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

www.ugd.edu.mk
## INTERNATIONAL SYMPOSIUM AT FACULTY OF MEDICAL SCIENCES
“Current achievements and future perspectives in medical and biomedical research”

### SCIENTIFIC PROGRAM
November 24, 2015 - Stip

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:00</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00 – 9:15</td>
<td>Rector / Vice rector/Dean</td>
</tr>
</tbody>
</table>

**SESSION 1**

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15 – 9:35</td>
<td>Ass. Marija Darkovska Serafimovska</td>
<td>Macedonian agency of drug and medical devices, Director</td>
</tr>
<tr>
<td></td>
<td>University Goce Delcev Stip</td>
<td>Republic of Macedonia</td>
</tr>
<tr>
<td></td>
<td><strong>Step forward of Macedonian agency for medicines and medical devices,</strong></td>
<td><strong>establishment and strategic plan for development</strong></td>
</tr>
<tr>
<td>9:35 – 9:55</td>
<td>Assoc. Prof. Zorica Arsovksa Sarafinovska</td>
<td>Institute of Public Health of the Republic of Macedonia, Skopje,</td>
</tr>
<tr>
<td></td>
<td>University Goce Delcev Stip</td>
<td>Republic of Macedonia</td>
</tr>
<tr>
<td></td>
<td><strong>Adherence to Therapy: A Modern Pharmacotherapeutic Approach</strong></td>
<td></td>
</tr>
<tr>
<td>9:55 – 10:15</td>
<td>Prof. Biljana Gjorgjeska</td>
<td>University Goce Delcev Stip</td>
</tr>
<tr>
<td></td>
<td>Republic of Macedonia</td>
<td><strong>Use of disinfectants and antiseptics in selected health institutions in Republic of Macedonia</strong></td>
</tr>
<tr>
<td>10:15 – 10:35</td>
<td>Assoc. Prof. Bistra Angelovska</td>
<td>University Goce Delcev Stip</td>
</tr>
<tr>
<td></td>
<td>President of Pharmaceutical Chamber of Macedonia. Republic of Macedonia</td>
<td><strong>Code of Ethics for Pharmacists – Pharmaceutical Chamber of Macedonia</strong></td>
</tr>
</tbody>
</table>

10:40 – 11:10 Coffee break  

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:10 – 11:50</td>
<td>Prof. Neven Zarkovic</td>
<td><strong>4-Hydroxynonenal – major bioactive marker of lipid peroxidation</strong></td>
</tr>
<tr>
<td></td>
<td>Rudjer Boskovic Institute, Croatia</td>
<td></td>
</tr>
<tr>
<td>11:50 – 12:10</td>
<td>Assoc. Prof. Tatjana Ruskovska</td>
<td>University Goce Delcev Stip Republic of Macedonia</td>
</tr>
<tr>
<td></td>
<td>Nicotinamide adenine dinucleotide biosynthesis and consumption in dysfunctional white adipocytes</td>
<td>New insights into the chemistry and functions of Coenzyme Q</td>
</tr>
<tr>
<td>12:10 – 12:30</td>
<td>Prof. Rubin Gulaboski</td>
<td>University Goce Delcev Stip Republic of Macedonia</td>
</tr>
<tr>
<td></td>
<td>Genetically modified systems to study muscular dystrophies</td>
<td></td>
</tr>
<tr>
<td>12:30 – 12:50</td>
<td>Assoc. Prof. Darko Bosnakovski</td>
<td>University Goce Delcev Stip</td>
</tr>
<tr>
<td></td>
<td>Republic of Macedonia</td>
<td><strong>Poster presentation</strong></td>
</tr>
</tbody>
</table>

12:50 – 14:00 Coffee break  

**Poster presentation**
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

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
EDITOR IN CHIEF
Assoc. Prof. Darko Bosnakovski, University “Goce Delcev” Stip

