SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION

PRECLINICAL TESTING OF ACTIVE SUBSTANCES AND CANCER RESEARCH

WITH INTERNATIONAL SYMPOSIUM ON ANTI-CANCER AGENTS, CARDIOTOXICITY AND NEUROTOXICITY

Organized by

CENTRE FOR PRE-CLINICAL TESTING OF ACTIVE SUBSTANCES – CPCTAS FACULTY OF SCIENCE UNIVERSITY OF KRAGUJEVAC FACULTY OF MEDICINE UNIVERSITY OF KRAGUJEVAC SERBIAN PHYSIOLOGICAL SOCIETY

Under the auspice of EU 7th Framework Program (FP)



CME accredited by the Health Council of Serbia

FINAL PROGRAM

<u>http://cpctas.pmf.kg.ac.rs/conference</u> <u>http://www.physiology.org.rs/eng/htm/konf2011/program.pdf</u>

MARCH 16-19, 2011, KRAGUJEVAC, SERBIA

FOREWORD

Dear Colleagues,

CPCTAS (Centre for Pre-Clinical Testing of Active Substances) is a project financed under the 7th Framework Program (FP) within research potential work program through the coordination and support actions funding scheme. The project coordinator is Faculty of Science University of Kragujevac, and other project beneficiaries are: Faculty of Medicine University of Kragujevac, Institute Curie Paris, School of Medicine, Aristotle University Thessaloniki and Faculty of Natural Sciences and Mathematics Skopje. Currently, established Centre has significant research potential that can cooperate with both hospitals and pharmaceutical industries. The international cooperation between EU and Western Balkan partner institutions will be a strong foundation for the future mutual research activities. This cooperation accelerate the setting up of sustainable partnership between the most competitive research centers of EU and WBC with the research interests in the investigation of active substances.

Cancer affects people at all ages and caused about 13% of all human deaths. Standard therapies have not significantly changed the outcome of cancer patients during the last few decades. Therefore, new and more effective therapies need to be developed. Preclinical studies have substantial role in synthesis, development and examination of active substances and could be potential medications.

We really hope that the conference entitled "PRECLINICAL TESTING OF ACTIVE SUBSTANCES AND CANCER RESEARCH" is a unique opportunity for all participants to give their contribution in global fight against cancer. Strong support given by our eminent experts in this field, as well as by our scientific friends from abroad, indicate undoubted success of the meeting.

Kragujevac is not only the town where you will probably find typical Serbian spirit of life but also the place where higher education in Serbia started. We appreciate your participation not only from Serbia but also from other countries and wishing you warm welcome to Kragujevac.

On behalf of the Program/Organizing Committee

Snežana Marković, Dejan Baskić Vladimir Jakovljević and Dragan Djurić

PROGRAM/ORGANIZING COMMITTEE

Marković S, Kragujevac, Program/Organizing Committee Chairman
Baskić D, Kragujevac, Program/Organizing Committee Co-Chairman
Jakovljević V, Kragujevac, Program/Organizing Committee Co-Chairman
Djurić D, Belgrade, Program Committee Co-Chairman & Symposium Organizer

INTERNATIONAL PROGRAM COMMITTEE

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Duffy S, Paris, France
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Geraldo S, Paris, France
Hourdakis M, Thessaloniki, Greece
Kouvelas D, Thessaloniki, Greece
Kungulovski D, Skopje, FYR Macedonia
Lopatina E, St. Petersburg, Russia
Louvard D, Paris, France
Lukić M, Kragujevac, Serbia

Montagnac G, Paris, France Krylov B, St. Petersburg, Russia Kulchitsky V, Minsk, Belarus Papazisis G, Thessaloniki, Greece Rakić Lj, SASA, Serbia Sardeli C, Thessaloniki, Greece Singal P, Winnipeg, Canada Strbak V, Bratislava, Slovakia Šušić V, SASA, Serbia Vignjević-Matić D, Paris, France

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Ognjanovic B, Kragujevac Obradović A, Kragujevac Popović S, Kragujevac Radojević I, Kragujevac Štajn A, Kragujevac Stefanović O, Kragujevac Trifunović S, Kragujevac Vasić G, Kragujevac Volarević V, Kragujevac Žižić J, Kragujevac

PROGRAM

Venue: Hotel "Šumarice", Kragujevac, Serbia

Wednesday, March 16th, 2011

17.00-17.45

OPENING CEREMONY/WELCOME MESSAGES

Chairmen: Marković S, Baskić D, Jakovljević V, Djurić D

17.45-18.15

HOW MOUSE MODELS CAN UNVEIL A NEW SIGNALING PATHWAY FOR COLORECTAL TUMORIGENESIS: THE EXAMPLE OF NOTCH

Robine S

UMR144/Institut Curie, Paris, France

18.15-18.45

PRECLINICAL TESTING IN ANIMAL SYSTEM/ORGAN MODELS (METABOLISM, CNS, GASTROINTESTINAL, CARDIOVASCULAR, RESPIRATORY, IMMUNE SYSTEM, ENDOCRINE)

Kouvelas D

School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece

19.00

WELCOME RECEPTION/COCKTAIL (Restaurant, Hotel "Šumarice", Kragujevac)

Thursday, March 17th, 2011

Room B

FP7 INFO DAY

Chairmen: Nedović V, Bugarčić Ž, Dimitrijević V

10.00-10.10

INTRODUCTION

Nedović V, Assistant Minister

Ministry of Science and Technological Development Republic of Serbia

10.10-10.30

LAST CALLS OF REGIONS OF KNOWLEDGE AND RESEARCH POTENTIAL IN FP7

Janssen L, Policy Officer

DG Research and Innovation, European Commission

10.30-10.50

HEALTH: PERSPECTIVES FOR INVOLVEMENT OF SERBIAN RESEARCHERS AND RESEARCH ORGANISATIONS IN COLLABORATIVE PROJECTS

Đurković-Đaković O, Serbian Expert Member in the FP7 Program Committee for HEALTH Institute for Medical Research, Belgrade

