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**CURRENT ACHIE**

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

**SCIENTIFIC PROGRAM**  
**November 24, 2015 - Stip**

**Registration**

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**Chair: Prof. Emilija Janevik Ivanovska**

**Co-chair: Ass. Prof. Elena Drakalska**

**Ass. Marija Darkovska Serafimovska**

Macedonian agency of drug and medical  
devices, Director

University Goce Delcev Stip

Republic of Macedonia

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

**Assoc. Prof. Zorica Arsovska Sarafinovska**

Institute of Human Health, Skopje,

University Goce Delcev Stip

Republic of Macedonia

*Adherence to Therapy: A Modern Pharmacotherapeutic Approach*

**Prof. Biljana Gjorgjeska**

University Goce Delcev Stip

Republic of Macedonia

*Use of disinfectants and antiseptics in the health institution in Republic of Macedonia*

**Assoc. Prof. Bistra Angelovska**

University Goce Delcev Stip

President of Pharmaceutical Chamber  
of Macedonia. Republic of Macedonia

*Code of Ethics for Pharmacists – Pharmaceutical Chamber of Macedonia*

**Coffee break**

**Poster presentation**

**SESSION 2**

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**Prof. Neven Zarkovic**

Rudjer Boskovic Institute, Croatia

*4-Hydroxynonenal – major bioactive marker of lipid peroxidation*

**Assoc. Prof. Tatjana Ruskovska** University  
Goce Delcev Stip Republic of Macedonia

*Nicotinamide adenine dinucleotide biosynthesis and consumption in dysfunctional white adipocytes*

**Prof. Rubin Gulaboski** University

Goce Delcev Stip Republic of Macedonia

*New insights into the chemistry and functions of Coenzyme Q*

**Assoc. Prof. Darko Bosnakovski**

University Goce Delcev Stip

Republic of Macedonia

*Genetically modified systems to study muscular dystrophies*

**Coffee break**

**Poster presentation**



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**Co-chair: Ass. Prof. Nevenka Velickova**

**Prof. Lia Rimondini**  
Università del Piemonte Orientale,  
Novara, Italy

*Counteracting microbial biofilm formation  
onto dental materials*

**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 treat-  
ment*

**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*

**Prof. Lence Miloseva**  
University Goce Delcev Stip  
Republic of Macedonia

*Multiple predictive model for clinical and  
subclinical depression in adolescence*

**Coffee break**

**Poster presentation**

## SESSION 4

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

**Prof. Adriano Duatti**  
University of Ferrara, Ferrara, Italy

*Molecular imaging and radionuclide therapy  
of prostate cancer*

**Assoc. Prof. Vaso Taleski**  
University Goce Delcev Stip  
Republic of Macedonia

*Where Nanotechnology and Nanomedicine  
meet – Applications and Potential Risks*

**Dr. Aleksandar Cvetkovski**  
University Goce Delcev Stip  
Republic of Macedonia

*The role of molecular cocrystals in drug devel-  
opment*

**Prof. Emilija Janevik Ivanovska**  
University Goce Delcev Stip  
Republic of Macedonia

*Drug development based on radiolabeled  
antibodies*

**Closing remarks**

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*November 24, 2015 – Stip*

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- 1. Step forward of Macedonian Agency for medicines and medical devices. Establishment and strategic plan for development**  
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*Author: Ass. Prof. Zorica Arsovska Sarafinovska*
- 3. Use of disinfectants and antiseptics in selected health institutions in Republic of Macedonia**  
*Author: Prof. Biljana Gjorgjeska*
- 4. Code of Ethics for Pharmacists – Pharmaceutical Chamber of Macedonia**  
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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**  
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- 9. Counteracting microbial biofilm formation onto dental materials**
- 10. The endless potential of the umbilical cord blood for investigation, research and treatment**  
*Author: Prof. dr. Elizabeta Zisovska*
- 11. The cytokinesis-blocked micronucleus assay: Good choice for detection and evaluation of genotoxicity in human cells**  
*Author: Ass. Misko Milev*
- 12. Multiple predictive model for clinical and subclinical depression in adolescence**  
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- 13. Molecular Imaging and therapy with radionuclides of prostate cancer**  
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- 14. Where Nanotechnology and Nanomedicine meet – Applications and Potential Risks**  
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- 16. Drug development based on radiolabeled antibodies**  
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*November 24, 2015 – Stip*

