International symposium at Faculty of medical sciences

CURRENT ACHIEVEMENTS AND FUTURE PERSPECTIVES IN MEDICAL AND BIOMEDICAL RESEARCH

STIP, 24 NOVEMBER 2015
MULTIMEDIA CENTRE – UGD, STIP

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INTERNATIONAL SYMPOSIUM AT FACULTY OF MEDICAL SCIENCES
“Current achievements and future perspectives in medical and biomedical research”

SCIENTIFIC PROGRAM
November 24, 2015 - Stip

8:30 – 9:00 Registration
9:00 – 9:15 Rector / Vice rector/Dean

SESSION 1
Chair: Prof. Emilija Janevik Ivanovska
Co-chair: Ass. Prof. Elena Drakalska

9:15 – 9:35 Ass. Marija Darkovska Serafimovska
Macedonian agency of drug and medical devices, Director
University Goce Delcev Stip
Republic of Macedonia

9:35 – 9:55 Assoc. Prof. Zorica Arsovska Sarafinovska
Institute of Public Health of the
Republic of Macedonia, Skopje,
University Goce Delcev Stip
Republic of Macedonia

9:55 – 10:15 Prof. Biljana Gjorgjeska
University Goce Delcev Stip
Republic of Macedonia

10:15 – 10:35 Assoc. Prof. Bistra Angelovska
University Goce Delcev Stip
President of Pharmaceutical Chamber of Macedonia. Republic of Macedonia

10:40 – 11:10 Coffee break

Poster presentation
Chair: Prof. Milka Zdravkovska
Co-chair: Ass. Prof. Darinka Gjorgieva Ackova

10:10 – 11:50 Prof. Neven Zarkovic
Rudjer Boskovic Institute, Croatia

11:50 – 12:10 Assoc. Prof. Tatjana Ruskovska
University Goce Delcev Stip Republic of Macedonia

12:10 – 12:30 Prof. Rubin Gulaboski
University Goce Delcev Stip Republic of Macedonia

12:30 – 12:50 Assoc. Prof. Darko Bosnakovski
University Goce Delcev Stip
Republic of Macedonia

12:50 – 14:00 Coffee break
Poster presentation

Step forward of Macedonian agency for medicines and medical devices, establishment and strategic plan for development

Adherence to Therapy: A Modern Pharmacotherapeutic Approach

Use of disinfectants and antiseptics in selected health institutions in Republic of Macedonia

Code of Ethics for Pharmacists – Pharmaceutical Chamber of Macedonia

4-Hydroxynonenal – major bioactive marker of lipid peroxidation

Nicotinamide adenine dinucleotide biosynthesis and consumption in dysfunctional white adipocytes

New insights into the chemistry and functions of Coenzyme Q

Genetically modified systems to study muscular dystrophies
SESSION 3

Chair: Assoc. Prof. Cena Dimova  
Co-chair: Ass. Prof. Nevenka Velickova

14:00 – 14:40  
Prof. Lia Rimondini  
Università del Piemonte Orientale, Novara, Italy  
Counteracting microbial biofilm formation onto dental materials

14:40 – 15:00  
Prof. Elizabeta Zisovska  
Agency for Quality and Accreditation of Healthcare Institutions, Skopje, Republic of Macedonia  
The endless potential of the umbilical cord blood for investigation, research and treatment

15:00 – 15:20  
Ass. Misko Milev  
University Goce Delcev Stip, Republic of Macedonia  
The cytokinesis-blocked micronucleus assay: Good choice for detection and evaluation of genotoxicity in human cells

15:20 – 15:40  
Prof. Lence Miloseva  
University Goce Delcev Stip, Republic of Macedonia  
Multiple predictive model for clinical and subclinical depression in adolescence

15:40 – 16:00  
Coffee break  
Poster presentation

SESSION 4

Chair: Assoc. Prof. Darko Bosnakovski  
Co-chair: Ass. Prof. Katarina Smilkov

16:00 – 16:40  
Prof. Adriano Duatti  
University of Ferrara, Ferrara, Italy  
Molecular imaging and radionuclide therapy of prostate cancer

16:40 – 17:00  
Assoc. Prof. Vaso Taleski  
University Goce Delcev Stip, Republic of Macedonia  
Where Nanotechnology and Nanomedicine meet – Applications and Potential Risks

17:00 – 17:20  
Dr. Aleksandar Cvetkovski  
University Goce Delcev Stip, Republic of Macedonia  
The role of molecular cocrystals in drug development