10.50-11.10

RESEARCH POTENTIALS: EXPERIENCE AND OPPORTUNITIES FOR SERBIAN RESEARCHERS AND RESEARCH ORGANISATIONS IN FORTHCOMING CALLS

Dukić Ž, National Contact Person for REGPOT and HEALTH Programmes Ministry of Science and Technological Development Republic of Serbia 11.10-11.30

HELPING SERBIAN RESEARCHERS AND RESEARCH ORGANISATIONS IN PROJECT PROPOSALS PREPARATION

Quarrie S, Kolić J

Office for Supporting FP7 Proposal Preparation

11.30-12.00 Pause / Coffee break

12.00-12.20

TRANSLATIONAL RESEARCH: PRACTICAL EXPERIENCE

Dubois T

Institute Curie, Paris, France

12.20-12.30

CENTRE FOR PRE-CLINICAL TESTING OF ACTIVE SUBSTANCES (CPCTAS): EXAMPLE OF THE A GRANTED PROJECT

Marković S

Faculty of Science, University of Kragujevac, Kragujevac, Serbia

12.30-12.45

MULTI-LEVEL PATIENT-SPECIFIC ARTERY AND ATHEROGENESIS MODEL FOR OUTCOME PREDICTION, DECISION SUPPORT TREATMENT, AND VIRTUAL HAND-ON TRAINING

Filipović N, Scientific Coordinator for FP7 ARTreat Project Faculty of Mechanical Engineering, University of Kragujevac, Kragujevac, Serbia

12.45-13.15

PRESENTATIONS OF THE RESEARCH CAPACITIES AND OPPORTUNITIES

City of Kragujevac, University of Kragujevac, Faculty of Science, Medical Faculty, Hospital Centre Kragujevac, Institute for Public Health Kragujevac, Veterinarian Institute Kraljevo

13.15-13.30

Discussion

Room A

SESSION 1: ANTIMICROBIAL AND ANTIPROLIFERATIVE ASPECTS OF CHEMICAL ACTIVE SUBSTANCES

Chairmen: Trifunović S, Arsenijević N, Božić B

10.00-10.15

ANTIMICROBIAL ACTIVITY OF ETHYL ESTERS OF (S,S)-ETHYLENEDIAMINE--N,N'-DI-2-PROPAONIC AND (S,S)-ETHYLENEDIAMINE-N,N'-DI-2-(3-METHYL)--BUTANOIC ACIDS AND CORRESPONDING PLATINUM(IV) COMPLEXES

Stanković M¹, Radić G¹, Glođović V¹, Radojević I², Stefanović O², Čomić Lj², Trifunović S¹ Department of Chemistry and ²Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

10.15-10.30

IN VITRO ANTIMICROBIAL ACTIVITY OF NOVEL PLATINUM(IV) AND PALLADIUM(II) COMPLEXES WITH 1,2-DIPHENYL-ETHYLENEDIAMINE-N,N'-DI-3--PROPANOIC ACID

Radojević I¹, Stefanović O¹, Radić G², Glođović V², Čomić Lj¹, Trifunović S²

¹Department of Biology and Ecology and ²Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

10.30-10.45

IN VITRO AND IN VIVO ANTITUMOR ACTIVITY OF SELECTED GOLD (III) COMPLEXES ON 4T1 MOUSE BREAST CANCER CELL LINE

Volarević V¹, Milovanović M¹, Djeković A², Petrović B², Arsenijević N¹, Bugarčić ZD²

¹Department of Microbiology and Immunology, Centre for Molecular Medicine, Faculty of Medicine, University of Kragujevac; ²Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

10.45-11.00

THE ANTIPROLIFERATIVE EFFECTS OF CISPLATIN AND OF BUTYL AND PENTYL ESTERS OF (S,S)-ETHYLENEDIAMINE-N,N'-DI-2-PROPANOIC AND CORRESPONDING PLATINUM(IV) COMPLEXES ON HUMAN COLON AND BREAST CANCER CELL LINES

Đačić D¹, Cvetković D¹, Glođović V², Radić G², Trifunović S², Marković S¹

¹Department of Biology and Ecology and ²Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

11.00-11.15

EVALUATION OF ANTIPROLIFERATIVE ACTIVITY OF NEW PALLADIUM COMPLEXES AND MECHANISM OF CELL DEATH ON HCT-116 AND MDA-MB-231 CELL LINES

Žižić JB¹, Ćurčić MG¹, Obradović AD¹, Mrkalić E², Matović Z², Ćendić M², Djurdjević P³, Živić Ž³, Marković SD¹

¹Department for Biology and Ecology and ²Department for Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, ³Department of Hematology, Clinical Centre Kragujevac, Kragujevac, Serbia

11.15-11.30

STRUCTURE-ACTIVITY RELATIONSHIPS OF 3-SUBSTITUTED-5,5-DIPHENYHYDANTOIS AS POTENTINAL ANTIPROLIFERATIVE AND ANTIMICROBIAL AGENTS

Obradović A¹, Trišović N², Božić B², Stefanović O¹, Marković S¹, Čomić Lj¹, Božić B³, Ušćumlić G²

¹Department of Biology, Faculty of Science, University of Kragujevac, Kragujevac, ²Department of Organic Chemistry, Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, ³Institute for Physiology and Biochemistry, Faculty of Biology, University of Belgrade, Belgrade, Serbia

11.30-12.00 Pause / Coffee break

SESSION 2: ANTIMICROBIAL, ANTIPROLIFERATIVE AND ANTIOXIDATIVE ASPECTS OF NATURAL ACTIVE SUBSTANCES

Chairmen: Čomić Lj, Kungulovski Dz, Vukojević J

12.00-12.20

ADVANCED DIAGNOSTIC METHODS FOR HUMAN BRUCELLOSIS

Taleski V¹, Kungulovski D¹

¹Institute of Biology, Faculty of Natural Sciences and Mathematics, University St's Cyril and Methodius, Skopje, FYR Macedonia

12.20-12.35

HYPERICIN AND PSEUDOHYPERICIN PRODUCTION IN ELICITED Hypericum perforatum L. CELL PROVIDES ANTIOXIDANT PROTECTION

Gadzovska-Simić S¹, Tuševski O¹, Stefova M², Kungulovski Dz³, Atanasova-Pancevska N³

¹Laboratory for Plant Cell and Tissue Culture, Institute of Biology, ²Department of Analytical Chemistry, Institute of Chemistry, ³Laboratory for Microbiology, Institute of Biology, Faculty of Natural Sciences and Mathematics, University "Ss. Cyril and Methodius", Skopje, FYR Macedonia.