INTERNATIONAL EDITORIAL BOARD
Prof. Rubin Gulaboski, University “Goce Delcev” Stip
Prof. Emillija Janevik Ivanovska, University “Goce Delcev” Stip
Assoc. Prof. Bistra Angelovska, University “Goce Delcev” Stip
Assoc. Prof. Tatjana Ruskovska, University “Goce Delcev” Stip
Prof. Milka Zdravkovska, University “Goce Delcev” Stip
Assoc. Prof. Cena Dimova, University “Goce Delcev” Stip
Prof. Biljana Gjorgjeska, University “Goce Delcev” Stip
Prof. Dr. Guenka Petrova, Medical University in Sofia, Bulgaria
Prof. Angel Galabov, Bulgarian Academy of Science, Bulgaria
Prof. Dr. Jörg Babin-Ebell, University of Marburg, Germany
Prof. Dr. Günter Niklewski, Paracelsus Medical University, Nuremberg, Germany
Prof. Ivan Bogeski, Saarland University, Germany
Prof. Markus Hoth, Saarland University, Germany
Peter Bossew, German Federal Office for Radiation Protection, Berlin, Germany
Assoc. Prof. Aleksandar Mitic, Faculty of medicine, University of Nis, Serbia
Prof. Dr. Lazar Ranin, University of Belgrade, School of medicine, Serbia
Prof. Dragan Petrovic, Faculty of Medicine, University of Nis, Serbia
Prof. Dr. Tatjana Vukosavljević-Gvozden, University of Belgrade, Belgrade, Serbia
Zora S. Zunic, University of Belgrade, Institute of Nuclear Sciences Vinča, Belgrade, Serbia
Prof. Teodor Traistaru, “Carol Davila” University of medicine and pharmacy, Bucharest, Romania
Prof. Dr. Alexandru Eugen Petre, “Carol Davila” University of medicine and pharmacy, Bucharest, Romania
Prof. Lia Rimondini, Università del Piemonte Orientale, Novara, Italy
Prof. Neven Zarkovic, “Rudjer Boskovic Institute”, Zagreb, Croatia
Prof. Asia Celebic, University of Zagreb, Croatia
Dr. sc. Milena Jadrivić-Mladar-Takač, Faculty of Pharmacy and Biochemistry, University of Zagreb, Croatia,
Prof. Fernanda Borges, University of Porto, Portugal
Jadwiga Mazur, Institute of Nuclear Physics Krakow, Poland
Prof. Istvan Szialard, University of Pec Medical School, Hungary
Prof. Adriano Duatti, University of Ferrara, Ferrara, Italy
Prof. Neil G. Hartman, Purdue University, USA

Prof. Kara Duncan Weatherman, Purdue University College of Pharmacy, West Lafayette, USA
Prof. David Bernlohr, Department of Biochemistry, Molecular Biology and Biophysics, University of Minnesota - Twin Cities, USA
Prof. Meera Venkatesh, International Atomic Energy Agency, IAEA, Vienna, Austria
Prof. Lajos Balogh, Faculty of Veterinary Medicine and Department of Isotopes Applications NIIRR, Budapest, Hungary
Prof. Joao Osso Jr, International Atomic Energy Agency, IAEA, Vienna, Austria
Dr. Uday Bhonsle, International Atomic Energy Agency, IAEA, Vienna, Austria

Prof. Remo Guerrini, University of Ferrara Italy
Prof. Enzo Palmieri, University of Padua, Italy
Prof. Jean-Noel Talbot, AP-HP and University Pierre et Marie Curie, France
Prof. Philip Elsinga, University Medical Center Groningen, Netherlands
Dr. Sergei Nazarenko, North Estonia Medical Centre, Estonia
Prof. Ana Marusic, University of Split School of Medicine, Croatia
Prof. Ureljia Rodin, University of Zagreb Medical School, Croatia,
Ahmed Novo, AKAZ, Bosnia and Herzegovina