17:20 – 17:40  
Prof. Emilija Janevik Ivanovska  
University Goce Delcev Stip, Republic of Macedonia  
Drug development based on radiolabeled antibodies

17:40 – 18:00  
Closing remarks
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The organizers would like to acknowledge the support given from the University Goce Delcev- Stip and the Pharmaceutical chamber of Macedonia. Gratitude is expressed to Alkaloid AD Skopje and Fitofarm for the financial support.
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“Current achievements and future perspectives in medical and biomedical research”
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2. Adherence to Therapy: A Modern Pharmacotherapeutic Approach
   Author: Zorica Arsovska Sarafinovska

3. Use of disinfectants and antiseptics in selected health institutions in Republic of Macedonia
   Author: Biljana Gjorgjeska

4. Code of Ethics for Pharmacists – Pharmaceutical Chamber of Macedonia
   Author: Bistra Angelovska

5. 4-Hydroxynonenal – major bioactive marker of lipid peroxidation
   Authors: Neven Zarkovic, Kamelija Zarkovic

6. Nicotinamide adenine dinucleotide biosynthesis and consumption in dysfunctional white adipocytes
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7. New insights into the chemistry and functions of Coenzyme Q
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8. Genetically modified systems to study muscular dystrophies
   Author: Darko Bosnakovski

9. Counteracting microbial biofilm formation onto dental material
   Author: Lia Rimondini

10. The endless potential of the umbilical cord blood for investigation, research and treatment
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11. The cytokinesis-blocked micronucleus assay: Good choice for detection and evaluation of genotoxicity in human cells
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12. Multiple predictive model for clinical and subclinical depression in adolescence
    Authors: Lence Miloseva, Tatjana Vukosavljevic-Gvozden

13. Molecular Imaging and therapy with radionuclides of prostate cancer
    Author: Adriano Duatti

14. Where Nanotechnology and Nanomedicine meet – Applications and Potential Risks
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15. The role of molecular cocrystals in drug development
    Author: Aleksandar Cvetkovski

16. Drug development based on radiolabeled antibodies
    Author: Emilija Janevik-Ivanovska
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2. Effect of kinesitherapy on physical activity in patient with Guillain-Barré syndrome  
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3. Case Report: Oligoasthenoteratozoospermia, treatment with acupuncture  
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Abstract

Introduction: Transcranial color duplex sonography represents a non-invasive diagnostically method which allows visualization of the brain arteries on the basis of the skull through color-coding of the flow rate. The arteries of the Willis’ circle (circulus arteriosus cerebri) can be identified through their anatomic localization in relation to brain stem structures and by determining the direction of flow. During examination the ultrasound beam passes through natural cranial openings, or windows, which are areas of the cranium where the bone is the thinnest (transtemporal, tansorbital and transoccipital windows). During hemodynamic analysis on the Doppler wave, the following basic parameters are analyzed: systolic speed peak, median speed, spectral distribution of the frequencies, direction of flow, Doppler indexes (index of pulsation and index of asymmetry).

Goal: The goal is to show the diagnostic application of transcranial color duplex sonography in detection of morphologic and hemodynamic changes of the intracranial arteries in patients with stroke.

Material and methods: We present 62-year old patient who has been hospitalized due to acute paralysis of the left limbs, slurred speech and headache. Neurological examination on admission: left-sided hemiplegia, dysarthria, headache. At admission a CT was made with finding clearly limited hyperdense change – intracerebral hemorrhage with perifocal edema without evident mass effect on the adjacent brain structures. A neurosurgeon was consulted and he said that there were no indications for operation. Significant information: history of CVI before 18 years, with left limbs weaknesses (no medical documentation). Transcranial color duplex sonography was made with detected area of mixed arterial and venous signal, with increased flow rate and turbulence through transtemporal sonographic window. Because of that a CT angiography of the intracranial blood vessels was indicated which found anpial arteriovenous malformation with big nidus and dilated and tortuous vein which flows to v. Galeni. Arteriovenous malformation receives blood through the right a. cerebri media, right a. carotis posterior and also cross-filling through the left a. carotisinterna and aa. comunicantes anterior.
Results: On discharge improved neurological condition, the patient was with residual left sided hemiparesis and discreet dysarthria – mRS score 3.

Discussion: Transcranial color duplex sonography is a non invasive method of evaluation of intracranial blood flow, especially in patients with stroke. It helps if selection is made for patients that should undergo additional invasive radiological tests such as CT angiography.

Keywords: arteriovenous malformation, transcranial color duplex sonography.