12.35-12.50

ANTIMICROBIAL AND ANTIOXIDATIVE POTENTIAL OF GANODERMA LUCIDUM CULTIVATION BROTH

Simonić J¹, Kosanić M², Stajić M¹, Vukojević J¹, Ranković B²

¹Faculty of Biology, University of Belgrade, Belgrade, ²Faculty of Science, University of Kragujevac, Kragujevac, Serbia

12.50-13.00

ANTIBACTERIAL ACTIVITY OF PLANT EXTRACTS AND THEIR SYNERGISTIC EFFECTS WITH ANTIBIOTICS

Stefanović O, Radojević I, Čomić Lj

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

13.00-13.10

IN VITRO ANTIMICROBIAL ACTIVITY OF METHANOL EXTRACTS FROM FIVE DIFFERENT SPECIES OF LICHEN

Radojević I¹, Stefanović O¹, Stamenković S², Mitrović T², Cvetković V², Čomić Lj¹ Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, ²Department of Biology and Ecology, Faculty of Science and Mathematics, University of Niš, Niš, Serbia

13.10-13.20

ANTIOXIDATIVE ACTIVITIES OF GOLDMOSS STONECROP (SEDUM ACRE L.) PLANT EXTRACTS

Stanković M¹, Topuzović M¹, Solujić S², Vuković N², Nićiforović N², Mihailović V²

¹Department of Biology and Ecology and ²Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, Serbia.

13.20-13.30

PHENOLIC CONTENT IN VITRO ANTIPROLIFERATIVE AND APOPTOTIC ACTIVITY OF TEUCRIUM SPECIES FROM SERBIAN FLORA ON HCT-116 CELL I INF

Stanković M, Ćurčić M, Đačić D, Topuzović M, Marković S Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, Serbia.

13.30-15.00 Pause / Lunch

SYMPOSIUM "ANTI-CANCER AGENTS, CARDIOTOXICITY AND NEUROTOXICITY"

Organizers: Djurić D, Jakovljević V

Chairmen: Dhalla NS, Singal PK, Lopatina E

15.00-15.30

ANTI-CANCER DRUGS AND HEART DISEASE: PATHOPHYSIOLOGY AND PREVENTION

Singal PK

Institute of Cardiovascular Sciences, St. Boniface Hospital Research Centre, University of Manitoba, Winnipeg, Canada

15.30-15.45

HOMOCYSTEINE-INDUCED CARDIOTOXICITY IN RAT: FOCUS ON HEART VARIABLES, CORONARY FLOW AND OXIDATIVE STRESS

Djurić D¹, Živković V², Krstić D¹, Živković S¹, Djordjević D², Jakovljević V²

¹Institute of Medical Physiology "Richard Burian" and Institute of Medicinal Chemistry, School of Medicine University of Belgrade, ²Department of Physiology, Faculty of Medicine, University of Kragujevac, Belgrade/Kragujevac, Serbia

15.45-16.00

THE ROLE OF GASOTRANSMITTER NO IN HOMOCYSTEINE- AND LINDANE - INDUCED NEUROTOXICITY

Hrnčić D¹, Rašić – Marković A¹, Šušić V², Djurić D¹, Stanojlović O¹

¹Institute of Medical Physiology "Richard Burian", School of Medicine, University of Belgrade, Belgrade, ²Serbian Academy of Sciences and Arts, Belgrade, Serbia

16.00-16.15

ANTIOXIDATIVE EFFECT OF TOTAL OLIVE LEAF EXTRACT IN EXPERIMENTAL CEREBRAL ISHEMIA

Radenović L

Institute for Physiology and Biochemistry, Faculty of Biology, University of Belgrade, Serbia

Chairmen: Krylov B, Kulchitsky V, Strbak V

16.15-16.30

STUDY OF IN VITRO SENSITIVITY OF TUMOR CELLS OF THE CENTRAL NERVOUS SYSTEM TO CHEMOTHERAPEUTIC DRUGS AND NERVE GROWTH FACTOR

Chernov AN¹, Kalunov VN¹, Talabaev MV², Grigoriev DG³, Demidchik YE⁴, Cherstvoy ED³, Kulchitsky VA¹

¹Institute of Physiology, National Academy of Sciences of Belarus; ²Clinical Hospital of Fast Medical Support; ³Belarusian State Medical University; ⁴Belarusian Medical Academy of Post-Graduate Education, Minsk, Belarus

16.30-16.45

STIMULATION OF INSULIN SECRETION IN TUMOR CELL LINES AND PANCREATIC ISLETS

Bačová $Z^{1,3}$, Hafko R^1 , Orečná M^1 , Kohút P^2 , Hapala I^2 , Štrbák $V^{1,3}$

¹Institute of Experimental Endocrinology, SAS, Bratislava, ²Institute of Animal Biochemistry and Genetics, SAS, Ivanka pri Dunaji, ³Department of Pathological Physiology, Medical Faculty, Slovak Medical University, Bratislava, Slovak Republic

16.45-17.00

IONIC MECHANISMS OF IMPULSE CODING IN THE NOCICEPTIVE MEMBRANE. CREATION OF NON-OPIOID ANALGESIC "ANOCEPTIN" AND "COLD" INFRARED LASER "CAMERTONE" FOR PAIN RELIEF

