



CONGRESS OF THE SERBIAN GENETIC SOCIETY

PROGRAM

2024 | October
2 - 5

ZLATIBOR · SERBIA



WEDNESDAY October 2nd

14:00-17:30 Registration

17:30-18:00 Opening ceremony

HALL "TARA"

OPENING LECTURE (chair: Jelena Milašin)

18:00-18:45 Miodrag Grbić "Genomics as a basis of 21-century science: from genome evolution, history, to biotechnology and new biomaterials"

19:00-20:00 Welcome cocktail



THURSDAY October 3rd

08:00-08:30 Registration

HALL "TARA"

PLENARY LECTURES (chair: Natalia Di Pietro, Mihajla Đan)

08:30-09:00 Nadia Di Pietrantonio "Epigenetic mechanisms involved in vascular degeneration induced by chronic hyperglycemia: focus on *in vitro* cellular models"

09:00-09:30 Josefa Gonzales "Transposable elements drive genetic and epigenetic novelty relevant for adaptive evolution across species"

HALL "MORAVA"

Topic Population genetics and genomics (chair: Marija Savić Veselinović, Mihailo Jelić)

09:30-09:45 Invited lecture - Jelena Blagojević "B chromosomes – Natural population study"

09:45-10:00 Invited lecture - Milica Keckarević Marković "The genetic variability of Roma population in Serbia"

10:00-10:15 Invited lecture - Tijana Banjanac "DNA barcoding and population genetics of non-model plant species: approaches, problems and possible solutions"

10:15-10:23 Short Oral Presentation - Alexey (Oleksiy) Yanchukov “Genome-wide phylogeny of Blind Mole Rats”

10:23-10:31 Short Oral Presentation - Iva Groše “The first genome-wide characterization of genetic diversity and population structure of hoverfly species based on ddRAD-seq data – case study on *Merodon armipes Rondani*”

10:31-10:39 Short Oral Presentation - Ivana Matić “Genetic variability and population structure of *European roller (Coracias garrulus)* from Serbia”

10:39-10:47 Short Oral Presentation - Mihajla Đan “eDNA metabarcoding of flowers”

10:47-10:55 Short Oral Presentation - Cvijeta Lazić “Soil invertebrate diversity survey: the choice of eDNA metabarcoding primers”

HALL “SAVA”

Topic Microbial genetics (chair: Iva Atanasković, Ivan Nikolić)

09:30-09:45 Invited lecture - Milica Ćirić “Environmental microorganisms and their populations as biotechnological solution to plastic pollution”

09:45-10:00 Invited lecture - Iva Atanasković “The function of the type III secretion system in plant-beneficial bacteria”

10:00-10:15 Invited lecture - Ivan Nikolić “Unveiling the genomic landscape of *Pseudomonas syringae*: exploring T3SS effector diversity and phylogenomic status of strains pathogenic on sugar beet”

10:15-10:23 Short Oral Presentation - Stefan Stanovčić “Identification of cellular factors in *Ustilago maydis* involved in the cell's response to cytotoxic and genotoxic stress”

10:23-10:31 Short Oral Presentation - Iva Rosić “Genome analysis of *B. velezensis* SS- 38.4 revealed the genetic basis of its biocontrol activity”

10:31-10:39 Short Oral Presentation - Aleksandra Mesaroš “Exploring the biocontrol potential: Investigating HCN-producing *Pseudomonas* strains against plant pathogens”

10:39-10:47 Short Oral Presentation - Olja Medić “Bacterial diversity and phylogenetic relationships in the phyllosphere and rhizosphere of organic and non-organic grapevine”

10:47-11:00 Discussion

11:00-11:30 Coffee break



HALL "MORAVA"

Topic Population genetics and genomics (chair: Marija Savić Veselinović, Mihailo Jelić)

11:30-11:38 Short Oral Presentation - Milica Mihajlović "Y-chromosomal landscape in Serbian population groups originating from historically and geographically significant distinct parts of the Balkan Peninsula"

