

PROGRAMME



CONGRESS

OF THE SERBIAN GENETIC SOCIETY

2019 | October
13–17

VRNJAČKA BANJA • SERBIA



SUNDAY October 13

from 14:00 Registration (hotel Fontana)

17:45-18:00 Opening ceremony

OPENING LECTURES

Moderators: Jelena Knežević-Vukčević, Milena Stevanović

18:00-18:30 **Natasa Przulj** "UNTANGLING BIOLOGICAL COMPLEXITY: FROM OMICS DATA TO NEW BIOMEDICAL KNOWLEDGE"

18:30-19:00 **Christine Patch** "GENETIC COUNSELLING IN THE ERA OF GENOMICS MEDICINE"

19:00-20:00 Welcome cocktail

MONDAY October 14

08:30-09:00 Registration (hotel Fontana)

PLENARY LECTURES

Moderators: Ander Matheu, Ivana Kavečan

09:00-09:30 **Ander Matheu** "UNDERSTANDING THE ROLE OF SOX STEM CELL GENES IN CANCER AND AGEING"

09:30-10:00 **Milena Stevanović** "SOX GENES: FOR BETTER OR FOR WORSE..."

session MEDICAL GENETICS

Moderators: Ander Matheu, Ivana Kavečan

Invited lectures

10:00-10:20 **Marija Stankovic** "INTERACTIONS OF GENETIC AND ENVIRONMENTAL FACTORS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE"

10:20-10:40 **Maja Zivkovic** "NEW INSIGHTS INTO REGULATORY GENETIC MAPS IN COMPLEX DISEASES: FROM 'GENE DESERTS' TO SUPER-ENHANCERS"

10:40-11:00 **Ivana Kavecan** "CLINICAL AND GENETIC ASPECTS OF OVERGROWTH SPECTRUM SYNDROMES"

11:00-11:20 **Marina Đurišić** "THE IMPORTANCE OF CORRECTLY REPORTING DIAGNOSTIC GENETIC TEST RESULTS"

11:20-11:40 Coffee break

Oral presentations

Moderators: Ander Matheu, Ivana Kavečan

- 11:40-11:50 **Branka Zukic** "PHARMACOGENOMIC PROFILING OF SERBIAN PATIENTS WITH PEDIATRIC ACUTE LYMPHOBLASTIC LEUKEMIA"
- 11:50-12:00 **Ivan Skadrić** "CYP450 FUNCTIONAL VARIANTS PANEL FOR POSTMORTEM GENETIC SCREENING IN SERBIAN POPULATION"
- 12:00-12:10 **Tatjana Damnjanović** "THE IMPLEMENTATION OF ARRAY-CGH TECHNOLOGY IN CLINICAL POSTNATAL TESTING IN SERBIAN POPULATION"
- 12:10-12:20 **Biljana Jekic** "ASSOCIATION OF THE MMP-2 rs2285053 CC AND TIMP-2 rs2277698 CT GENOTYPES COMBINATION WITH BONE EROSION IN PATIENTS WITH RHEUMATOID ARTHRITIS"
- 12:20-12:30 **Kristel Klaassen** "HYPERPHENYLALANINEMIA: FROM COMPLEX GENETICS TO COMPLEX PHENOTYPES"
- 12:30-12:40 **Nadja Nikolic** "GLUTATHIONE-S-TRANSFERASES POLYMORPHISMS COUPLED WITH INCREASED EXPRESSION OF PROINFLAMMATORY CYTOKINES PLAY A ROLE IN THE DEVELOPMENT OF PREECLAMPSIA IN SERBIAN WOMEN"
- 12:40-12:50 **Milan Obrenovic** "PREIMPLANTATION GENETIC SCREENING – PREVENTION OF ANEUPLOIDIES BEFORE IMPLANTATION"
- 12:50-13:00 **Jovan Pešović** "VARIANT REPEATS WITHIN DMPK EXPANSIONS AS GENETIC MODIFIER OF DM1 PHENOTYPE"
- 13:00-13:10 **Biljana Todorčić-Živanović** "TYROSINE KINASE DOMAIN MUTATIONS OF bcr-abl GENE IN THE PATIENTS WITH CHRONIC MYELOID LEUKEMIA RESISTANT TO FIRST LINE THERAPY"

13:15-13:30 Presentation of sponsor - N Analysis
"High resolution mass spectrometry drives cancer biomarker research"
Milan Ćosić, ANALYSIS DOO