Krylov B

Pavlov Institute of Physiology, Russian Academy of Sciences, St.-Petersburg, Russia

17.00-17.15

ANOCEPTIN – PRECLINICAL AND CLINICAL TESTS RESULTS

Lopatina E

Department of Experimental Physiology and Pharmacology, Almazov Federal Heart, Blood and Endocrinology Centre, Laboratory of Physiology of Excitable Membranes, Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg, Russia

17.15-17.30

EFFECTS OF THIOACETAMIDE ON LIPID PEROXIDATION AND CATALASE ACTIVITY IN VARIOUS RAT BRAIN REGIONS

Mladenović D¹, Radosavljević T¹, Rašić-Marković A², Hrnčić D², Krstić D³, Čolović M⁴, Petrovich S⁵, Stanojlović O²

¹Department of Pathophysiology, School of Medicine, University of Belgrade, ²Department of Physiology "Richard Burian", School of Medicine, University of Belgrade, ³Department of Medicinal Chemistry, School of Medicine, University of Belgrade, ⁴Department of Physical Chemistry, Vinča Institute of Nuclear Sciences, University of Belgrade, ⁵Laboratory of Molecular Biology and Endocrinology, Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia

17.30-17.45

NATURAL ANTIOXIDANTS IN THE PREVENTION OF DOXORUBICIN TOXICITY – NEW INSIGHTS

Dekanski D

Galenika a.d., Belgrade, Serbia

Friday, March 18th, 2011

SESSION 3: CANCER RESEARCH AND APPLICATION IN ACTIVE SUBSTANCES TESTING I

Chairmen: Vignjević-Matić D, Baskić D, Geraldo S

09.00-09.20

THE ROLE OF ACTIN CYTOSKELETON IN THE INVASION AND METASTASIS FORMATION

Schoumacher M, Louvard D, Vignjević D *Institut Curie/UMR144*, *Paris*, *France*

09.20-09.40

ACTIN BUNDLE ORGANISATION IS DISPENSABLE FOR INTESTINAL MICROVILLI PROTRUSION BUT ESSENTIAL FOR APICAL ENZYMESANCHORING AND INTESTINAL PHYSIOLOGY

Ubelmann F, Revenu C, Hurbain I, Delacour D, Louvard D, Robine S *Institut Curie/UMR144, Paris, France*

09.40-10.00

THE ROLE OF FILOPODIA IN CANCER CELL INTERACTION WITH THE TUMOUR MICROENVIRONMENT DURING INVASIVE MIGRATION

Geraldo S, Zaccarini F, Fetler L, Louvard D, Vignjević D *Institut Curie/UMR144*, *Paris*, *France*

10.00-10.20

ROLE OF FASCIN PHOSHORYLATION IN CANCER CELL MIGRATION

Elkhatib N, Louvard D, Vignjević D *Institut Curie/ UMR144*, *Paris, France*

10.20-10.40

NATURAL PRODUCT KORBAZOL EXERTS CYTOTOXICITY AGAINST HUMAN COLON CARCINOMA CELL LINES

Baskić D¹, Popović S¹, Zelen I², Djurdjević P³, Milovanović M¹, Volarević V¹, Arsenijević N¹ Department of Microbiology and Immunology, ²Department of Biochemistry, ³Department of Pathophysiology, Faculty of Medicine, University of Kragujevac, Kragujevac, Serbia

10.40-11.00

NEW JATROPHANES FROM Euphorbia dendroides L.: REVERSAL OF DRUG RESISTANCE AND SYNERGISTIC INTERACTION WITH PACLITAXEL

Pešić M¹, Aljančić I², Milosavljević S³, Todorović N², Jadranin M², Milosavljević G⁶, Povrenović D⁷, Banković J¹, Marković I⁵, Tanić N¹, Ruždijić S¹, Vajs V², Tešević V⁴

¹Institute for Biological Research, University of Belgrade, Belgrade, ²Institute for Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, ³Serbian Academy of Sciences and Arts, Belgrade, ⁴Faculty for Chemistry, University of Belgrade, Belgrade, Belgrade, ⁵Faculty of Medicine, University of Belgrade, Belgrade, ⁶Konekta Konsalting, Novi Sad, ⁷Faculty of Tecnology and Metallurgy, University of Belgrade, Belgrade, Serbia

11.00-11.30 Pause / Coffee break

SESSION 4: CANCER RESEARCH AND APPLICATION IN ACTIVE SUBSTANCES TESTING II

Chairmen: Dubois T, Montagnac G, Jurišić V, Trajković V

11.30-11.50

TUMOR AND MICROENVIRONMENT: THE ROLE OF PRESSURE IN CANCER PROLIFERATION

Montel F, Delarue M, Elgeti J, Vignjevic D, Cappello G, Prost J, Joanny F *Institut Curie/UMR 168, Paris, France*

11.50-12.10

DISSOCIACION BETWEEN ACTIVATION AND EFFECTOR-BINDING UNDERLIES ARF6's FUNCTION IN ENDOCYTIC RECYCLING

Montagnac G¹, Lemoyne de Forges H¹, Smythe E², Salamero J¹, Chavrier P¹

¹Institut Curie/UMR144, Paris, France, ²University of Sheffield, Sheffield, England, UK

12.10-12.30

LOOKING FOR THERAPEUTIC TARGETS IN TRIPLE-NEGATIVE BREAST CANCER

Dubois T

Curie Institute, Research Centre, Translational Research Department, Breast Cancer Biology Group, Paris, France 12.30-12.50

TNF-\alpha MEDIATED SHEDDING OF CD45 AND CD30 FROM K-562 CELLS IS ASSOCIATED WITH RELEASE OF LACTATE DEHYDROGENASE

Jurišić V², Srdić T¹

¹Institute of Oncology and Radiology of Serbia, ² School of Medicine, University of Kragujevac, Kragujevac, Serbia

