



2017 WORLD BIODISCOVERY CONGRESS

SCIENTIFIC PROGRAMME

17th - 19th July

FROM RESEARCH TO PRACTICE



VENUE: SOFIA UNIVERSITY "ST. KLIMENT OHRIDSKI", BULGARIA

17-18 JULY **AULA (CEREMONIAL HALL)**, 15 TZAR OSVOBODITEL BLVD., 1504 SOFIA
19 JULY **FACULTY OF BIOLOGY**, 8 DRAGAN TSANKOV BLVD., 1164 SOFIA



DAY 1 (MONDAY)

17 JULY

MORNING

9:00 AM – 10:00 AM
Registration and coffee

10:00 AM – 10:30 AM
Official opening

10:30 AM – 11:30 AM
Keynote lecture:
Targeting p53 in cancer therapy: reality or fantasy
Professor Sir David P Lane FRS
Chief Scientist, A*Star Singapore

11:30 AM – 12:00 AM
Questions & Answers and Congress photo

12:00 AM – 1:00 PM
LUNCH

AFTERNOON

Chairs: Prof Sir David Lane and Prof Nikolai Zhelev

1:00 PM – 2:00 PM

Plenary lecture:
New Generation technologies in drug discovery and development

Nikolai Zhelev

Abertay University, Dundee, Scotland, UK

2:00 PM – 2:30 PM

Regulation of DAPK expression by sumo pathway.

Yao Lin, Qing-shui Wang, Xiuli Zhang, Ling Chen.

College of Life Sciences Fujian Normal University, China

2:30 PM – 3:00 PM

Perivascular adipose tissue as regulator of the force of artery contractions in health and disease.

Hristo Gagov¹, Radoslava Emilova², Daniela Dimitrova³, Mitko Mladenov⁴, Rudolf Schuber⁵.

¹Faculty of Biology, Sofia University St. Kliment Ohridski, Sofia, Bulgaria.

²National Centre of Infectious and Parasitic Diseases, Department of Immunology, Sofia, Bulgaria.

³Bulgarian Academy of Sciences, Institute of Biophysics and Biomedical Engineering, Sofia, Bulgaria.

⁴University of Skopje Sts. Cyril and Methodius, Faculty of Natural Sciences and Mathematics, Institute of Biology, Skopje, Macedonia.

⁵Ruprecht-Karls-University Heidelberg, Medical Faculty Mannheim, Department of Cardiovascular Physiology, Mannheim, Germany.



DAY 1 (CONTINUED)

17 JULY

AFTERNOON (CONT'D)

3:00 PM – 3:30 PM

Identification of the gene complexes that determine some individual characteristics of a person.

Irma Mosse, Alexander Kilchevsky, Alexander Gonchar, Maxim Amel'yanovich Nikita Sedlyar.

Institute of Genetics & Cytology, National Academy of Sciences, Minsk, Belarus.

3:30 PM – 4:00 PM

Application of safe-by-design approach for curing osteoporosis – a lock at the future.

Armine Grigoryan^{1 and 2}, Iliyan Kolev², Anelia Dimitrova³, Margarita D. Apostolova⁴

¹Department of General Biology and Pathological Physiology, Medical University, Pleven, Bulgaria.

²Medical and Biological Research Lab, Institute of Molecular Biology, Bulgarian Academy of Sciences, Sofia, Bulgaria.

³Department of Pharmaceutical Sciences, Medical University of Varna, Varna, Bulgaria.

⁴Department of General Biology and Pathological Physiology, Medical University, Pleven, Bulgaria.

4:00 PM – 4:30 PM

COFFEE BREAK

TECHNOLOGY SESSION

4:30 PM – 5:00 PM

Biophysical analysis of molecular interactions and enzymatic activity with switchSENSE®

Daisylea Paiva

Dynamic Biosensors GmbH, Planegg, Germany.

5:00 PM – 5:30 PM

Not Paper or digital records, but paper as digital records

Stephen Leiper

Onorach Clinical, Dundee, Scotland

5:30 PM – 6:00 PM

BioDiscovery: Advanced open access journal in life sciences and medicine

Iliyana Kuzmova,

BioDiscovery, Pensoft Publishers, Sofia, Bulgaria

POSTER SESSION

6:00 PM – 8:00 PM

Poster session and wine reception



DAY 2 (TUESDAY)

18 JULY

MORNING

Chair: Dr Iva Ugrinova

Plenary lectures:

9:00 AM – 10:00 AM

Development of genomic biotechnologies in Belarus.

