QUANTUM DOTS FOR THE DETECTION OF BACTERIAL AND VIRAL PATHOGENS</b> <i>BANÁŠ, D., AHMET, D.A., NOGUERA, V.M., PAY, M., HOSNEDLOVÁ, B., KIZEK, R.</i>
11:00 - 11:15	<b>PBA8</b>	<b>LC-MS/MS STUDY OF FIRST PHASE IN-VITRO BIOTRANSFORMATION OF NEW PROMISING TACRINE DERIVATIVES</b> <i>NOVAK, M., KUCERA, R., DOLEZAL, R., PRCHAL, L.</i>
11:15 - 11:30	<b>PBA9</b>	<b>ANALYSIS OF ECCRINE SWEAT</b> <i>PRCHAL, L.</i>
11:30 - 11:45	<b>PBA10</b>	<b>ION MOBILITY SPECTROMETRY IN DOPING ANALYSIS</b> <i>PLACHKÁ, K., PEZZATTI, J., NICOLI, R., VEUTHEY, J.-L., GUILLARME, D., NOVÁKOVÁ, L.</i>

11:45 – 12:00 **PBA11** **STUDY OF INCREASING SENSITIVITY IN ESI- BY ANION ATTACHMENT**  
*LHOTSKÁ, I., KOČOVÁ VLČKOVÁ, H., NOVÁKOVÁ, L.*

## **LUNCH BREAK: 12:00 – 13:00**

13:00 - 13:15 **PBA12** **MODIFICATION OF CAPILLARY WALL BY GRAPHENE FOR SEPARATION IN CAPILLARY ELECTROPHORESIS**  
*LOCHMAN, L., FELIX, O., DECHER, G., KUCERA, R.*

13:15 - 13:30 **PBA13** **ANALYTICAL STUDY OF THE INFLUENCE OF EXPERIMENTAL CONDITIONS ON THE CHIRAL SEPARATION OF BORON CLUSTER COMPOUNDS**  
*HORÁČEK, O., KUČERA, R.*

13:30 - 13:45 **PBA14** **LC-MS/MS INVESTIGATION OF CARDIOPROTECTIVE DRUGS**  
*VÁŇOVÁ, N., BAVLOVIČ-PISKÁČKOVÁ, H., BRÁZDOVÁ, P., ŠTĚRBA, M., ŠTĚRBOVÁ-KOVAŘÍKOVÁ, P.*

13:45 - 14:00 **PBA15** **MONITORING INFLUENCE OF PESTICIDE SPRAY ON ANTIOXIDANTS IN APRICOTS**  
*HOLLÁ, M., KHOLOVÁ, A., SKLENÁŘOVÁ, H., ŠATÍNSKÝ, D.*

14:00 - 14:15 **PBA16** **COMPARATIVE STUDY OF VARIOUS SORBENTS FOR DETERMINATION OF OCHRATOXIN A AND OCHRATOXIN B IN ARCHIVE TOKAJ WINES USING ON-LINE SPE-HPLC**  
*KHOLOVÁ, A., LHOTSKÁ, I., ŠPÁNIK, I., MACHYŇÁKOVÁ, A., ŠATÍNSKÝ, D.*

14:15 - 14:30 **PBA17** **PEAR TREES MATERIAL AS A RICH SOURCE OF IMPORTANT PHENOLIC COMPOUNDS**  
*ADAMCOVÁ, A., ŠÍROVÁ, K., ŠATÍNSKÝ, D.*

14:30 - 14:45 **PBA18** **POLYMER INCLUSION MEMBRANE (PIM)-COATED MAGNETIC STIRRER BAR FOR THE PRECONCENTRATION OF SULFAMETHOXAZOLE**  
*ZATROCHOVÁ, S., ALMEIDA, M.I.G.S., KOLEV, S. D., ŠATÍNSKÝ, D.*

14:45 – 15:00 **COFFEE BREAK**

15:00 – 15:15 **PBA19** **CARBON DIOXIDE EXPANDED LIQUID AS A SOLVENT FOR THE EXTRACTION OF QUERCETIN FROM PLANT MATERIAL**  
*PILAŘOVÁ, V., KUDA, L., NOVÁKOVÁ, L., VAN STADEN, J., DOLEŽAL, K.*