12.50-13.05

IN VITRO COMPARISON OF THE PHOTOTHERMAL ANTICANCER ACTIVITY OF GRAPHENE NANOPARTICLES AND CARBON NANOTUBES

Arsikin K¹, Marković Z², Harhaji-Trajković Lj³, Todorović-Marković B², Kepić D²,

Jovanović S², Pantović A¹, Dramićanin M², Trajković V¹

¹School of Medicine, University of Belgrade, ²Vinca Institute of Nuclear Sciences, Belgrade, ³Institute for Biological Research, Belgrade, Serbia

13.05-13.20

SENSITIZATION OF GLIOMA CELLS TO SIMAVASTATIN-INDUCED APOPTOSIS BY INHIBITION OF AMPK/AKT/mTOR-DEPENDENT AUTOPHAGY

Janjetović K^{1,2}, Misirkić M^{1,2}, Vučičević Lj^{1,2}, Harhaji-Trajković Lj¹, Šumarac-Dumanović M¹, Mićić D¹, Trajković V¹

¹School of Medicine, University of Belgrade, ²Institute for Biological Research, Belgrade, Serbia

13.20-13.35

ANTITUMOR ACTIVITY OF SIDERITIS SCARDICA EXRAXTS AGAINST B-16 MOUSE MELANOMA CELLS

Jeremić I^{I} , Tadić V^{3} , Stanojević \check{Z}^{2} , Marković G^{3} , Arsić I^{3} , Bojović D^{3} , Bumbaširević V^{2} ,

¹Institute of Rheumathology and ²Institute of Clinical Biochemistry, School of Medicine, University of Belgrade, ³Institute for Medicinal Plant Research, Dr. Josif Pančić, Belgrade, Serbia

13.30-16.00 Pause / Lunch / Kragujevac tour

SESSION 5: PHARMACOLOGICAL AND GENOTOXIC ASPECTS OF ACTIVE **SUBSTANCES**

Chairmen: Janković S, Kouvelas D, Papazisis G

16.00-16.20

ENVIRONMENTAL RISK ASSESSMENT IN PRECLINICAL TESTING OF ACTIVE **SUBSTANCES**

Kouvelas D

School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece

16.20-16.40

ANTICANCER CHEMOTHERAPEUTICS - ASPECTS OF ENVIRONMENTAL RISK ASSESSMENT

Sardeli C

School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece

16.40-17.00

NEUROTOXICITY OF ANTICANCER AGENTS AND NEUROPROTECTIVE APPROACHES

Papazisis G

School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece

17.00-17.20

EFFECTS OF ENDOTHELINS ON ISOLATED ISTHMIC SEGMENT OF HUMAN OVIDUCT

Janković J¹, Janković S¹, Lukić G², Čanović D³, Folić M¹

¹Pharmacology Department, Medical Faculty, University of Kragujevac, Kragujevac, ²Gynecology & Obstetrics Clinic, Clinical Center, Kragujevac, ³Surgery Clinic, Clinical Center, Kragujevac, Serbia

17.20-17.35

THE EFFECTS OF MYOTREXATE ON THE VIABILITY OF THE UTERINE MYOMA in vitro

Kastratović T¹, Mitrović M², Nikolić I², Matović Z³, Arsenijević S¹

¹Gynecology Obstetrical Clinic, Clinical Center Kragujevac, Kragujevac, ²Department of Biochemistry, Medical Faculty, University of Kragujevac, Kragujevac, Kragujevac, Serbia

17.35-17.50

DOSE-DEPENDENT EFFECTS OF POLYCYCLIC AROMATIC HYDROCARBONS ON THE MITOCHONDRIAL 18 kDa TRANSLOCATOR PROTEIN DENSITY (TSPO) IN STEROIDOGENIC ORGANS AND ANTIOXIDANT ENZYMES IN A RAT MODEL OF INDUCED CARCINOGENESIS

Dimitrova-Shumkovska J¹, Veenman L², Gavish M²

¹Institute of Biology, Faculty of Natural Sciences and Mathematics, Ss. Cyril and Methodius University Skopje, Skopje, FYR Macedonia, ²Rappaport Family Institute for Research in the Medical Science, Technion-Israel Institute of Technology, Department of Molecular Pharmacology, Haifa, Israel

17.50-18.05

THE GENOTOXICITY OF HYDROXYAPATITE AND HYDROXYAPATITE WITH DICALCIUM SILICATE IN HUMAN PERIPHERAL LYMPHOCYTES

Opačić-Galić V¹, Petrović V¹, Živković S¹, Jokanovic V², Mitić-Ćulafić D³

¹ School of Dentistry, University of Belgrade, ² Institute for Nuclear Sciences Vinca, Belgrade, ³ Chair of Microbiology, Faculty of Biology, University of Belgrade, Belgrade, Serbia

18.05-18.20

ANTIGENOTOXIC/GENOTOXIC PROPERTIES OF PLANT MONOTERPENES

Nikolić B, Mitić-Ćulafić D, Vuković-Gačić B, Knežević-Vukčević J Faculty of Biology, University of Belgrade, Belgrade, Serbia

18.30-19.00 CONCLUDING REMARKS

19.00 GALA DINNER (Restaurant, Hotel "Šumarice", Kragujevac)

POSTER SESSIONS

Thursday, March 17th, 2011

9.00-19.00 **Poster Session 1**

(The presence of poster authors is required from 14.00 to 16.00)

SESSION 1: ANTIMICROBIAL AND ANTIPROLIFERATIVE ASPECTS OF CHEMICAL AND NATURAL ACTIVE SUBSTANCES

Chairmen: Isaković A, Taleski V, Gazdovska-Simić S, Topuzović M

P1 SYNTHESIS, ANTITUMOR ACTIVITY AND QSAR STUDIES OF 4-AMINOMETHYLIDENE DERIVATIVES OF SOME PYRAZOL-5-ONES

Marković V¹, Erić S², Stanojković T³, Joksović M¹

¹ Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, ² Faculty of Pharmacy, University of Belgrade, Belgrade, ³ Institute of Oncology and Radiology of Serbia, Belgrade, Serbia