Alexander Kilchevsky¹, Valentina Lemesh², Elena Sycheva²

¹National Academy of Sciences of Belarus.

²Institute of Genetics and Cytology of the National Academy of Sciences of Belarus.

10:00 AM – 10:30 AM

COFFEE BREAK

10:30 AM – 11:30 AM

CYC065, a novel, potent and selective inhibitor of CDK2/9 –mechanisms of action and anti-cancer activity

Daniella Zheleva

Cyclacel Pharmaceuticals Inc, Dundee, Scotland, UK

11:30 AM – 12:00 AM

Sigma 1 receptor modulators as a new weapon against multiple sclerosis

Simona Collina, Marta Rui, Giacomo Rossino, Serena Della Volpe, Daniela Rossi, Arianna Scuteri, Alessio Malacrida, Guido Cavaletti
University of Pavia, Pavia, Italy

12:00 AM – 1:00 PM

LUNCH

AFTERNOON

Chair: Prof Margarita D. Apostolova

1:00 PM – 1:30 PM

Plasmid DNA-releasing polymer matrices for effective tissue regeneration.

Jin Ho Lee

Hannam University, Daejeon, South Korea.

1:30 PM – 2:00 PM

Antibacterial activity of thin films TiO₂ doped with Ag and Cu on gracilicutes and firmicutes bacteria.

Dragomira Svetlozarova Stoyanova¹Iliana

Atanasova Ivanova¹ Orlin Iliev Angelov²

Todorka Gancheva Vladkova³

¹Department of General and Industrial Microbiology, Faculty of Biology, University "St. Kl. Ohridski", Sofia, Bulgaria.

²Central Laboratory of Solar Energy and New Energy Sources, Bulgarian Academy of Sciences, Sofia, Bulgaria.

³University of Chemical Technology and Metallurgy, Sofia, Bulgaria

2:00 PM – 2:30 PM

Two candidate genes for recurrent pregnancy loss and infertility: Could POM and ZP3 give us new diagnostic and therapeutic approach?

Fatma Silan

Faculty of Medicine, Canakkale 18 March University, Turkey



DAY 2 (CONTINUED)

18 JULY

AFTERNOON

2:30 PM – 3:00 PM

Idarubicin-ZHER2 conjugate as a new candidate for specific ablation of HER2-positive malignant cells: evaluation of induced immune response in BALB/c mice.

Mostafa Jamal¹, Leila Siavoshinia², Ghorban Mohammadzadeh², Mohammad Ali Ghaffari², Majid Zeinali³

¹Abadan School of Medical Sciences, Abadan, Iran.

Department of Biochemistry, Cellular and Molecular Research Center, Ahvaz

²Jundishapur University of medical science, Medical School, Ahvaz, Iran.

³Biotechnology Research Center, Research Institute of Petroleum Industry (RIPI), Tehran, Iran

3:00 PM – 3:30 PM

Tumor treating fields – new type of cancer therapy.

Nikolay Zyuzikov, Diane Ignacio, Ayinde Frederick.

The University of the West Indies, St Augustine, Trinidad and Tobago.

3:30 PM – 4:00 PM

Design, synthesis, biological evaluation, molecular docking and QSAR studies of acridone based derivatives as anticancer agents.

Mayur YC¹, Manikanta Murahari², Prashant S. Kharkar³, Nitin Lonikar⁴.

¹Department of Pharmaceutical Chemistry, SPP School of Pharmacy & Technology Management, SVKM's NMIMS, Mumbai 400 056, India

AFTERNOON (CONT'D)

²Department of Pharmaceutical Chemistry, SVKM's Dr. Bhanuben Nanavati College of Pharmacy, Mumbai 400 056, India.

³Department of Pharmaceutical Chemistry, Faculty of Pharmacy, M.S. Ramaiah University of Applied Sciences, Bangalore 560 054, India.

⁴Department of Pharmaceutical Chemistry, AME's V.L. College of Pharmacy, Raichur 584103, India.