13:30-14:30 Lunch & Poster viewing

PLENARY LECTURES

Moderators: Christine Patch, Ivana Novaković

- 14:30-15:00 **Olivera Miljanovic** "THE EFFECTIVENESS OF COMPREHENSIVE GENOMIC TESTING IN DIAGNOSTICS OF RARE GENOMIC DISEASES"
- 15:00-15:30 **Evangelia Eirini Tsermpini** "PRE-EMPTIVE PHARMACOGENOMICS IN PSYCHIATRY: WHERE DO WE STAND?"

session HUMAN OMICS VARIATION

Moderators: Christine Patch, Ivana Novaković

Invited lectures

- 15:30-15:50 **Sonja Pavlovic** "NEXT-GENERATION GENOMICS OF RARE DISEASES: ON THE ROAD TO NEW DIAGNOSTICS AND INNOVATIVE THERAPIES"
- 15:50-16:10 **Ana Krivokuca** "COMPLEXITIES OF VARIANT ANNOTATION USING NGS FOR DETECTING HEREDITARY BREAST AND OVARIAN CANCER PREDISPOSITION"
- 16:10-16:30 **Ivana Novakovic** "NEXT GENERATION SEQUENCING IN NEURODEGENERATIVE DISORDERS: OUR EXPERIENCE"
- 16:30-16:50 **Goran Čuturilo** "GENOMICS-BASED CLINICAL DISCOVERIES: A 5-YEAR EXPERIENCE IN A TERTIARY PEDIATRIC REFERRAL CENTRE"

16:50-17:10 **Coffee break**

Oral presentations

Moderators: Christine Patch, Ivana Novaković

- 17:10-17:20 **Rijad Konjhodžić** "MOLECULAR PROFILING OF COLORECTAL CANCER USING NEXT GENERATION SEQUENCING"
- 17:20-17:30 **Vladimir Gasic** "IMPORTANCE OF NEXT GENERATION SEQUENCING FOR DETECTION OF NOVEL PHARMACOGENOMIC MARKERS IN PEDIATRIC ACUTE LYMPHOBLASTIC LEUKEMIA"
- 17:30-17:40 **Marina Andjelkovic** "GENOMIC PROFILING AS A TOOL FOR DIFFERENTIAL DIAGNOSIS OF PATIENTS WITH PEDIATRIC LUNG DISEASES AND DISCOVERY OF NOVEL DISEASE-CAUSING GENES AND GENETIC VARIANTS"
- 17:40-17:50 **Anita Skakic** "GENOMIC PROFILING OF GLYCOGEN STORAGE DISEASES: FROM NGS METHOD TO THE CRISPR/CAS9 TECHNOLOGY"

PLENARY LECTURE

Moderator: Branka Vasiljević

- 18:00-18:30 **Donatella de Pascale** "MARINE ENVIRONMENT AS A SOURCE OF NEW MULTIACTIVITY PIGMENTS AND BIOACTIVE MOLECULES"
- 18:30-19:30 **POSTER SESSION 1** (sessions: Human omics variation and Medical genetics)
- 19:30-20:30 **Workshop 1: Personalized Medicine: Promise and Reality.**
Moderator: **Sonja Pavlović; Panelists: Natasa Przulj, Evangelia Eirini Tsermpini, Ivana Kavečan**
Introduction: Personalized medicine: Old Concept, New Achievements
Panel discussion topics: Personalized medicine - the best path forward?
Achievements and bottlenecks
Bioethical issues
Personalized medicine – where do we and our teams stand?

TUESDAY October 15

08:30-09:00 Registration (hotel Fontana)

PLENARY LECTURES

Moderators: Jelena Blagojević, Vesna Milankov

09:00-09:30 **Tomasz Grzybowski** "GENETIC PREDICTION OF BIOGEOGRAPHIC ANCESTRY WITHIN EUROPE"

09:30-10:00 **Vladimir Trifonov** "ORIGIN AND EVOLUTION OF VERTEBRATE SEX CHROMOSOMES"

session GENETIC DIVERSITY, PHYLOGENY AND CONSERVATION

Moderators: Jelena Blagojević, Vesna Milankov

Invited lectures

10:00-10:20 **Jasmina Ludoški** "THE UTILITY OF MOLECULAR MARKERS IN POPULATION AND CONSERVATION GENETICS IN DIPTERA"