P2 ANTITUMORAL ACTIVITY OF PLATINUM (IV) COMPLEX WITH 0,0'-DIETHYL ESTER OF (S,S)-ETHYLENEDIAMINE-N,N'--DI-2-(4-METHYL)-PENTANOIC ACID DIHYDROCHORIDE

Vujić J¹, Milovanović M², Volarević V², Arsenijević N², Trifunović S³

¹Faculty of Agronomy, University of Kragujevac, Čačak, ²The Medical Faculty, University of Kragujevac, Kragujevac, ³Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

P3 IN VITRO ANTITUMORAL ACTIVITY OF PLATINUM(II) COMPLEXES WITH 0,0'-DIALKYL ESTERS OF (S,S)-ETHYLENEDIAMINE-N,N'-DI-2-(4-METHYL)PENTANOIC ACID ON CLL CELLS

Milovanović M¹, Volarević V¹, Vujić JM², Trifunović SR², Arsenijević N¹

¹Faculty of Medicine, University of Kragujevac, ²Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

P4 ANTI-MELANOMA ACTION OF NOVEL Ru (II) COMPLEXES *IN VITRO* Jovanović M¹, Savić A², Dulović M¹, Misirlić-Denčić S¹, Sabo T², Grgurić-Šipka S², Marković I¹

¹Faculty of Medicine, University of Belgrade, Belgrade, ²Faculty of Chemistry, University of Belgrade, Belgrade, Serbia

P5 ANTITUMOR EFFECT OF NOVEL POLYMERIC COPPER(II) COMPLEXES WITH PYRAZOLONE-TYPE LIGANDS IN VITRO

Isaković A¹, Leovac M², Marković I¹, Misirlić-Denčić S¹

¹Institute of Medical and Clinical Biochemistry, Faculty of Medicine, University of Belgrade, Belgrade, ²Faculty of Sciences, Department of Chemistry, University of Novi Sad, Novi Sad, Serbia

P6 ¹H NMR STUDY OF THE REACTIONS OF A METHIONINE- AND HISTIDINE-CONTAINING PEPTIDES WITH DIFFERENT ANTITUMOR ACTIVE PLATINUM(II) COMPLEXES

Drašković N¹, Ašanin D², Živković M², Rajković S²

¹Faculty of Agriculture, University of Priština, Zubin Potok, ²Department of Chemistry, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

P7 IN VITRO ASSESSMENT OF THE ANTIMICROBIAL POTENTIAL OF ESSENTIAL OIL MIXTURE AGAINST SELECTED TYPES OF MICROORGANISMS

Kungulovski D, Atanasova-Pancevska N, Kungulovski I

Laboratory for Microbiology, Institute of Biology, Faculty of Natural Sciences and Mathematics, University "Ss. Cyril and Methodius", Skopje, FYR Macedonia

P8 PHENYLPROPANOID PRODUCTION IN Hypericum perforatum L. CELL CO-CULTIVATION WITH Agrobacterium rhizogenes A4

Gadzovska-Simić S¹, Tusevski O¹, Kungulovski Dz², Atanasova-Pancevska N², Stefova M³

¹Laboratory for Plant Cell and Tissue Culture, Institute of Biology, ²Laboratory for Microbiology, Institute of Biology, ³Department of Analytical Chemistry, Institute of Chemistry, Faculty of Natural Sciences and Mathematics, University "Ss. Cyril and Methodius", Skopje, FYR Macedonia

P9 LICHENS AS POSSIBLE ANTIMICROBIAL AGENTS

Kosanić M. Ranković B

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

P10 FREE-RADICAL SCAVENGING CAPACITY AND TOTAL PHENOLIC CONTENT OF FRAGRANT YELLOW ONION (ALLIUM FLAVUM L.)

Stanković M, Ćurčić M, Đačić D, Žižić J, Topuzović M, Marković S

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

P11 ANTIOXIDANT, ANTIPROLIFERATIVE AND APOPTOTIC ACTIVITY OF DIFFERENT EXTRACTS OF LEAVES AND SEED CONES FROM EUROPEAN YEW (Taxus baccata L.)

Ćurčić M, Stanković M, Đačić D, Topuzović M, Marković S Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, Serbia.

P12 IN VITRO ANTIPROLIFERATIVE ACTIVITY OF FIVE LICHENS SPECIES ON HCT-116 HUMAN COLON CELL LINE

Đačić D¹, Cvetković V², Stanković M¹, Ćurčić M¹, Mitrović T², Stamenković S², Marković S¹ Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, ²Department of Biology and Ecology, Faculty of Science and Mathematics, University of Niš, Niš, Serbia

P13 CYTOTOXIC ACTIVITIES OF UMBILICARIA CRUSTULOSA, PARMELIOPSIS AMBIGUA, UMBILICARIA POLYPHYLLA, LECANORA MURALIS AND PARMELIA SAXATIS METHANOL EXTRACTS ON HUMAN COLON CANCER CELL LINE

Đačić D, Kosanić M, Ćurčić M, Ranković B, Marković S Department of Biology and Ecology, Faculty of Science, University of

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

P14 EVALUATION OF REDOX STATUS OF HCT-116 CELL LINE TREATED WITH VARIOUS LICHEN AND PLANT EXTRACTS

Žižić J¹, Ćurčić M¹, Đačić D¹, Obradović A¹, Stanković M¹, Mitrović T², Kosanić M¹, Ranković B¹, Marković S¹

¹Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, ²Faculty of Natural Sciences and Mathematics, University of Niš, Niš, Serbia