4:00 PM – 4:30 PM

COFFEE BREAK

4:30 PM – 5:00 PM

Recent advances in the structure-guided research and development of antimicrobial therapeutics

Dimitar Trifonov, Tom Evers

National Research Tomsk State University, Tomsk, Russia

EVENING

8:00 PM – 11:00 PM

CONGRESS DINNER

Happy village restaurant, www.veseloselo.com



DAY 3 (WEDNESDAY)

19 JULY

MORNING

Chair: Professor Nikolai Zhelev

Plenary talks:

9:00 AM – 9:45 AM

Graduates for the future: curriculum design and the student perspective.

Janet Horrocks, Nikolai Zhelev, Yvette Wharton.

Abertay University, Dundee, Scotland

9:45 AM – 10:30 AM

Lifelong employability for the biosciences: teamwork approaches for embedding employability at Edinburgh Napier University.

Claire Garden, Clare Taylor, Janis MacCallum, Samantha Campbell Casey, Helen Wareing, Wendy Reid, Linda Gunn.

10:30 AM – 11:00 AM

COFFEE BREAK

11:00 AM – 12:00 AM

Round table: Teaching tomorrows graduates

12:00 AM – 1:00 PM

LUNCH

AFTERNOON

1:00 PM – 1:30 PM

Closing ceremony



POSTER SESSION

1 The effects of changes in composition and state of the lipids on erythrocytes' oxygen-transport function in pathological conditions associated with the development of hypoxia

Victor V. Revin, Natalia V. Gromova, Igor P. Grunyushkin, Elvira S. Revina Anastasiya Yu. Samonova, Ilya N. Solomadin, Alexander Yu. Tychkov.

Federal State Budgetary Educational Institution of Higher Education "National Research Ogarev Mordovia State University", Saransk, Russia

2 New mechanisms of perinatal hypoxia and perspectives of pathogenesis-oriented treatment

Larisa Balykova, Revin V.V, Ledyajkina L.V, Trofimov V.A, Vlasov A.P, Nazarova I.S. National Research Ogarev Mordovia State University, Saransk, Russia

3 Change in morphometric and oxygen-binding properties of erythrocytes in vascular diseases patients

Nadezhda V. Revina¹, Natalia V. Gromova¹, Elvira S. Revina¹, Ilya N. Solomadin¹, Alexander Yu. Tychkov¹, Victor V. Revin¹, Anastasiya N. Kukina¹, Inessa Ya. Moiseeva²

¹Federal State Budgetary Educational Institution of Higher Education "National Research Ogarev Mordovia State University", Saransk, 430005, Russia. ²Federal state-financed academic institution of higher education «Penza State University, Penza, 440026, Russia

4 PNA/DNA model to explore the glycolytic enzyme glucose 6-phosphate isomerase for DNA repair activity

Elitsa Boteva¹, Milena Tileva¹, Monika Pischetsrieder², Roumyana Mironova¹.

¹Institute of Molecular Biology, Bulgarian Academy of Sciences. ²Food Chemistry Unit, Department of Chemistry and Pharmacy, Emil Fischer Center, Friedrich-Alexander Universität Erlangen-Nürnberg, Erlangen, Germany

5 Innovative sterilization technology - bacterial inactivation by cold argon plasma

Yovana Todorova¹, Ivaylo Yotinov¹, Yana Topalova¹, Evgenia Benova², Mariana Atanasova², Todor Bogdanov², Plamena Marinova³

¹Sofia University, Faculty of Biology, 8 Dragan Tzankov Blvd., 1164 Sofia, Bulgaria. ²Sofia University, Faculty of Physics, 5 James Bourchier Blvd., 1164 Sofia, Bulgaria. ³Medical University Sofia, Faculty of Medicine, 2 Zdrave Str., 1431 Sofia, Bulgaria

6 Physiological effect of bacterial strains from genus bacillus applicable in organic farming

Dmitrii Semenovskij, Emiliyan Dzhustov, Teodora Georgieva, Rositsa Tropcheva, Yana Evstatieva, Dilyana Nikolova, Valentin Savov, Tsvetana Licheva.

Sofia University St. Kliment Ohridski, Faculty of Biology, 8 "Dragan Tsankov" str., 1164 Sofia, Bulgaria

7 Pilot assessment of cyanotoxins as potential risk factors for cancer in Bulgaria

Maya Petrova Stoyneva-Gärtner, Blagoy Angelov Uzunov, Petya Hristova Dimitrova.

Sofia University "St Kliment Ohridski", Faculty of Biology, Department of Botany

8 Testosterone as diamine oxidase activity regulator

Milena Mishonova, Hristo Gagov.