15:15 – 15:30 **PBA20** **3D-PRINTED MAGNETIC STIRRING CAGES FOR THE EXTRACTION OF BISPHENOLS FROM WATER USING MICRO- AND NANOFIBERS**  
*ŠRÁMKOVÁ, I. H., HORSTKOTTE, B., ERBEN, J., CHVOJKA, J., ŠVEC, F., SOLICH, P., ŠATÍNSKÝ, D.*

15:30 – 15:45 **PBA21** **BIOMIMETIC CRYSTALLIZATION OF METAL ORGANIC FRAMEWORK FOR THE PREPARATION OF HYBRID MONOLITH IN CAPILLARY FORMAT FOR THE SELECTIVE EXTRACTION OF DRUGS**  
*FIKAROVÁ, K., MAYA, F., HORSTKOTTE, B., SKLENÁŘOVÁ, H., ŠVEC, F.*

15:45 – 16:00 **PBA22** **COMBINING LAB-IN-SYRINGE WITH BEAD-INJECTION FOR PRECONCENTRATION OF NONSTEROIDAL ANTI-INFLAMMATORY DRUGS IN SURFACE WATERS COUPLED ONLINE TO HIGH PERFORMANCE LIQUID CHROMATOGRAPHY**  
*GEMUH, C., HORSTKOTTE, B., SOLICH, P.*

16:00 – 16:15 **PBA23** **POLYSULFONE MEMBRANE ENRICHED IN BIOACTIVE COMPOUNDS TO REDUCE OXIDATIVE STRESS AND INFLAMMATION IN DIALYSIS PATIENTS**  
*KOHLVÁ, M., ROCHA, S., AMORIM G., C., SANTOS-SILVA, A., SOLICH, P., MONTENEGRO, C.*



16:15 – 16:30 **PBA24** **LIQUID-PHASE MICROEXTRACTION OF ORGANOPHOSPHORUS PESTICIDES USING SUPRAMOLECULAR SOLVENT AS A CARRIER FOR FERROFLUID**  
*HASHEMI, B., ZOHRABI, P., SHAMSIPUR, M., HASHEMI, M.*

# Lecture hall B

## Session 5 - Biochemistry, Pharmacology and Toxicology – morning: 8:00 – 12:00

Chairpersons: Prof. Daniel Scherman, Prof. Petr Pávek, Assoc Prof. Martina Čečková