LOCAL EDITORIAL BOARD
Prof. Lence Miloseva, University “Goce Delcev” Stip
Prof. Gorgi Sumanov, University “Goce Delcev” Stip
Assoc. Prof. Ivona Kovacevksa, University “Goce Delcev” Stip
Assoc. Prof. Vaso Taleski, University “Goce Delcev” Stip
Assoc. Prof. Zdenka Stojanovska, University “Goce Delcev” Stip
Ass. Prof. Svetlana Jovevska, University “Goce Delcev” Stip
Ass. Prof. Nevenka Velickova, University “Goce Delcev” Stip
Ass. Prof. Velo Markovski, University “Goce Delcev” Stip
Ass. Prof. Kiro Papakoca, University “Goce Delcev” Stip
Ass. Prof. Lence Nikolovska, University “Goce Delcev” Stip
Ass. Prof. Elena Drakalska, University “Goce Delcev” Stip
Ass. Prof. Mire Spasov, University “Goce Delcev” Stip
Ass. Prof. Darinka Gorgieva Ackova, University “Goce Delcev” Stip
Ass. Prof. Katarina Smilkov, University “Goce Delcev” Stip

EDITORIAL STAFF
Milkica Janeva
Andonela Janeva
Tanja Janeva
Spase Stojanov
Mihail Aleksandrov
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.
INTERNATIONAL SYMPOSIUM AT FACULTY OF MEDICAL SCIENCES

“Current achievements and future perspectives in medical and biomedical research”

November 24, 2015 – Stip

ORAL PRESENTATIONS

1. Step forward of Macedonian Agency for medicines and medical devices. Establishment and strategic plan for development
   Author: Marija Darkovska- Serafimovska

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
   Authors: Prof. Tatjana Ruskovska, David Bernlohr

7. New insights into the chemistry and functions of Coenzyme Q
   Authors: Rubin Gulaboski, Valentin Mirceski, Ivan Bogeski, Sasa Mitrev, Kokoskarova Pavlinka, Velo Markovski, Reinhard Kappl, Markus Hoth

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
    Author: Elizabeta Zisovska

11. The cytokinesis-blocked micronucleus assay: Good choice for detection and evaluation of genotoxicity in human cells
    Authors: Misko Milev, Velickova N., Petrova B., Gorgieva P., Nedeljkovic B.,

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
    Authors: Vaso Taleski, Darko Bosnakovski, Milka Zdravkovska, Velo Markoski, Zdenka Stojanovska, Svetlana Jovevska

15. The role of molecular cocrystals in drug development
    Author: Aleksandar Cvetkovski

16. Drug development based on radiolabeled antibodies
    Author: Emilija Janevik-Ivanovska
1. Correlation between dynamic balance and gait parameters in patients with ischemic stroke in the chronic period
   Authors: Danche Vasileva, Daniela Lubenova, Marija Mihova, Ivan Maznev, Lence Nikolovska, Zhu Jihe;

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, Dance 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 vertebrobasilar system stroke
   Authors: Milena Nikolova, Antoaneta Dimitrova, Danche Vasileva, Daniela Lubenova, Kristin Petrova Grigorova;

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;

9. Cognitive behavioral program in treating insomnia among elderly patients
   Authors: Kneginja Richter, Lence Miloseva, Guenter Niklewski, Anja Piehl;

10. Regulations and legal aspects in management of medical waste
    Authors: Biljana Shikoska, Cena Dimova, Gjorgi Schumanov;

11. Control of the psychiatric disorders in the Republic of Macedonia
    Authors: Leonid Ramov, Velo Markoski;

12. Monitoring of the renal function in Indometacin treated patients with rheumatoid arthritis
    Authors: Drita Yzeiri Havziu, M.Hiljadnikova-Bajro, T. Kadifkova Panovska;

13. Incidence of breast cancer in Macedonia
    Authors: Dijana Stojanova, Velo Markoski;

14. HPV virus as a cause of cancer of the cervix in R.Macedonia
    Authors: Stefanija 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, Saso 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 β-thalassemia in the region of Strumica  
*Authors: Silvana Sinokapovska, Cena Dimova;*