Topic Evolutionary and conservation genetics (chair: Dragana Cvetković, Jelena Blagojević)

11:40-11:55 Invited lecture - Dragana Šnjegota "Population Genetic Studies of the *Canis* Genus in Bosnia and Herzegovina: Challenges and Achievements"

11:55-12:10 Invited lecture - Slobodan Davidović "Harnessing genetic-based pedigrees for the conservation of the autochthonous Balkan sheep breed (Pramenka) and its local varieties"

12:10-12:18 Short Oral Presentation - Lea Vlajnić "Horny but barren: Mitochondrial genotype associated with reduced fertility increases mating success rate in male seed beetles"

12:18-12:26 Short Oral Presentation - Mariya A Kusliy: High mitogenome diversity of cave lions (*Panthera spelaea* Goldfuss, 1810) in Siberia

12:26-12:34 Short Oral Presentation - Marko Đokić: Karyotyping of a strictly protected European mammal - the lesser blind mole rat *Nannosplax leucodon* superspecies using non-lethal sampling

12:34-12:42 Short Oral Presentation - Snezhana A Samarina: Phylogenetic reconstructions for ancient and recent representatives of canids (Canidae) of Siberia and Tajikistan territory based on mtDNA sequences

12:42-12:50 Short Oral Presentation - Svetlana Modina: Phylogeography of Late Pleistocene woolly mammoths (*Mammuthus primigenius*) from geographically isolated areas of Southern and Eastern Siberia

12:50-12:58 Short Oral Presentation - Vladimir Trifonov: Mechanisms of asexual reproduction in vertebrates

HALL "SAVA"

Topic Medical genetics (chair: Nadia Di Pietrantonio, Jelena Milašin)

11:30-11:45 Invited lecture - Branka Zukić "Pharmacogenomics as a basis for personalized medicine"

11:45-11:53 Short Oral Presentation - Umme Samia "Effect of Freeze-Dried Lung Tissues (LFDT) on modulation of gene expression promoting an aggressive phenotype in non-small cell lung cancer (NSCLC)"

11:53-12:01 Short Oral Presentation - Nikola Kačaki "Polymorphisms of *HLA-A, -B, -DRB1* alleles and haplotypes in patients with acute myeloid leukemia"

12:01-12:09 Short Oral Presentation - Iva Barjaktarović "Mutations in *JAK2, CALR, MPL* and *NPM1* genes in primary myelofibrosis"

12:09-12:17 Short Oral Presentation - Marija Mijović “Genetic evaluation of 203 Serbian patients with skeletal dysplasia”

12:20-12:35 Sponsor presentation 1

12:35-12:50 Sponsor presentation 2

12:50-13:05 Sponsor presentation 3

HALL “TARA”

Mini symposium “Current landscape of neonatal screening in Serbia and a look into the future” by Roche

13:00-13:15 Miloš Brkušanić, PhD (Research Associate, Centre for Human Molecular Genetics, University of Belgrade-Faculty of Biology) “Perspectives of neonatal screening in Serbia: panel expansion and harmonization with European practices”

13:15-13:25 Olivera Jovović (President of NORBS & SMA Serbia) “The evolution of SMA treatment: Benefits of neonatal screening from the perspective of patient associations”

13:25-13:30 Discussion

13:30-14:30 Lunch break

HALL "TARA"

PLENARY LECTURES (chair: Dragana Mitić-Ćulafić, Ninoslav Đelić)

14:30-15:00 Mirta Milić "Alkaline comet and micronucleus cytome assay – the use of the methods and their perspectives through the results of the hCOMET, HUMNap, EDIAQI, and BioMolTox projects"

15:00-15:30 Rui Oliveira "Exploring plants amazing capacity to thrive under stress to protect our genomes"

HALL "MORAVA"

Topic Challenges of genotoxicology in the 21st century (chair: Mirta Milić, Dragana Mitić-Ćulafić)