- 8:00 – 8:30 **IL3** **THIOSEMICARBAZONES SUPPRESS EXPRESSION OF THE C-MET ONCOGENE BY MULTIPLE MOLECULAR MECHANISMS**  
*RICHARDSON, D.*
- 8:30 - 8:45 **PXFL1** **IN VITRO SCREENING OF STRUCTURALLY DIFFERENT TOPOISOMERASE II INHIBITORS FOR PREVENTION OF ANTHRACYCLINE CARDIOTOXICITY**  
*KUBES, J., JANSOVA, H., KARABANOVICH, G., MELNIKOVA, I., JIRKOVSKA, A., SKALICKA, V., JIRKOVSKY, E., ROH, J., SIMUNEK, T.*
- 8:45 - 9:00 **PXFL2** **EVALUATION OF DAUNORUBICIN ANTIPROLIFERATIVE EFFECT ON TOPOISOMERASE 2B DEPLETED HL-60 GENERATED WITH CRISPR-CAS9**  
*SKALICKA, V., KHAZEEM, M. M., JASCEVSKA, N., AUSTIN, C. A., JIRKOVSKA, A.*
- 9:00 - 9:15 **PXFL3** **TYROSINE KINASE INHIBITORS AS MULTITASKING SOLDIERS AGAINST CANCER DRUG RESISTANCE: THE EXEMPLARY CASE OF MIDOSTAURIN**  
*MORELL, A., NOVOTNÁ, E., WSÓL, V.*
- 9:15 - 9:30 **PXFL4** **EMD1214063 REVERSES MULTIDRUG RESISTANCE BY INHIBITING THE EFFLUX FUNCTION OF ABCB1 AND ABCG2 TRANSPORTERS**  
*VAGIANNIS, D., ZHANG, Y., BUDAGAGA, Y., SKARKA, A., STAUD, F., HOFMAN, J.*
- 9:30 - 9:45 **PXFL5** **MIDOSTAURIN AS A NOVEL MODULATOR OF ABC TRANSPORTERS IN ACUTE MYELOID LEUKEMIA**  
*SUCHÁ, S., ŠORF, A., VÍŠEK, B., ČEČKOVÁ, M.*
- 9:45 - 10:00 **PXFL6** **OVERCOMING DAUNORUBICIN RESISTANCE MEDIATED BY ALDO-KETO REDUCTASE 1B10**  
*BUKUM, N., MORELL, A., NOVOTNA, E., WSOL, V.*
- 10:00 - 10:15 **COFFEE BREAK**
- 10:15 - 10:30 **PXFL7** **INHIBITION OF HUMAN ALDO KETO REDUCTASE (AKR1C3) BY OLAPARIB – A POSSIBLE REMEDY FOR DAUNORUBICIN RESISTANCE**  
*TAVARES, T. S., HOFMAN, J., MORELL, A. G., WSÓL, V.*
- 10:30 - 10:45 **PXFL8** **NOVEL PHOTODYNAMICALLY ACTIVE HYDROPHILIC AND AMPHIPHILIC ANIONIC (AZA)PHthalocyanine DERIVATIVES FOR TREATMENT OF TUMOROUS DISEASES**  
*HALAŠKOVÁ, M., KOLLÁR, J., ZIMČÍK, P., MACHÁČEK, M.*
- 10:45 - 11:00 **PXFL9** **PRECISION-CUT INTESTINAL SLICES FROM HUMAN TISSUE AS AN EX VIVO MODEL FOR ABCB1 TRANSPORTER INDUCTION**  
*MARTINEC, O., BIEL, C., ČERVENÝ, L., VOKŘÁL, I., DE GRAAF, I. A., OLINGA, P.*
- 11:00 - 11:15 **PXFL10** **IN VITRO AND EX VIVO EVALUATION OF ANTI-HIV AND ANTI-HCV DRUGS EFFECTS ON DIGOXIN INTESTINAL ABSORPTION**  
*HULIČIAK, M., MARTINEC, O., ŠTAUD, F., VOKŘÁL, I., ČERVENÝ, L.*
- 11:15 – 11:30 **PXFL11** **EFFECT OF ANTIDEPRESSANTS ON PLACENTAL HANDLING OF SEROTONIN**  
*HORÁČKOVÁ, H., KARAHODA, R., VÁCHALOVÁ, V., ČERVENÝ, L., ABAD, C., ŠTAUD, F.*

- 11:30 – 11:45 **PXFL12** **EFFECT OF GESTATION AGE ON EXPRESSION AND FUNCTION OF ENZYMES INVOLVED IN TRYPTOPHAN METABOLISM IN HUMAN AND RAT PLACENTA**  
*ABAD, C., KARAHODA, R., HORACKOVA, H., KASTNER. P., KUCERA, R., STAUD, F.*
- 11:45 – 12:00 **PXFL13** **THE CONTRIBUTIVE ROLE OF THE PLACENTAL ABCC1 IN MATERNAL AND FETAL PROTECTION. THE CASE OF MARAVIROC**  
*TUPOVA, L., HIRSCHMUGL, B., PILAROVA, V., SZEKELY, V., BAKOS, E., SUCHA, S., NOVAKOVA, L., STAUD, F., LACZKA, C., WADSACK, C., CECKOVA, M.*

**LUNCH BREAK: 12:00 – 12:30**

## Lecture hall B

### Session 6 - Biochemistry, Pharmacology and Toxicology – afternoon: 12:30 – 17:45

Chairpersons: Prof. Des Richardson, Prof. František Štaud, Prof. Barbora Sztotáková, Assoc Prof. Lukáš Červený