Sofia University St. Kliment Ohridski, Faculty of Biology

9 Antiviral activity of stachys thracica dav. extracts against human herpes virus type 1 and 2

Petya Angelova, Venelin Tsvetkov, Anton Hinkov, Daniel Todorov, Kalina Shishkova, Zhenya Yordanova, Veneta Kapchina-Toteva, Stoyan Shishkov.

Laboratory of Virology, Faculty of Biology, Sofia University "St. Kl. Ohridski



POSTER SESSION

10 Osteogenic, adipogenic and neurogenic differentiation of human adipose-derived mesenchymal stem cells before and after cryopreservation

Marina Hristova, Elena Hristova, Plamen Todorov, Kiril Lazov.

Institute of Biology and Immunology Affiliation of Reproduction "Acad. Kiril Bratanov"
Bulgarian Academy of Science Blvd. 73 "Tzarigradsko shose" 1113 Sofia, Bulgaria

11 Effect of vit.E, A, D3 addition in cryopreservation extenders and different volume of vials on quality of canine spermatozoa"

Kiril Lazov, Tsvetan Tsvetkov, Denica Daskalova.

Institute of Biology and Immunology Affiliation of Reproduction "Acad. Kiril Bratanov"
Bulgarian Academy of Science Blvd. 73 "Tzarigradsko shose" 1113 Sofia, Bulgaria

12 Comet assay – a sensitive tool for genotoxicity assessment of environmental stress in *Mytilus galloprovincialis* from the Bulgarian Black Sea coast

Bela Vasileva¹, Lachezar Yakimov², Borislava Kukurina¹, Milena Georgieva¹

George Miloshev¹, Nesho Chipev³.

¹Laboratory of Yeast Molecular Genetics, Institute of Molecular Biology "Roumen Tsanev", Bulgarian Academy of Sciences, "Acad. G. Bonchev" Str., Bl. 21, 1113 Sofia, Bulgaria. ²IBER, Institute of Biodiversity and Ecosystem Research, BAS, 2 Gagarin Str., 1113 Sofia, Bulgaria. ³IBER, Institute of Biodiversity and Ecosystem Research, BAS, 2 Gagarin Str., 1113 Sofia, Bulgaria

13 Genetic changes in natural *Taraxacum officinale* populations obtained under pollution stress

Borislava Kukurina, George Miloshev.

Laboratory of Yeast Molecular Genetics, Institute of Molecular Biology "Roumen Tsanev", Bulgarian Academy of Sciences, "Acad. G. Bonchev" Str., Bl. 21, 1113 Sofia, Bulgaria

14 HMGB1 stimulates the motility of non-small cell lung cancer cells via RAGE

Maria Petrova, Ivan Iliev, Iva Ugrinova.

Roumen Tsanev Institute of Molecular Biology, Bulgarian Academy of Sciences

15 The acidic tail of HMGB1 is important for HMGB1-dependent p53 activation

Maria Schröder, Jordana Todorova, Iva Ugrinova.

Roumen Tsanev Institute of Molecular Biology, Bulgarian Academy of Sciences

16 SRCAP chromatin remodelling complex in double-strand break repair

Petar Botev, *Anastas Gospodinov*.

Institute of Molecular Biology, Bulgarian Academy of Sciences

17 Mammalian RUVBL1 in DNA replication

Rossitsa Hristova, *Anastas Gospodinov*.

Institute of Molecular Biology, Bulgarian Academy of Sciences

18 Ultrananocrystalline diamond coated implants for enhanced osseointegration

Silviya R. Stateva¹, Daniel Merker², Cyril Popov², Margarita D. Apostolova¹.

¹Roumen Tsanev Institute of Molecular Biology, Bulgarian Academy of Sciences, Acad. G. Bonchev Str., Bl. 21, 1113 Sofia, Bulgaria. ²Institute of Nanostructure Technologies and Analytics, Center for Interdisciplinary Nanostructure Science and Technology, University of Kassel, Heinrich-Plett-Str. 40, 34132 Kassel, Germany

19 Validation of a novel HPLC-based serum thymidine kinase assay for breast cancer detection

Elena Kuzmanova, Marilena Spanou, Emma Leckie, Nikolai Zhelev

Abertay University, Dundee, Scotland, UK



POSTER SESSION

20 Cryogenic pretreatment of keratinous waste for enhanced methane production

Elena Kuzmanova, Joseph C. Akunna, Nikolai Zhelev
Abertay University, Dundee, Scotland, UK