21. Lymphoepithelioma: A case report  
*Authors: Vase Stojcheska, Rade Filipovski, Dobri Stoimenov, Nikica Atanasova, Goran Karaivanov, Ana Doneva, Irena Shulevska, Silvana Kraleva;*

22. F-ra Capitulum Radii L.Dex. – A Case report  
*Authors: Svetlana Jovevska, M.Idrizovikj;*

23. Patient with intracranial hemorrhage and arteriovenous malformation detected with transcranial color duplex sonography – case report  
*Authors: Elena Simeonovska Joveva, Marija Karakolevska-Ilova, Aleksandar Serafimov, Lidija Petrovska, Anita Arsovska;*

24. Hereditary supracondylar spur of the humerus: Case report  
*Authors: Strahil Todorov, Christian Lozanoski, George Zafiroski;*

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 Korunovska Stevkovska, Biljana Kapusevska, Nikola Gigovski, Aneta Mijoska, Katerina Zlatanovska, Cvetanka Bajraktarova Mishevska;*

28. Alveolar socket preservation and shaping using temporary prosthetic construction – cases presentation  
*Authors: Nikola K. Gigovski, Vesna Korunovska- Stevkoska, Emilija Bajraktarova, Aneta Mijoska, Ana Radeska-Panovska, Ana Gigovska;*

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 iotn (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  
*Authors: Darko Kochovski, Verica Toneva, Cena Dimova;*

33. Poor oral hygiene and show of caries in 12 year old children  
*Author: Sanja Naskova;*

34. Implant-prosthetic therapy failure in smoker and nonsmoker patients  
*Authors: Aneta Mijoska, Mirjana Popovska, Biljana Kapusevska, Nikola Gigovski, Vesna Korunovska- Stevkoska, Emilija Bajraktarova, Katerina Zlatanovska;*

35. Oral surgery treatment in the patients with combination syndrome  
*Authors: Vesna Korunovska-Stevkovska, Katerina Zlatanovska, Nikolka Gigovski, Žaklina Menceva, Julijana Nikolovska, Emilija Bajraktarova-Valjakova, Aneta Mijoska;*

36. Iatrogenic mistakes, cause for a failure at surgical treatment of a chronic periapical processes  
*Authors: Sarita Kadrova, Cena Dimova;*

37. Evaluation of Different Preparation of Artificial Teeth and Acrylate Prosthetic Base  
*Authors: Pavle Apostoloski, Cena Dimova, Katerina Zlatanovska, Julija Zarkova;*
38. Analysis of the dimensional stability of elastomeric silicone impression materials
Authors: Galaba Veresa, Cena Dimova, Julijana Miloseva;

39. Use of gypsum into working everyday in dental technician
Authors: Hadis Arslanov, Cena Dimova, Julija Vladikova, Pavle Apostoloski;

40. Mobile dental NOG-types used in working dental models
Authors: Julija Vladikova, Cena Dimova, Hadis Arslanov, Pavle Apostoloski;

41. Determining normal tissue toxicity of non-radioactively Lu/Y-labeled rituximab-conjugates in rat animal model
Authors: Darinka Gjorgieva Ackova, Katarina Smilkov, Icko Gjorgoski, Emilia Janevik-Ivanovska;

42. Genetically Engineered Mouse Models For Human Pancreatic Cancer: A Review Of The KC, KPC And iKRas*P53* Models
Authors: David Mwanza Wanjeh, Joel Munene Muchira, Aschalew Alemu Marie, Darko Bosnakovski;

43. Mouse Models For Human Prostate Cancer: Xenograft Vs Genetically Engineered Mouse Model
Authors: Aschalew Alemu Marie, Joel Munene Muchira, David Mwanza Wanjeh, Darko Bosnakovski;

44. HER2 Transgenic Mouse Models: A Way To HER2+ Breast Cancer Targeted Therapy
Authors: Joel Munene Muchira, David Mwanza Wanjeh, Aschalew Alemu Marie, Darko Bosnakovski;