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- 2. Effect of kinesitherapy on physical activity in patient with Guillain-Barré syndrome**  
*Authors: Antoaneta Dimitrova, Kristin Petrova Grigorova, Daniela Lubenova, Danche Vasileva, Milena Nikolova;*
- 3. Case Report :  
Oligoasthenoteratozoospermia, treatment with acupuncture**  
*Authors: Jihe Zhu, Blagica Arsovska, Danche Vasileva, Andrijana Sterjovska-Aleksovska, Kristina Kozovska;*
- 4. Treatment of cervical spondylosis with acupuncture**  
*Authors: Kristina Kozovska, Jihe Zhu, Blagica Arsovska, Andrijana Sterjovska-Aleksovska;*
- 5. Effect of kinesitherapy on static and dynamic balance in patient after vertebro-basilar system stroke**  
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- 6. Malignant pleural effusions in lung cancer: the condition during the disease**  
*Authors: Marija Karakolevska-Ilova, Elena Simeonovska Joveva, Aleksandar Serafimov, Lidija Petrovska;*
- 7. Systemic fungal infections in hematological malignancies**  
*Authors: Petar Kuzmanovski, Velo Markoski;*
- 8. Morbidity and mortality of malignant neoplasms in Macedonia**  
*Authors: Viktorija Vukovikj, Velo Markoski;*
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*Authors: Kneginja Richter, Lence Miloseva, Guenter Niklewski, Anja Piehl;*
- 10. Regulations and legal aspects in management of medical waste**  
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- 11. Control of the psychiatric disorders in the Republic of Macedonia**  
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- 14. HPV virus as a cause of cancer of the cervix in R.Macedonia**  
*Authors: Stefaniya Joveva, Velo Markoski, Vaso Taleski;*
- 15. Analysis of the Pap test results by age groups in the area of Kriva Palanka**  
*Authors: Robert Nikolovski, Kristina Denchovska, Goran Mladenovski, Velo Markovski;*
- 16. Giant rhinophyma treated by excision and full thickness skin grafting**  
*Author: Emilija Lozanovska Doneva;*
- 17. Incidence of patients with chronic renal failure in Skopje**  
*Authors: Simona Kamceva, Velo Markoski;*
- 18. Calculation of effective dose to family members of patients with thyroid diseases**  
*Authors: Marina Zdravevska Kochovska, Emilija Janjevik Ivanovska, Meri Angeleska, Sasho Nikolovski, Zlatko Filipovski;*
- 19. Contemporary Microbiological Diagnostic Tests for Rapid Identification and Detection of Resistance of Mycobacterium tuberculosis**  
*Authors: Oliver Taleski, Vaso Taleski;*
- 20. Analysis of clinical features and complications in patients with  $\beta$ -thalassemia in the region of Strumica**  
*Authors: Silvana Sinokapovska, Cena Dimova;*



- 21. Lymphoepithelioma : A case report**  
*Author: Vase Stojcheska;*
- 22. F-ra Capitulum Radii L.Dex. – A Case report**  
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- 23. Patient with intracranial hemorrhage and arteriovenous malformation detected with transcranial color duplex sonography – case report**  
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- 24. Hereditary supracondylar spur of the humerus: Case report**  
*Authors: George Zafirovski, Strahil Todorov, Christian Lozanoski;*
- 25. Prosthetic rehabilitation in patient with advanced degree of functional disorders (case report)**  
*Authors: Natasa Denkova, Katerina Zlatanovska, Ana Radeska-Panovska, Sanja Nashkova, Ivona Kovacevska;*
- 26. Marginal Implants Bone Loss – a Case Report**  
*Authors: Kiro Papakoca, Ana Radeska-Panovska, Katerina Zlatanovska;*
- 27. Ectodermal Dysplasia, a Case Report: Challenge for Prosthodontic Solution**  
*Authors: Emilija Bajraktarova Valjakova, Bajevska Jagoda, Vesna Korunoska Stevkovska, Biljana Kapushevskaja, Nikola Gigovski, Aneta Mijoska, Katerina Zlatanovska, Cvetanka Bajraktarova Mishevskaja;*
- 28. Alveolar socket preservation and shaping using temporary prosthetic construction – case presentation**  
*Authors: Nikola K. Gigovski, Vesna Korunoska- Stevkoska, Emilija Bajraktarova, Aneta Mijoska, Ana Radeska-Panovska;*
- 29. Porcelain veneers produced by refractory die method**  
*Authors: Katerina Zlatanovska, Julija Zarkova-Atanasova, Ana Radeska, Natasa Denkova, Kiro Papakoca;*
- 30. Correlation of Two Different Local Hemostatic Modalities in Oral Surgery Patients with Oral Anticoagulants**  
*Author: Cena Dimova;*
- 31. Assessment of orthodontic treatment need among school children by using index (index of orthodontic treatment need)**  
*Authors: Ana Radeska-Panovska, Kiro Papakoca, Natasa Denkova, Ivona Kovacevska, Katerina Zlatanovska;*
- 32. Oral Hygiene Level Maintenance among Dental Medicine Students**  
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- 33. Poor oral hygiene and show of caries in 12 year old children**  
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- 34. Implant-prosthetic therapy failure in smoker and nonsmoker patients**  
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- 35. Oral surgery treatment in the patients with combination syndrome**  
*Authors: Vesna Korunoska Stevkovska, Nikola Gigovski, Katerina Zlatanovska, Emilija Bajraktarova, Aneta Mijoska;*
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- 38. Analysis of the dimensional stability of elastomeric silicone impression materials**  
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- 39. Use of gypsum into working everyday in dental technician**  
*Author: Hadis Arslanov*
- 40. Mobile dental NOG-types used in working dental models**  
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- 41. Determining normal tissue toxicity of non-radioactively Lu/Y-labeled rituximab-conjugates in rat animal model**  
*Author: Darinka Gjorgieva Ackova;*