- 12:30 - 12:45 **PXFL14** PRIMARY HUMAN HEPATOCYTE SPHEROIDS AS *IN VITRO* PLATFORM FOR PRECLINICAL DRUG DEVELOPMENT  
*SMUTNY, T., PAVEK, P.*
- 12:45 - 13:00 **PXFL15** CHARACTERIZATION OF TRANSCRIPTOME IN HUMANIZED CAR MICE REGULATED BY MODEL MURINE LIGAND TCPOBOP  
*SKODA, J., DUSEK, J., PAVEK, P.*
- 13:00 - 13:15 **PXFL16** DISCOVERY OF POTENT GPBAR1 AGONISTS/FXR ANTAGONISTS  
*HORVATOVA, A., KASPAR, M., DRASTIK, M., PAVEK, P., KUDOVA, E.*
- 13:15 - 13:30 **PXFL17** MATHEMATICAL MODELING OF THE SIGNALING PATHWAYS OF NUCLEAR RECEPTORS  
*MATTHIOS, A., DUINTJER TEBBENS, E.J., PAVEK, P.*
- 13:30 - 13:45 **PXFL18** PROBING THE STRUCTURE AND FUNCTION OF THE CYTOSOLIC DOMAIN OF THE HUMAN ZINC TRANSPORTER ZNT8 WITH NICKEL (II) IONS  
*CATAPANO, M.C., MLADĚNKA, P., MARET, W.*
- 13:45 - 14:00 **PXFL19** ISOLATED SILYMARIN FLAVONOLIGNANS AND THEIR ABILITY TO INTERACT WITH TRANSITION METALS AND PLATELETS  
*TVRDÝ, V., APPLOVÁ, L., KARLÍČKOVÁ, J., MACÁKOVÁ, K., HRUBŠA, M., VALENTOVÁ, K., MLADĚNKA, P.*
- 14:00 - 14:15 **PXFL20** PLATELET AGGREGATION IN HEALTHY POPULATION: PRELIMINARY DATA ON AGE-DEPENDENT DIFFERENCES  
*HRUBŠA, M., MACÁKOVÁ, K., KARLÍČKOVÁ, J., CARAZO, A., PARVIN, S., MLADĚNKA, P.*
- 14:15 - 14:30 **PXFL21** SOLUBLE ENDOGLIN, DOES NOT AFFECT CHOLESTEROL AND BILE ACIDS METABOLISM IN NASH MOUSE MODEL  
*IGREJA SA, I., PRASNICKA, A., LASTUVKOVA, H., HROCH, M., HYSPLER, R., DOLEZELOVA, E., MICUDA, S., NACHTIGAL, P.*
- 14:30 - 14:45 **PXFL22** ENDOGLIN MODULATES ADHESION AND TRANSMIGRATION OF MONOCYTES IN OXYSTEROL INDUCED ENDOTHELIAL DYSFUNCTION  
*VICEN, M., HAVELEK, R., MACHÁČEK, M., TRIPSKÁ, K., VITVEROVÁ, B., NACHTIGAL, P.*
- 14:45 - 15:00 **COFFEE BREAK**
- 15:00 - 15:15 **PXFL23** ENDOGLIN EXPRESSION, SIGNALIZATION AND FUNCTION IN IFLAMMATION INDUCED ENDOTHELIAL DYSFUNCTION  
*TRIPSKÁ, K., VICEN, M., HAVELEK, R., NACHTIGAL, P.*
- 15:15 - 15:30 **PXFL24** THE TOXICITY OF ALANTOLACTONE AND GERMACRONE TOWARDS DIFFERENTIATED HEPARG CELLS AND THEIR INFLUENCE ON CHOLESTEROL METABOLISM  
*ZÁRYBNICKÝ, T., MATOUŠKOVÁ, P., BOUŠOVÁ, I.*
- 15:30 - 15:45 **PXFL25** THE UDP-GLYCOSYLTRANSFERASES IN *HAEMONCHUS CONTORTUS* AND THE METABOLISM OF ANTHELMINTICS  
*DIMUNOVÁ, D., RAISOVÁ STUHLÍKOVÁ, L., MATOUŠKOVÁ, P.*