45. Types of scaffolds and thier application in bone tissue engineering
Authors: Milena Volcheva, Darko Bosnakovski;

46. Significance of preparation of tissue samples for electron microscopy for observation and diagnosis
Authors: Jovanka Laskova, Gordana Petrusevska, Darko Bosnakovski;

47. Design and characterization of nanoparticles as platforms for delivery of curcumin
Authors: Elena Drakalaska, Denitsa Momkova, Stanislav Rangelov, Nikolay Lambov;

48. Freeze-drying approach to enhance antibody stability
Authors: Katarina Smilkov, Darinka Gjorgieva Ackova, Emilia Janevik-Ivanovska;

49. An overview of phytosomes as a novel herbal drug delivery system
Authors: Emilija Apostolova, Brankica Spaseska, Maja Simonoska Crcaervska, Maja Glavash Dodov, Renata Slaveska Raichki;

50. Determination of active pharmaceutical ingredient – chloropyramine in dragées
Authors: Vesna Kostik, Biljana Gjorgjeska, Sofija Petkova;

51. Comparison of volatile aroma compounds between cultivated and spontaneous flowering stems of Sideritis scardica Griseb. from R. Macedoni
Authors: Bujar Qazimi, Gjoshe Stefkov, Marija Karapandzova, Ivana Cvetkovikj, Svetlana Kulevanova;

52. Bioactive compounds of cold-pressed oil from the seeds of Gojy Berry (Lycium barbarum)
Author: Sanja Kostadinov Velickovska;

53. Development and validation of HPLC method for determination of flavonoids in herbal preparations
Authors: Tanja Janeva, Zorica Arsova-Sarafinovska;

54. Atomic emission spectrometry with inductively coupled plasma (ICP-AES) analysis of trace elements in Camellia sinensis teas
Authors: Dragica Doneva, Trajce Stafilov, Zorica Arsova-Sarafinovska, Katerina Starkoska, Maja Shishovska, Katerina Bačeva Andonovska;

55. Determination of trace elements analyzed by atomic emission spectrometry with inductively coupled plasma (ICP-AES) in Matricaria chamomilla L. teas present on macedonian market
Authors: Dragica Doneva, Trajce Stafilov;

56. Human health risks from heavy metals via consumption of contaminated food
Authors: Biljana Balabanova, Rubin Gulaboski;
57. Development of an ultrasonic method for effective extraction of capsaicin as a potent bioactive compound
Authors: Viktorija Maksimova, Liljana Koleva Gudeva, Blaga Radovanovic, Rubin Gulaboski;

58. Electrochemical analysis of the properties of benzene-1,2,4-triol
Authors: Milkica Janeva, Rubin Gulaboski;

59. Comparison of the procedure for registration of medicines in the European Union and the Republic of Macedonia
Authors: Sofija Petkovska, Danica Zahkova, Biljana Gjorgjeska;

60. Pharmacoeconomic evaluation of the antibiotic prophylaxis in orthopedic surgeries
Authors: Dijana Atanasova, Bistra Angelovska, Biljana Lazarova;

61. Therapeutic approach in the treatment of benign prostatic hyperplasia
Authors: Rozeta Aceva, Zorica Arsova – Sarafinovska;

62. Oxidative stress, aging and antioxidants
Authors: Viktorija Trajkoska, Zorica Arsova Sarafinovska;

63. Oxidative stress, oxidative DNA damage and prostate cancer
Authors: Evgenija Nedelkoska, Zorica Arsova-Sarafinovska;

64. RNA interference (RNAi) mechanism as a basis for future successful treatment of chronic hepatitis B infection
Authors: Ana Nikolova, Darko Bosnakovski;

65. Anti-cancer target therapy based on drugs conjugated to hyaluronic acid
Authors: Marija Zafirova, Darko Bosnakovski;

66. Cancer specific conjugated monoclonal antibodies for anticancer therapy
Authors: Daniela Todosiova, Darko Bosnakovski, Emilia Janevik Ivanovska;