10:20-10:40 **Vladimir M. Jovanović** "EVOLUTIONARY HISTORY AND PHYLOGEOGRAPHY OF GENUS *APODEMUS* (MURIDAE, RODENTIA)"

10:40-11:00 **Nemanja Gojković** "THE FIRST INTEGRATIVE ASSESSMENT OF THE INVASIVE POPULATION OF *AEDES ALBOPICTUS* (DIPTERA: CULICIDAE) FROM THE CENTRAL BALKANS"

Oral presentations

11:00-11:10 **Lea Kurtek** "GENETIC VARIABILITY OF *CHEILOSIA URBANA* (DIPTERA, SYRPHIDAE)"

11:10-11:20 **Jelena M. Aleksić** "THE EXTENT OF RECENT MATERIAL TRANSFERS AND PAST DEMOGRAPHIC HISTORY IN NORWAY SPRUCE INFERRED FROM GENOMIC DATA"

11:20-11:40 Coffee break

11:40-11:50 **Miloš Stevanović** "MULTILOCUS SEQUENCE CHARACTERIZATION OF *GNOMONIOPSIS IDAEICOLA*"

11:50-12:00 **Milan Mataruga** "DYNAMIC CONSERVATION OF *PICEA OMORIKA* POPULATIONS IN THE REPUBLIC OF SRPSKA, BOSNIA AND HERZEGOVINA"

12:00-12:10 **Ivana Budinski** "WAS THE BALKAN PENINSULA A GLACIAL REFUGIUM FOR THE MEDITERRANEAN HORSESHOE BAT, *RHINOLOPHUS EURYALE* (BLASIUS, 1853)?"

PLENARY LECTURE

Moderators: Milorad Kojić, Michael Lisby

12:10-12:40 **Michael Lisby** "DISCOVERY OF THE HUMAN ZGRF1 DNA REPAIR HELICASE"

session MISCELLANEOUS TOPICS

Moderators: Milorad Kojić, Michael Lisby

Invited lectures

12:40-13:00 **Giuliano Degrassi** "ENZYMATIC PRE-TREATMENT OF BIOMASS FOR IMPROVEMENT OF BIOGAS PRODUCTION"

13:00-13:20 **Gordana Timotijević** "CRISPR/Cas9 MUTAGENESIS AS A TOOL TO GAIN INSIGHT INTO THE ROLES OF HIGHLY HOMOLOGOUS PLANT DSS1 GENES"

13:30-14:30 Lunch & Poster viewing

PLENARY LECTURES

Moderators: Domagoj Šimić, Goran Bekavac

14:30-15:00 **Johann Vollmann** "EFFECTS OF THE Dt2 GENE FOR STEM TERMINATION ON AGRONOMIC AND SEED COMPOSITION TRAITS OF SOYBEAN"

15:00-15:30 **Vlatko Galic** "GWAS FOR BIOMASS RESPONSES TO WATER WITHHOLDING IN GBS GENOTYPED, FREELY AVAILABLE ACCESSIONS OF MAIZE"

session BREEDING FOR CHANGING ENVIRONMENTS

Moderators: Goran Bekavac, Nenad Delić

Invited lectures

15:30-15:50 **Dragan Perović** "USE OF BARLEY AND WHEAT REFERENCE SEQUENCES: DOWNSTREAM APPLICATIONS IN BREEDING, GENE ISOLATION, GWAS AND EVOLUTION"

15:50-16:20 **Vasilije Isajev** "UTILIZATION AND TRANSFER OF FOREST GENETIC RESOURCES BY INTRODUCTION OF ALIEN SPECIES"

16:20-16:50 **Jelena Srdić** "BREEDING OF MAIZE HYBRIDS WITH SPECIFIC TRAITS FOR ENHANCED AGRONOMIC AND NUTRITIONAL PROPERTIES"

16:50-17:10 **Vuk Đorđević** "GENOMIC PREDICTION – NEW TOOL IN SOYBEAN BREEDING"

17:10-17:30 Coffee break

Oral presentations

17:30-17:40 **Aleksandra Radanović** "MOLECULAR MARKERS FOR DETECTION OF Rf1 GENE DEVELOPED FROM BAC-END SEQUENCES IN SUNFLOWER"

17:40-17:50 **Desimir Knežević** "EFFECT OF GENOTYPE AND ENVIRONMENT ON VARIABILITY OF PRODUCTIVE TILLERING IN BREAD WHEAT (*TRITICUM AESTIVUM L.*)"