21 A systems biology approach for modeling cell cycle pathways in normal and tumor cells for drug development

Nikolai Zhelev¹, Elena Kuzmanova¹, Vili Stoyanova², and Alexey Goltsov¹
¹Abertay University, Dundee, United Kingdom; ²Medical University Plovdiv, Plovdiv, Bulgaria

22 Can phthalates disrupt oocyte meiotic maturation in mouse model?

Forouzan Absalan
Abadan school of medical sciences, Abadan, Iran

23 Plasmid DNA-loaded polycaprolactone microspheres as bioactive bulking agent for soft tissue augmentation

Jin Ho Lee, Mi Ri Park, Tae Ho Kim, Se Heang Oh
Hannam University, Daejeon, South Korea

24 Transdifferentiation of mesenchymal stem cells into spermatogoneal stem cell by spermatogoneal stem cell extract

Ebrahim Kharazinejad¹, Keywan Mortezaee², Seyed Mehdi Sajjadi³, Mohammad Barbarestani⁴
¹Department of Anatomy, School of Medicine, Abadan University of Medical Sciences, Abadan, Iran. ²Department of Anatomy, School of Medicine, Kurdistan University of Medical Sciences, Sanandaj, Iran. ³Cellular and molecular research center, Birjand University of Medical Sciences, Birjand, Iranciencies, Sanandaj, Iran. ⁴Department of Anatomy, School of Medicine, Tehran University of Medical Sciences, Poursina Street, Tehran, Iran

25 Solid lipid nanoparticle enhances cytotoxicity of quercetin against MCF-7 human breast cancer cells

Firoozeh Niazvand, Layasadat Khorsandi, Mahmoud Orazizadeh, Mohammadreza Abbaspour, Esrafil Mansouri, Ali Khodadai.
Abadan University of Medical Sciences, Abadan, Iran

26 Curcumin-loaded PLGA nanoparticles effects on osteoarthritis in rats

Firoozeh Niazvand, Layasadat Khorsandi, Mahmoud Orazizadeh, Mohammadreza Abbaspour.
Abadan school of medical sciences, Abadan, Iran

27 Basal and PGF2 α -stimulated secretion of pro-inflammatory cytokines from 3T3-L1 adipocyte-like cells

B. Ilieva¹, E. Marinova², H. Gagov¹, R. Konakchieva¹
¹Sofia University St. Kliment Ohridski, Faculty of Biology, Sofia, Bulgaria,
²MC ReproBioMed Ltd., Sofia

28 A step forward in the identification of compounds interfering with the Embryonic Lethal Abnormal Vision (ELAV) protein - RNA complexes

Serena Della Volpe¹, Daniela Rossi¹, Francesca Vasile², Donatella Potenza², Marialaura Amadio¹, Alessia Pascale¹, Simona Collina¹
¹University of Pavia, Corso Str. Nuova, 65, 27100, Pavia, Italy
²University of Milan, Via Festa del Perdono, 7, 20122, Milano, Italy



POSTER SESSION

29 Synthesis of a drug discovery library for the identification of sigma receptors modulators

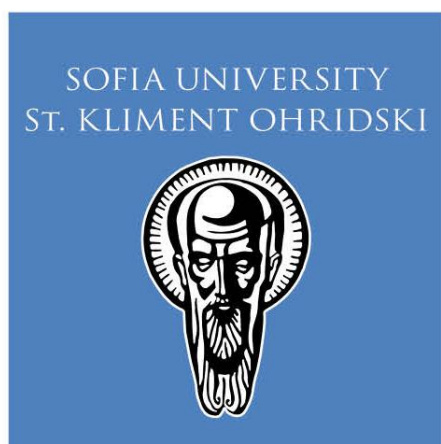
Giacomo Rossino, Marta Rui, Marcello Di Giacomo, Daniela Rossi, Simona Collina
University of Pavia, Corso Str. Nuova, 65, 27100, Pavia, Italy

30 Reproductive outcome following thawed embryo transfer in ovarian hyperstimulation syndrome management

Forouzan Absalan¹, Alireza Ghannadi², Marjaneh Kazerooni²
¹Abadan School of Medical Sciences, Abadan, Iran
²Shiraz- Human Assisted Reproductive Center, Shiraz, Iran



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