67. Accreditation of the Laboratory of Radiopharmacy – requested requirements or need of challenge
Authors: Apostolova Paulina, Delipeteva Katarina, Smilkov Katarina, Gjorgieva Ackova Darinka, Sterjova Marija, Janevik Ivanovska Emilia;

68. Quality control of PET radiopharmaceuticals, with reference to its specifics vs quality control of conventional pharmaceuticals
Authors: Filip Jolevski, Maja Velickovska, Maja Chochevska, Marija Atanasova, Katerina Kolevska, Emilia Janevik-Ivanovska;

69. Production of [11C] Choline in The University Institute for PET – new perspective in diagnostics of prostate malignancy in R. of Macedonia
Authors: Katerina Kolevska, Maja Chochevska, Marija Atanasova, Katerina Kolevska, Emilia Janevik-Ivanovska;

70. PET radiopharmaceuticals in the diagnosis of neurological diseases
Authors: Marija Pandeva, Emilia Janevik-Ivanovska;

71. Achievements and perspectives in formulation of stable immunoconjugate of the HER2-targeting trastuzumab – potential for rapid labelling with Gallium-68
Authors: Marija Sterjova, Predrag Dzodic, Katarina Smilkov, Darinka Gorgieva-Ackova, Emilia Janevik-Ivanovska
INTERNATIONAL SYMPOSIUM AT FACULTY OF MEDICAL SCIENCES

“Current achievements and future perspectives in medical and biomedical research”