17:50-18:00	Dejan Sokolović "DIALLEL ANALYSIS FOR MOST IMPORTANT TRAITS OF RED FESCUE (<i>FESTUCA RUBRA L.</i>)"
18:00-19:30	POSTER SESSION 2 (sessions: Breeding for changing environments and Miscellaneous topics)
18:00-18:15	Presentation of sponsor - ELTA 90
18:15-19:45	Workshop 2: The truth is in wine and DNA - applications of molecular methods in viticulture Moderators: Jelena M. Aleksić, Gabriele Di Gaspero Gabriele Di Gaspero "DISEASE RESISTANCE LOCI IN GRAPEVINE: HAPLOTYPE DIVERSITY AND IMPLICATIONS FOR AN EFFICIENT MARKER ASSISTED SELECTION" Aleksandar Tabakovic "REGISTRATION OF WINE VARIETIES" Jelena M. Aleksić "DNA FINGERPRINTING OF SERBIAN GRAPEVINE VARIETIES BY MEANS OF NUCLEAR MICROSATELLITES" Darko Jaksic "AUTOCHTHONOUS AND REGIONAL VINE VARIETIES – GENETIC POTENTIAL AND CLONAL SELECTION" Dragoslav Ivanišević "CLONAL SELECTION OF <i>Vitis vinifera</i> : THE METHOD FOR CONSERVATION OF AUTOCHTHONOUS GRAPEVINE VARIETIES" Dragoslav Ivanišević "ACHIEVEMENTS IN THE CREATION OF NEW GRAPEVINE VARIETIES IN SERBIA BY HYBRIDIZATION"
19:45-20:30	Serbian Genetic Society Meeting
20:30	Wine tasting

WEDNESDAY October 16

08:30-09:00 Registration (hotel Fontana)

PLENARY LECTURE

Moderators: Branka Vuković-Gačić, Bojana Žegura

09:00-09:30 **Bojana Žegura** "HEPATIC 3D *IN VITRO* CELL MODELS FOR GENOTOXICITY ASSESSMENT"

session GENETIC TOXICOLOGY: FROM CELL TO ECOSYSTEM

Moderators: Branka Vuković-Gačić, Bojana Žegura

Invited lectures

- 09:30-09:50 **Dragana Mitić-Ćulafić** "GENOTOXICITY AND BIOCOMPATIBILITY OF NEW NANOSTRUCTURAL DENTAL BIOMATERIALS BASED ON ACTIVE CALCIUM SILICATE SYSTEM AND HYDROXYAPATITE"
- 09:50-10:10 **Branka Vuković-Gačić** "CURRENT APPROACHES AND BIOASSAYS IN THE ASSESSMENT OF ENVIRONMENTAL POLLUTION"
- 10:10-10:30 **Ninoslav Djelić** "GENOTOXIC EFFECTS OF NONSTEROIDAL HORMONES"

Oral presentations

- 10:30-10:40 **Biljana Nikolić** "BIOCOMPATIBILITY OF RESIN-BASED COMPOSITES - COMPARATIVE ANALYSIS OF CYTOTOXICITY AND GENOTOXICITY OF CONSTITUENTS AND THEIR COMBINATIONS"
- 10:40-10:50 **Stefana Cvetković** "PROTECTIVE EFFECT OF *GENTIANA LUTEA* EXTRACTS AGAINST UV-INDUCED GENOTOXICITY"
- 10:50-11:00 **Marina Jovanović** "THE MODULATION OF Keap1-Nrf2 SIGNALING PATHWAY: *IN VITRO* STUDIES OF COMMERCIAL CYTOSTATIC AND POLYGONOIDEAE WEEDS WITH CHEMOTHERAPEUTIC POTENTIALS"
- 11:00-11:20 **Coffee break**