P15 IN VITRO ANTIBACTERIAL ACTIVITIES OF SOME LAMIACEAE ESSENTIAL OILS AGAINST HUMAN PATHOGENS

Stanković N¹, Čomić Lj², Miladinović D³, Mihajlov-Krstev T⁴, Mladenović M⁴

¹Institute for public health, Niš, ²Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, ³Faculty of Medicine, University of Niš, ⁴Department of Biology and Ecology, Faculty of Science and Mathematics, University of Niš, Niš, Serbia

Friday, March 18th, 2011

9.00-19.00 **Poster Session 2**

(The presence of poster authors is required from 14.00 to 16.00)

SESSION 2: CANCER RESEARCH AND APPLICATION IN ACTIVE SUBSTANCES TESTING

Chairmen: Schoumacher M, Pešić M, Tovilović G, Stankov K

P16 IN VIVO IMAGING OF CELL MIGRATION DURING INTESTINAL HOMEOSTASIS

Simon A, Louvard D, Vignjević D Institut Curie/UMR144, Paris, France

P17 THE ROLE OF CARCINOMA-ASSOCIATED FIBROBLASTS IN THE INITIATION OF COLON CANCER CELL INVASION

Glentis A, Schoumacher M, Geraldo S, Louvard D, Vignjević D *Institut Curie /UMR144, Paris, France*

P18 THE ROLE CARCINOMA-ASSOCIATED FIBROBLASTS IN DIRECTIONAL INVASION OF CANCER CELL

Zaccarini F, Geraldo S, Louvard D, Vignjević D *Institut Curie/UMR144, Paris, France*

P19 DESINGNING NEW TOOLS O STUDY THE DINAMICS OF CLATHRIN AND MICROTUBULES

Kungulovski I¹, Montagnac G²

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P20 THE EFFECTS OF TUMOR-ASSOCIATED FIBROBLASTS ON MOTILITY OF COLLORECTAL CANCER CELLS

Matić M¹, Schoumacher M², Vignjević D²

¹Institute of Biology and Ecology, Faculty of Science, University of Kragujevac, Serbia,

²Department of Cell Biology, Institut Curie, Paris, France

P21 NATURAL PRODUCT KORBAZOL INDUCES APOPTOTIC CELL DEATH IN B-CLL CELLS THROUGH ROS-MEDIATED MECHANISMS

Popović S¹, Baskić D¹, Djurdjević P², Zelen I³, Arsenijević N¹

¹Department of Microbiology and Immunology, ²Department of Pathophysiology,

³Department of Biochemistry, Faculty of Medicine, University of Kragujevac, Kragujevac, Serbia

P22 CYTOTOXIC EFFECTS OF GLASS IONOMER CEMENTS ON HUMAN PULP DERIVED MESENCHYMAL STEM CELLS

Kanjevac T¹, Milovanović M², Volarević V², Arsenijević N²

¹Department for Preventive and Pediatric Dentistry, Faculty of Medicine, University of Kragujevac, ²Department of Microbiology and Immunology, Centre for Molecular Medicine, Faculty of Medicine, University of Kragujevac, Kragujevac, Serbia

P23 IN VITRO AND IN VIVO ANTI-MELANOMA ACTION OF METFORMIN Pantović A ¹, Janjetović K^{1,2}, Misirkić-Marjanović M^{1,2}, Vučićević Lj^{1,2}, Stevanović D¹, Harhaji-Trajković Lj², Sumarac-Dumanović M, ¹ Mićić D¹, Trajković V¹ ¹ School of Medicine, University of Belgrade, Serbia, ² Institute for Biological Research, Belgrade, Serbia

P24 PACLITAXEL IN THE TREATMENT OF MULTI-DRUG RESISTANT NON-SMALL CELL LUNG CANCER, COLON CANCER AND GLIOBLASTOMA CELL LINES

Podolski-Renić A^1 , Pešić M^1 , Anđelković T^1 , Banković J^1 , Milinković V^1 , Marković I^2 , Tanić N^1 , Ruždijić S^1

¹Institute for Biological Research, Department of Neurobiology, University of Belgrade, Belgrade, ²Faculty of Medicine, University of Belgrade, Belgrade, Serbia

P25 ANTIPROLIFERATIVE EFFECT OF LIGNIN MODEL COMPOUND AGAINST HUMAN CELL LINES

Radotić K¹, Andrijević Lj², Bogdanović J¹, Mutavdžić D¹, Bogdanović G²

¹Centre for Multidisciplinary Studies, University of Beograd, Beograd, Serbia, ²Institute of Oncology Sremska Kamenica, Sremska Kamenica, Serbia

P26 ALPHA-TOCOPHERYL SUCCINATE EFFECTS ON EHRLICH ASCITES CARCINOMA CELLS

Stankov K¹, Bajin-Katić K¹, Stanimirov B¹, Mihajlović D¹, Kovacević Z²

¹Department of Biochemistry, Medical Faculty Novi Sad, ²Serbian Academy of Sciences and Arts, Branch in Novi Sad, Novi Sad, Serbia

P27 ARYLPIPERAZINE DOPAMINERGIC LIGANDS PREVENT NITRIC OXIDE-INDUCED MITOCHONDRIAL DAMAGE AND NEURONAL APOPTOSIS Tovilović G¹, Vukić Šoškić², Zogović N¹, Misirkić M^{1,3}, Janjetović K^{1,3}, Vučićević Lj^{1,3},

Tovilović G¹, Vukić Soškić², Zogović N¹, Misirkić M^{1,3}, Janjetović K^{1,3}, Vučićević Lj^{1,3}, Trajković V³

¹Institute for Biological Research, Belgrade, ²Proteosys AG, Mainz, Germany, ³School of Medicine, University of Belgrade, Belgrade, Serbia

P28 BEHAVIORAL MANIFESTATIONS OF ACUTE THIOACETAMIDE-INDUCED HEPATIC ENCEPHALOPATHY IN RATS

Mladenović D¹, Rašić-Marković A², Radosavljević T¹, Hrnčić D², Krstić D³, Stanojlović O²