BOOK OF ABSTRACTS

November 24, 2015 – Stip
Contents

ORAL PRESENTATIONS ................................................................. 14
Step forward of Macedonian Agency for medicines and medical devices ................................................................. 14
Establishment and strategic plan for development ........................................................................................................ 15
Adherence to Therapy: A Modern Pharmacotherapeutic Approach .................................................................................. 16
Use of disinfectants and antiseptics in selected health institutions in Republic of Macedonia ........................................... 18
Code of Ethics for Pharmacists – Pharmaceutical Chamber of Macedonia ................................................................. 19
4-Hydroxynonenal – major bioactive marker of lipid peroxidation .................................................................................. 20
Nicotinamide adenine dinucleotide biosynthesis and consumption in dysfunctional white adipocytes ....................... 21
New Insights into the Chemistry and Functions of Coenzyme Q .................................................................................. 22
Genetically modified systems to study muscular dystrophies ......................................................................................... 23
Counteracting microbial biofilm formation onto dental materials .................................................................................. 24
The endless potential of the umbilical cord blood for investigation, research and treatment ........................................... 25
The cytokerinosis-blocked micronucleus assay: Good choice for detection and evaluation of genotoxicity in human cells .......................................................................................................................... 27
Multiple predictive model for clinical and subclinical depression in adolescence .......................................................... 28
Molecular Imaging and therapy with radionuclides of prostate cancer ........................................................................ 29
Where Nanotechnology and Nanomedicine meet – Applications and Potential Risks ................................................... 31
The role of molecular cocrytals in drug development ................................................................................................. 33
Drug development based on radiolabeled antibodies ................................................................................................. 34
POSTER PRESENTATIONS ............................................................... 35
Correlation between dynamic balance and gait parameters in patients with ischemic stroke in the chronic period ........ 36
Effect of kinesitherapy on physical activity in patient with Guillain-Barré syndrome .................................................. 37
Case Report: Oligoasthenoteratozoospermia, treatment with acupuncture................................................................. 38
Treatment of cervical spondylosis with acupuncture ................................................................................................. 38
Effect of kinesitherapy on static and dynamic balance in patient after vertebo-basal system stroke ......................... 41
Malignant pleural effusions in lung cancer: the condition during the disease ............................................................. 42
Systemic fungal infections in hematological malignancies .......................................................................................... 44
Morbidity and mortality of malignant neoplasms in Macedonia ................................................................................ 45
Cognitive behavioral program in treating insomnia among elderly patients ............................................................. 46
Regulations and legal aspects in management of medical waste .................................................................................. 47
Control of the psychiatric disorders in the Republic of Macedonia ........................................................................ 49
Monitoring of the renal function in Indometacin treated patients with rheumatoid arthritis ........................................ 50
Incidence of breast cancer in Macedonia .................................................................................................................. 51
HPV virus as a cause of cancer of the cervix in R. Macedonia ...................................................................................... 52
Analysis of the Pap test results by age groups in the area of Kriva Palanka ................................................................. 53
Giant rhinophyma treated by excision and full thickness skin grafting ................................................................... 55
Incidence of patients with chronic renal failure in Skopje .......................................................................................... 56
Calculation of effective dose to family members of patients with thyroid diseases .................................................... 57
Contemporary Microbiological Diagnostic Tests for Rapid Identification and Detection of Resistance of Mycobacterium tuberculosis ............................................................................................................. 59
Analysis of clinical features and complications in patients with β-thalassemia in the region of Strumica.................. 60
Lymphoepithelioma: A case report .......................................................................................................................... 62
F-ra Capitullum Radii L. Dex. – A Case report ............................................................................................................ 63
Patient with intracranial hemorrhage and arteriovenous malformation detected with transcranial color duplex sonography – case report ............................................................................................................. 64
Hereditary supracondylar spur of the humerus: Case report ............................................................................................ 65
Prosthetic rehabilitation in patient with advanced degree of functional disorders (case report) .................................. 67
Marginal Implants Bone Loss – a Case Report ............................................................................................................... 68
Ectodermal Dysplasia, a Case Report: Challenge for Prosthodontic Solution ............................................................ 69
Alveolar socket preservation and shaping using temporary prosthetic construction – cases presentation...71
Porcelain veneers produced by refractory die method.................................................................72
Correlation of Two Different Local Hemostatic Modalities in Oral Surgery Patients with
Oral Anticoagulants.........................................................................................................................73
Assessment of orthodontic treatment need among school children by using ion
(index of orthodontic treatment need) ............................................................................................75
Oral Hygiene Level Maintenance among Dental Medicine Students ...........................................76
Poor oral hygiene and show of caries in 12 year old children.....................................................77
Implant-prosthetic therapy failure in smoker and nonsmoker patients ........................................78
Oral surgery treatment in the patients with combination syndrome............................................79
Iatrogenic mistakes, cause for a failure at surgical treatment of a chronic periapical processes...80
Evaluation of Different Preparation of Artificial Teeth and Acrylate Prosthetic Base ................81
Analysis of the dimensional stability of elastomeric silicone impression materials ....................82
Use of Gypsum Into Working Everyday in Dental Technician.....................................................84
Mobile dental NOG types used in working dental models............................................................85
Determining normal tissue toxicity of non-radioactively Lu/Y-labeled rituximab-conjugates in
rat animal model............................................................................................................................86
Genetically Engineered Mouse Models For Human Pancreatic Cancer: A Review Of The KC, KPC
And iKras*P53* Models..................................................................................................................87
Mouse Models For Human Prostate Cancer: Xenograft Vs Genetically Engineered Mouse Model ...88
HER2 Transgenic Mouse Models: A Way To HER2+ Breast Cancer Targeted Therapy ................89
Types of scaffolds and their application in bone tissue engineering .............................................90
Significance of preparation of tissue samples for electron microscopy for observation and diagnosis ......91
Design and characterization of nanoparticles as platforms for delivery of curcumin .........................93
Freeze-drying approach to enhance antibody stability.................................................................94
An overview of phytosomes as a novel herbal drug delivery system .........................................95
Determination of active pharmaceutical ingredient – chloropyramine in dragées .........................97
Comparison of volatile aroma compounds between cultivated and spontaneous flowering stems
of Sideritis scardica Griseb. from R. Macedonia.........................................................................98
Bioactive compounds of cold-pressed oil from the seeds of Goji Berry (Lycium barbarum) ..........99
Development and validation of HPLC method for determination of flavonoids in herbal preparations...100
Atomic emission spectrometry with inductively coupled plasma (ICP-AES) analysis of trace
elements in Camellia sinensis teas.................................................................................................101
Determination of trace elements analyzed by atomic emission spectrometry with inductively coupled
plasma (ICP-AES) in Matricaria chamomilla L. teas present on macedonian market ..................102
Human health risks from heavy metals via consumption of contaminated food..........................103
Development of an ultrasonic method for effective extraction of capsaicin as a potent bioactive
compound......................................................................................................................................104
Electrochemical analysis of the properties of benzene-1,2,4-triol ..............................................105
Comparison of the procedure for registration of medicines in the European Union and the
Republic of Macedonia..................................................................................................................106
Pharmacoconomic evaluation of the antibiotic prophylaxis in orthopedic surgeries ......................107
Therapeutic approach in the treatment of benign prostatic hyperplasia ......................................108
Oxidative stress, aging and antioxidants .....................................................................................109
Oxidative stress, oxidative DNA damage and prostate cancer.......................................................110
RNA interference (RNAi) mechanism as a basis for future successful treatment of chronic
hepatitis B infection.........................................................................................................................111
Anti-cancer target therapy based on drugs conjugated to hyaluronic acid.....................................112
Cancer-specific conjugated monoclonal antibodies for anticancer therapy...................................115
Accreditation of the Laboratory of Radiopharmacy – requested requirements or need of challenge ...117
Quality control of PET radiopharmaceuticals, with reference to its specifics vs quality control
of conventional pharmaceuticals.................................................................................................119
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of $^{11}$CCholine in The University Institute for PET – new perspective in diagnostics of prostate malignancy in R. of Macedonia</td>
<td>120</td>
</tr>
<tr>
<td>PET radiopharmaceuticals in the diagnosis of neurological diseases</td>
<td>122</td>
</tr>
<tr>
<td>Achievements and perspectives in formulation of stable immunoconjugate of the HER2-targeting trastuzumab – potential for rapid labelling with Gallium-68</td>
<td>123</td>
</tr>
</tbody>
</table>
Determination of active pharmaceutical ingredient – chloropyramine in dragées