- 15:45 – 16:00 **PXFL26** **PROFILING MICRORNA EXPRESSION IN SUSCEPTIBLE AND RESISTANT STRAINS OF HAEMONCHUS CONTORTUS USING SMALL RNA SEQUENCING**  
NGUYEN, L. T., MATOUŠKOVÁ, P., SKÁLOVÁ, L.
- 16:00 – 16:15 **PXFL27** **METABOLIC PATHWAYS OF NEW POTENTIAL ANTHELMINTICS IN HAEMONCHUS CONTORTUS AND ITS HOST**  
ZAJÍČKOVÁ, M., NAVRÁTILOVÁ, M., NGUYEN, L.T., PRCHAL, L., STUHLÍKOVÁ, R.L., KELLEROVÁ, P., SKÁLOVÁ, L.
- 16:15 - 16:30 **BREAK**
- 16:30 - 16:45 **PXFL28** **CIRCULATION OF ANTHELMINTICS IN THE ENVIRONMENT**  
NAVRÁTILOVÁ, M., STUHLÍKOVÁ RAISOVÁ, L., SKÁLOVÁ, L.
- 16:45 - 17:00 **PXFL29** **EFFECT OF ANTHELMINTIC RESIDUES ON TRANSCRIPTION LEVEL OF BIOTRANSFORMATION ENZYMES**  
KELLEROVÁ, P., MATOUŠKOVÁ, P., NAVRÁTILOVÁ, M., ŠTĚRBOVÁ, K., STUHLÍKOVÁ RAISOVÁ, L., SKÁLOVÁ, L.
- 17:00 – 17:15 **PXFL30** **PRELIMINARY RESULTS OF ANTI-INFLAMMATORY ACTIVITY IN SELECTED FERN SPECIES**  
PAVIČÍČ, A., SZOTAKOVA, B., LANGHANSOVA, L.
- 17:15 - 17:30 **PXFL31** **DETERMINATION OF TOXICITY OF BRAF INHIBITORS *IN VITRO***  
MAIXNEROVÁ, J., HYRŠOVÁ, L., TREJTNAR, F.
- 17:30 - 17:45 **PXFL32** **THE EFFECTS OF THE CIGARETTE SMOKE ON HUMAN SKIN AND POSSIBILITIES OF ITS PROTECTION**  
ŠULCOVÁ, K., JAKUBÍKOVÁ, K., MAZUROVÁ, M., DOLEČKOVÁ, I., VÁVROVÁ, K.

# Lecture hall A

## Session 7 - Pharmacognosy and Toxicology of Natural Compounds: 8:15 – 14:45

Chairpersons: Assoc. Prof. Lucie Cahlíková and Assoc. Prof. Karel Šmejkal

- 8:30 - 8:45 **FG1** **ANALYSIS OF COPPER-CHELATING ACTIVITY OF ISORHAMNETIN AND TAMARIXETIN**  
*LOMOZOVÁ, Z., MACÁKOVÁ, K., KARLÍČKOVÁ, J., CATAPANO, M. C., MLADĚNKA, P.*
- 8:45 - 9:00 **FG2** **SCREENING OF ANTIPLATELET ACTIVITY OF ISOQUINOLINE ALKALOIDS**  
*PARVIN, M.S., MACAKOVA, K.*
- 9:00 - 9:15 **FG3** **PHYTOCHEMICAL ANALYSIS AND BIOLOGICAL ACTIVITY OF AZORELLA COMPACTA**  
*ŠTŮSKOVÁ, M., TŮMOVÁ, L.*
- 9:15 - 9:30 **FG4** **CYTOTOXIC EVALUATION OF ASTAXANTHIN MONOESTERS FROM MICROALGAE**  
**HAEMATOCOCCUS PLUVIALIS**  
*FÁBRYOVÁ, T., DA SILVA D. C., ANDRADE P. B., VALENTÃO P., PEREIRA D. M., KOPECKÝ J., CHEEL, J., TŮMOVÁ, L.*
- 9:30 - 9:45 **FG5** **ISOLATION OF ALKALOIDS FROM VINCA MINOR L. AND THEIR INHIBITORY ACTIVITY ON HUMAN CHOLINESTERASES**  
*VRABEC, R., OPLETAL, L., LOČÁREK, M., MAŘÍKOVÁ, J., JENČO, J., HULCOVÁ, D., ŠAFRATOVÁ, M., JANOUŠEK, J.*
- 9:45 - 10:00 **FG6** **NMR ELUCIDATION OF ACETYLCARANINE**  
*MAŘÍKOVÁ, J., HOŠŤÁLKOVÁ, A., KUNEŠ, J.*
- 10:00 - 10:15 **COFFEE BREAK**
- 10:15 - 10:30 **FG7** **BROUSSONETIA PAPYRIFERA AS A RICH SOURCE OF VARIOUS SECONDARY METABOLITES**  
*MALANÍK, M., PAULÍKOVÁ, M., POMYKALOVÁ, K., ŠAFÁŘOVÁ, H., POSPÍŠILOVÁ, T., ŠMEJKAL, K.*
- 10:30 - 10:45 **FG8** **ISOLATION AND IDENTIFICATION OF ACTIVE CONSTITUENTS FROM PAULOWNIA TOMENTOSA STEUD. FRUIT**  
*MOLČANOVÁ, L., DALL'ACQUA, S., ŠMEJKAL, K.*
- 10:45 - 11:00 **FG9** **IDENTIFICATION OF PLANT PHENOLICS AS NOVEL PPAR $\gamma$  AGONISTS**  
*TREML, J., DIRSCH, V., VÁCLAVÍK, J., ŠMEJKAL, K.*
- 11:00 - 11:15 **FG10** **ISOLATION AND IDENTIFICATION OF SCELETIUM TORTUOSUM CONSTITUENTS**  
*RJAŠKOVÁ, V., ÇIÇEK, S., ZIDORN, C., ŠMEJKAL, K.*
- 11:15 – 11:30 **FG11** **ANTIMICROBIAL PROPERTIES OF CANNABINOIDS FROM CANNABIS INDICA**  
*HELCMAN, M., TREML, J., ŠMEJKAL, K., BURCLOVÁ, Z.*
- 11:30 – 11:45 **FG12** **ISOLATION OF AMARYLLIDACEA ALKALOIDS FROM HIPPEASTRUM CULTIVAR FERRARI AND EVALUATION FOR THEIR BIOLOGICAL ACTIVITIES**  
*ALSHAMMARI, L., KUNEŠ, J., HAVELEK, R., CAHLÍKOVÁ, L.*
- 11:45 – 12:00 **FG13** **ALIPHATIC AND AROMATIC DERIVATIVES OF MONTANINE-TYPE ALKALOIDS AND THEIR CYTOTOXIC ACTIVITY**  
*MAAFI, N., CAHLÍKOVÁ, L., KUNEŠ, J.*