¹Department of Pathophysiology, School of Medicine, University of Belgrade, ²Department of Physiology "Richard Burian", School of Medicine, University of Belgrade, ³Department of Medicinal Chemistry, School of Medicine, University of Belgrade, Belgrade, Serbia

P29 OXIDATIVE STRESS IN HEMODIALYSIS PATIENTS: THE ROLE OF EXTRACELLULAR MYELOPEROXIDASE

Kisić B¹, Mirić D¹, Stanić M², Dragojević I¹, Stolić A³

¹ Institute of Biochemistry, Faculty of Medicine, Kosovska Mitrovica, ²Centre of Medical Biochemistry, Health Centre Kosovska Mitrovica, ³ Institute for Preventive Medicine, Faculty of Medicine, Kosovska Mitrovica, Serbia

P30 THE EFFECT OF ERYTROPOIETIN THERAPY ON NITRIC OXIDE LEVEL IN PATIENTS WITH END STAGE RENAL DISEASE

Dejanova B¹, Petrovska S¹, Dejanov P², Antevska V¹

¹Institute of Physiology, ²Clinic of Nephrology, Medical Faculty, University of Skopje, Skopje, FYR Macedonia

P31 POSSIBLE BLOOD VESSEL IMPAIRMENT MARKERS IN CHRONIC DISEASES

Dejanova S

Medical Faculty, University of Skopje, Skopje, FYR Macedonia

P32 EVALUATION OF ESTRADIOL LEVEL AND SERUM LIPIDS IN WHITE WISTAR RATS OF FEMALE GENDER DURING THEIR GENERATIVE LIFE

Petrovska S, Dejanova B, Antevska V

Institute of Physiology, Medical Faculty, University "St. Cyrilus and Methodius", Skopje, FYR Macedonia

P33 THE ANTIOXIDATIVE EFFECTS OF ESTRADIOL THERAPY ON ERYTHROCYTES I WOMEN WITH PREECLAMPSIA

Djordjević N¹, Babić G², Marković S¹, Ognjanović B¹, Štajn A¹, Saičić Z³

¹Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Kragujevac, ²Medical Faculty, University of Kragujevac, Kragujevac, ³Department of Physiology, Institute for Biological Research "Siniša Stanković", University of Belgrade, Belgrade, Serbia

P34 LIVER DAMAGE AND REGENERATIVE RESPONSE IN RATS TREATED WITH THIOACETAMIDE

Puškaš N^1 , Mladenović D^2 , Radosavljević T^2 , Rašić-Marković A^3 , Hrnčić D^3 , Macut Dj^4 , Šušić V^5 , Stanojlović O^3

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P35 INFORMATION SYSTEM FOR SUPPORT OF THE CPCTAS

Cvjetković V, Djokić M, Marinković M

Department for Informatics, Faculty of Science, University of Kragujevac, Kragujevac, Serbia

REGISTRATION FEE (before February 1st 2011 or after February 1st 2011)

PARTICIPANTS $40 \in \text{ or } 60 \in MEMBERS OF THE SERBIAN PHYSIOLOGICAL SOCIETY} 30 \in \text{ or } 50 \in MEMBERS OF THE SERBIAN PHYSIOLOGICAL SOCIETY} 30 \in \text{ or } 50 \in MEMBERS OF THE SERBIAN PHYSIOLOGICAL SOCIETY} 30 \in \text{ or } 50 \in MEMBERS OF THE SERBIAN PHYSIOLOGICAL SOCIETY} 30 \in \text{ or } 50 \in MEMBERS OF THE SERBIAN PHYSIOLOGICAL SOCIETY 30 \in MEMBERS$

NOTICE:

For attendees from abroad – payment in Euro to account following instructions of the Organizing Secretariat.

Full registration includes admission to all scientific sessions, opening ceremony, welcome reception, cocktail and receiving Final Program & Abstract Book.

OFFICIAL LANGUAGE

Official language will be Serbian and English. No simultaneous translation will be provided. All abstracts will be published in English.

COFFEE, REFRESHMENT AND LUNCH

Coffee, refreshment and lunch will be served upon request on commercial basis in a restaurant of Hotel Šumarice Kragujevac and it will be on the responsibility of the participants.

SOCIAL PROGRAM

The social program will include convivial (welcome reception, cocktail) and cultural (city tours, monasteries tour, visit to museums, etc) events. Exciting social events will be offered (joint dinner with multinational music, Kragujevac tour, visit of Museums etc.). For more details, please contact anaobradovic@kg.ac.rs. Gala dinner is not included in registration and tickets should be provided with additional cost of 15 Euro per person.

CANCELLATION AND REFUNDS

Notification of cancellation should be sent in writing to Program/Organizing Committee. If a cancellation is received before February 15th^t 2011, 70% of the total amount will be refunded to the participant. We regret that no refunds can be given for cancellations received on or after that date. Please note that for administrative reasons, refunds will be dealt with after the Conference.

AUDIOVISUAL FACILITIES

For the oral presentations, video beam projections will be available in each conference room. Presentations should be prepared in "Power Point"(*.ppt file). For special audiovisual facilities, please send in advance a special request to the Program Secretariat.

POSTER INSTRUCTIONS

Poster size should be 120 (height) cm x 80 (width) cm. Poster figures should be designed to be viewed from a distance and the authors should use clear, visible graphics and large text fonts. Material for mounting posters will be provided in the poster area. Authors are requested to be present by their posters during the poster session for which their poster has been scheduled.

ACCOMMODATION/CONTACT

Hotel accommodation and arrival/departure service will be reserved in different price categories in Kragujevac at special rates. For making hotel reservation at special rates, please contact anaobradovic@kg.ac.rs

Confirmation will be sent upon receipt of payment. In order to receive an e-mail confirmation, please indicate your e-mail address.

IMPORTANT INFORMATION

Symposium date: March 16-19, 2011

Conference Venue: Hotel "Šumarice", Kragujevac, Serbia

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