Vesna Kostik\textsuperscript{1}, Biljana Gjorgjeska\textsuperscript{1}, Sofija Petkovska\textsuperscript{1}

\textsuperscript{1} Department of Pharmacy, Faculty of medical sciences, University “Goce Delcev”
Stip

Abstract

Chloropyramine is a first generation antihistamine drug approved in some Eastern European countries for the treatment of allergic conjunctivitis, allergic rhinitis, bronchial asthma, and other allergic conditions. Chloropyramine is known as a competitive reversible H1-receptor antagonist. By blocking the effects of histamine, the drug inhibits the vasodilatation, increased vascular permeability, and tissue oedema associated with histamine release in the tissue.

A simple gas chromatography method based on gas chromatography - mass detection technique (GC-MS) for the determination of chloropyramine active pharmaceutical ingredient (API) in dragées was developed and validated. Chromatographic separation was achieved on a fused silica ZB-5 capillary column (30 m x 0.25 mm i.d. x 0.25 µm film thickness). Acquisition was performed in selected ion monitoring mode (SIM) with target ion (58 m/z) and reference ions (71 m/z, 125 m/z). The method was validated in respect system suitability, specificity, linearity, range accuracy and precision, limit of detection (LOD), limit of quantification (LOQ), specificity, robustness and stability. The advantages of this method include simple sample treatment, short elution time (less than 15 min) and short analysis time (less than 25 min). The proposed method could be applicable for routine analysis in pharmaceutical analytical laboratories.

Keywords: active pharmaceutical ingredient, chloropyramine, gas chromatography-mass detection, dragées.