**LUNCH BREAK: 12:00 – 13:00**

- 13:00 - 13:15 **FG14** **DERIVATIVES OF AMARYLLIDACEAE ALKALOID AMBELLINE AS POTENTIAL DRUGS**  
RITOMSKÁ, A., HULCOVÁ, D., MAŘÍKOVÁ, J., CAHLÍKOVÁ, L.
- 13:15 - 13:30 **FG15** **ALKALOIDS AS POTENTIAL DRUGS IN THE TREATMENT OF ALZHEIMER'S DISEASE**  
HULCOVÁ, D., ŠAFRATOVÁ, M., HOŠŤÁLKOVÁ, A., CHLEBEK, J., OPLETAL, L., CAHLÍKOVÁ, L.
- 13:30 - 13:45 **FG16** **ALKALOIDS OF THE AMARYLLIDACEAE FAMILY AS POTENTIAL DRUGS IN THERAPY OF DISEASES OF AFFLUENCE**  
BREITEROVÁ, K., MAŘÍKOVÁ, J., KOUTOVÁ, D., CAHLÍKOVÁ, L.
- 13:45 - 14:00 **FG17** **SEMISYNTHETIC DERIVATIVES OF AMARYLLIDACEAE ALKALOID HAEMANTHAMINE AS POTENTIAL DRUGS IN THE TREATMENT OF ALZHEIMER'S DISEASE**  
PERINOVA, R., KOHELOVA, E., SPULAK, M., MARIKOVA, J., HULCOVA, D., CAHLIKOVA, L.
- 14:00 - 14:15 **FG18** **SEPARATION OF STEREOISOMERS FROM ZEPHYRANTHES CITRINA**  
KOHELOVÁ E., JENČO J., CAHLÍKOVÁ, L., MAŘÍKOVÁ, J.
- 14:15 - 14:30 **FG19** **BIOLOGICAL EVALUATION OF ALKALOIDS ISOLATED FROM NARCISSUS CV. CARLTON AND ANTIPROLIFERATIVE POTENTIAL OF THEIR SEMISYNTHETIC DERIVATIVES**  
AL MAMUN, A., CAHLÍKOVÁ, L., MAŘÍKOVÁ, J.
- 14:30 - 14:45 **FG20** **NEUROPROTECTIVE ACTIVITY OF NUPHAR LUTEA L. ALKALOID**  
WIJAYA, V., OPLETAL, L., HULCOVÁ, D., KUNEŠ, J., MAŘÍKOVÁ, J., CHLEBEK, J.

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