42. **Genetically Engineered Mouse Models For Human Pancreatic Cancer: A Review Of The KC, KPC And iKras\*P53\* Models**  
*Authors:* David Mwanza Wankeh, Joel Munene Muchira, Aschalew Alemu Marie, Darko Bosnakovski;
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*Authors:* Emilija Apostolova, Brankica Spaseska, Maja Simonoska Crcarevska, Maja Glavash Dodov, Renata Slaveska Raichki;
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**70. PET radiopharmaceuticals in the diagnosis of neurological diseases**

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*Author:* Marija Sterjova



***Faculty of Medical Sciences***

***University Goce Delcev – Stip, Macedonia***

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# Accreditation of the Laboratory of Radiopharmacy – requested requirements or need of challenge

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## **Abstract**

Laboratory of Radiopharmacy is a part the Faculty of Medical Sciences, Department of Pharmacy in the Goce Delcev University in Stip and was granted by the Government of Republic of Macedonia as a part of the project for improvement of the laboratories in the country. The main field in which the Laboratory of Radiopharmacy has focused after the establishment in 2011 is to introduce a new molecules as a potential radiofarmaceuticals, labeling with radioactive and not radioactive isotopes, defining their structure and especially chemical and radiochemical identification of potential impurities. In the same time carefully implementing radiation safety program for controlling laboratory environment. The Laboratory is deeply involved in the educational program in all cycles of academic degrees following a few international and local research projects. The laboratory staff is educated and trained in the national and international programs in the field of Radiopharmacy and Radiochemistry, as well included in the training courses dedicated to the implementation the standards and quality assurance providing additional effectiveness in the work.

All that activities including the requested requirements from the Ministry of Education and Sciences were enough strong reason to start the process of accreditation of the Laboratory of Radiopharmacy and to focus on that all our activities in the next period. The aim of our study is to introduce, to validate and to accreditate the procedures for quality control of radiopharmaceuticals for clinical and research purpose according regulatory standards. At that stage we have in progress the process of Accreditation with implementation of Standard MKC EN ISO/IEC 17025 - General requirements for the competence of testing and calibration laboratories. International Standard ISO/IEC 17025 specifies the general requirements for the competence of testing and calibration laboratories if they wish to demonstrate that they operate a quality system, are technically competent and are able to generate technically and scientifically valid results. The compliance these requirements enables the acceptance of testing and calibration results also between laboratories and countries.

Our Laboratory of Radiopharmacy currently is in the phase of implementation of the General requirements for the competence of testing and calibration laboratories of the Standard MKC EN ISO/IEC 17025. This standard holds five clauses, two annexes, and one bibliography section, out of which, the most important are Clause 4, that specifies the management requirements, and Clause 5, that specifies the requirements for technical competence for the type of tests the laboratory undertakes.

In the same time we are preparing the first method that will be applied to as ISO recognized. The process of accreditation is a long process of implementation of the standards and require continuous engagement of all staff and persons included in whole activities of the Laboratory.

After the establishment in the current location and have sufficient and competent staff that was necessary required we started with the initiative of accreditation. We are expecting that the implementation of ISO/IEC 17025 as part of laboratory quality initiatives will provide both, recognized laboratory in a medical and clinical application including professional benefits, and have important rule in the research and educational field, have an access to more agreements for testing and improved national and global reputation. In the same time constantly to expand data quality and laboratory effectiveness. This will also permit to reach the agreement of the trends of implementation good laboratory under umbrella of international standards like ISO 17025 in radiopharmaceutical and radiochemical laboratories explained as a need of expanding of "good scientific practice".



The accreditation process of the laboratories according Standard MKC EN ISO/IEC 17025 is also applied for Radiopharmacy and Radiochemistry. We are expecting that our Laboratory of Radiopharmacy will finish the first step of accreditation until June 2016 and be able to continue on the same road of good recognized work following already accepted standards and to have full access and confidentiality to the national and international research and clinical activities.

### **Keywords**

Accreditation, Laboratory of Radiopharmacy, MKC EN ISO/IEC 17025.