15:30-15:45 Invited lecture - Stefana Cvetković "Potential of *Gentiana lutea* extracts to reduce DNA damage induced by food mutagens and UV radiation"

15:45-16:00 Invited lecture - Ninoslav Djelić "Increased primary DNA damage caused by thyroid hormone in various phases of type 2 diabetes mellitus"

16:00-16:15 Invited lecture - Mira Milisavljevic "New insights into molecular complexity of genome protection in *Ustilago maydis*"

16:15-16:30 **Invited lecture** - Margareta Kračun-Kolarević “How the Selection of Organisms, Approaches, and Assays in Biomonitoring Affects the Evaluation of Genotoxic Potential in Aquatic Environments”

16:30-16:45 **Invited lecture** - Jovana Kostić “Unfolding the potential: Highlighting the value of genotoxicity biomarkers in chub *Squalius cephalus* (Linnaeus, 1758) in three Serbian watersheds with different pollution pressures”

16:45-17:00 Discussion

HALL “SAVA”

15:30-18:00 **Workshop** “STREAMLINE hub for modelling diseases and discovering molecular mechanisms of neurodevelopmental disorders”

17:00-17:30 Coffee break

HALL “MORAVA”

17:30-17:38 **Short Oral Presentation** - Milan Rajković “Assessment of thymol and *Agaricus bisporus* extract, genotoxic and antigenotoxic effects on a continuous honey bee cell line”

17:38-17:46 **Short Oral Presentation** - Stefana Vuletić "*Frangula alnus* Mill as a source of potential chemotherapeutics effective against colorectal carcinoma"

17:46-17:54 **Short Oral Presentation** - Nina Tomić "Evaluation of cytotoxic, genotoxic and ROS-mediated oxidative stress caused by nanocomposite material based on resveratrol and selenium nanoparticles"

17:54-18:10 Discussion

18:00-19:30 POSTER SESSION

19:30-20:30 Serbian Genetic Society Meeting



FRIDAY October 4th

08:00-08:30 Registration

HALL "TARA"

PLENARY LECTURES (chair: Violeta Anđelković, Miodrag Grbić)

08:30-09:00 Borut Peterlin "Future of genetics in medicine"

09:00-09:30 Vladimir Meglič "Use of phenomic and genetic data in buckwheat breeding – ECOBREED example"

09:30-10:00 Dragan Nikolić "Approaches and achievements in grapevine breeding"

HALL "MORAVA"

Topic Medical genetics (chair: Borut Peterlin, Ivana Joksić)

10:10-10:25 Invited lecture - Dušanka Savić Pavićević "Somatic instability of repeat expansions drives progression in myotonic dystrophy type 1"

10:25-10:40 Invited lecture - Goran Čaturilo "Diagnostic yield of whole genome sequencing in a tertiary pediatric referral centre: a 5-year retrospective study"

10:40-10:48 Short Oral Presentation - Marija Branković "Analysis of clinical exome panel in rare movement and cognitive disorders"

10:48-11:03 Sponsor presentation

HALL "SAVA"

Topic New breeding technologies and perspectives (chair: Jelena Srdić, Jasmina Milenković)

10:15-10:30 Invited lecture - Aleksandar Kovačević "PHENO_MaizE Project: UAV-Driven High-Throughput Phenotyping for Enhanced Maize Breeding"

10:30-10:45 Invited lecture - Marina Čeran "Genomics-assisted breeding for crop improvement"

10:45-11:00 Invited lecture - Vladimir Perišić "Contemporary breeding of tomatoes"

11:00-11:30 Coffee break

HALL "MORAVA"

Topic Medical genetics (chair: Borut Peterlin, Ivana Joksić)

11:30-11:45 Invited lecture - Nela Maksimović "Copy number variations in children with autism spectrum disorders"

11:45-12:00 Invited lecture - Milena Janković "Genetics of neurodegenerative disorders"