PLENARY LECTURES

Moderators: Marina Stamenković-Radak, Vladimir Trifonov

- 11:20-11:50 **Thomas Flatt** "THE GENETIC BASIS OF CLINAL ADAPTATION IN *DROSOPHILA*"
- 11:50-12:20 **Giovanni Giuseppe Vendramin** "MOLECULAR SIGNATURES OF CLIMATE ADAPTATION AND RANGE EXPANSIONS IN MEDITERRANEAN CONIFERS"

session ADAPTATION AND ECOLOGICAL GENETICS

Moderators: Marina Stamenković-Radak, Vladimir Trifonov

Oral presentations

- 12:20-12:30 **Andrea Piotti** "DO DENDROPHENOTYPIC TRAITS INFLUENCE INDIVIDUAL REPRODUCTIVE SUCCESS? AN EMPIRICAL ASSESSMENT IN NORWAY SPRUCE NATURAL POPULATIONS"
- 12:30-12:40 **Mirjana Beribaka** "CHANGE IN MICROBIOTA DIVERSITY IN TWO *DROSOPHILA* SPECIES UNDER EXPERIMENTAL CONDITIONS ON LEAD"
- 12:40-12:50 **Pavle Erić** "DOES SEX-SPECIFIC SELECTION ON SYMPATRIC MITO-NUCLEAR VARIATION ACT ON ADULT *DROSOPHILA SUBOBSCURA* IN REGARD TO DESICCATION RESISTANCE?"

12:50-14:20	POSTER SESSION 3 (sessions: Genetic toxicology: from cells to ecosystem; Adaptation and ecological genetics; Genetic diversity, phylogeny and conservation; Microbial genetics; Bioinformatics and big data analysis)
14:20-15:00	Lunch & Poster viewing
15:00-20:00	Excursion
21:00	Galla Dinner

THURSDAY October 17

PLENARY LECTURES

Moderators: Djordje Fira, Slaviša Stanković

- 09:00-09:30 **Vittorio Venturi** "THE PATHOBIOMES OF TWO BACTERIAL DISEASES OF RICE; IDENTIFYING MICROBIAL COOPERATORS AND ANTAGONISTS OF THE PATHOGEN"
- 09:30-10:00 **José Pérez-Martín** "PHEROMONE INDUCED CELL CYCLE ARREST IN *USTILAGO MAYDIS*"

session 7 - MICROBIAL GENETICS

Moderators: Vittorio Venturi, José Pérez-Martín

Invited lectures

- 10:00-10:20 **Branko Jovčić** "MOBILE INTEGRONS: SENSING THE CELL PHYSIOLOGY"
- 10:20-10:40 **Nada Stankovic** "SEQUENCING OF *STREPTOMYCES SP.* NP10 GENOME – A KEY TO THE TREASURE CHEST"
- 10:40-11:00 **Mira Milisavljevic** "SURVIVING OXIDATIVE STRESS - NEW CELLULAR FUNCTIONS INVOLVED IN RECYCLING AND GENOME PROTECTION IN *USTILAGO MAYDIS*"
- 11:00-11:20 **Tanja Berić** "SPECIFICITY OF THE PATHOVAR OR UBIQUITY OF THE SPECIES: THE CASE OF *PSEUDOMONAS SYRINGAE PV. APTATA*"
- 11:20-11:40 **Goran Vukotić** "BACTERIOPHAGES AND PHAGE-ENCODED DEPOLYMERASES"

Oral presentations

- 11:40-11:50 **Mina Obradovic** "BACILLUS CEREUS NM1 ISOLATED FROM SOIL PRODUCES TWO-COMPONENT LANTIBIOTIC THUSIN, ACTIVE AGAINST MULTIRESTANT PATHOGENS"
- 11:50-12:10 **Coffee break**

PLENARY LECTURE

Moderators: Ivana Morić, Leonardo De Oliveira Martins

12:10-12:40 **Leonardo De Oliveira Martins** "FROM PHYLOGENETICS TO PHYLOGENOMICS, BETWEEN BACTERIAL STRAINS AND THE TREE OF LIFE "

session BIOINFORMATICS AND BIG DATA ANALYSIS

Moderators: Ivana Morić, Leonardo De Oliveira Martins

12:40-13:00 **Ivan Jovanović** "EVOLUTION FROM "T" TO π SHAPED PROFILE OF A RESEARCHER IN THE ERA OF miRNOMICS"

13:00-13:20 **Bojana Banović Đeri** "LEAF TOTAL TRANSCRIPTOME ANALYSIS ENRICHES INSIGHT INTO MAIZE ABIOTIC STRESS SIGNALING NETWORK"

CLOSING LECTURE

Moderator: Branka Vasiljević

13:20-13:50 **Ana Cvejic** "EXPLORING THE MECHANISMS OF HAEMATOPOIETIC LINEAGE PROGRESSION AT THE SINGLE-CELL LEVEL "

14:00 **Closing ceremony**