12:00-12:08 Short Oral Presentation - Miloš Brkušanin “Our Journey from Individual Efforts to Nationwide Support: Implementing Newborn Screening for Spinal Muscular Atrophy in Serbia”

12:08-12:16 Short Oral Presentation - Ana Marjanović “APOE genotype, ATXN1 and ATXN2 repeats size in C9orf72 expansion carriers”

12:16-12:30 Discussion

12:30-12:45 Sponsor presentation ELTA 90: “Experience of one medical genetics laboratory in use of commercial Yourgene Health kits in routine diagnostics”, Danijela Radivojević

12:45-13:00 Sponsor presentation ProMedia: “State of the art solutions for karyotyping and fluorescence imaging - automated microscopy using MetaSystems”, Nina Ilić (5 min), Dejana Jurišić-Knežev (ProMedia) (10 min)

13:00-13:15 Sponsor presentation

13:15-13:30 Sponsor presentation

HALL “SAVA”

Topic New breeding technologies and perspectives (chair: Jelena Srdić, Jasmina Milenković)

11:30-11:45 Invited lecture - Mirjana Petrović “Previous achievements and trends in fodder crops breeding”

11:45-12:00 Invited lecture - Željana Prijić “Conservation of genetic resources of herbaceous peonies in Serbia through various propagation methods”

12:00-12:15 Invited lecture - Mirjana Šijačić Nikolić “Conservation of the gene pool of woody species in Belgrade’s urban forests”

12:15-12:23 Short Oral Presentation - Vuk Đorđević “Cutting-edge breeding tools for soybean yield prediction”

12:23-12:31 Short Oral Presentation - Manja Božić “Genes involved in cold response in early developmental stages of maize”

12:31-12:39 Short Oral Presentation - Vladislava Galović “Expression analyses of drought related genes in leaves and stems in two Wild cherry clones”

12:40-12:50 Discussion

12:50-13:30 POSTER SESSION

13:30-14:30 Lunch break



HALL "TARA"

PLENARY LECTURES (chair: Dragana Miladinović, Marina Đurišić)

14:30-15:00 Dragan Perović "Isolation of BaMMV/BaYMV barley resistance genes allows the gene-editing based disease management and redefinition of the gene origin"

15:00-15:30 Diana Plašeska Karanfilška "Genetics of early pregnancy losses"

15:30-16:10 Thomas Liehr "New insights into uniparental disomy"

HALL "MORAVA"

Topic Medical genetics (chair: Goran Čturiilo, Diana Plašeska Karanfilška)

16:15-16:30 Invited lecture - Ivana Kavečan "Clinical Manifestations and Innovative Treatment Options for Inherited Forms of Hypophosphatemia"

16:30-16:45 Invited lecture - Ivana Joksić "Prenatal diagnostics of fetal anomalies- standards of care and future perspectives"

16:45-17:00 Sponsor presentation

17:00-17:15 Sponsor presentation



HALL "SAVA"

Topic New breeding technologies and perspectives (chair: Dragan Perović, Vuk Đorđević)

16:20-16:35 Invited lecture - Takao Komatsuda "Root specific gene expressions confer resistance to soil-borne Bymovirus in wheat and barley"

16:35-16:50 Invited lecture - Ljiljana Samolovac "Perspectives of milk production in the Republic of Serbia using modern methods of cow selection and breeding"

16:50-16:58 Short Oral Presentation - Sanja Jovanović "Bacterial treatment enhances the growth of one-year-old sessile oak (*Quercus petraea* (Matt.) Liebl) seedlings of two Serbian provenances"

16:58-17:06 Short Oral Presentation - Ana Obradović "Molecular identification of *Fusarium graminearum* pathogen of small grains and maize in Serbia"

17:10-17:40 Coffee break

HALL "MORAVA"

Topic Medical genetics (chair: Goran Čturiilo, Diana Plašeska Karanfilska)

17:40-17:55 Invited lecture - Nina Ilić "Genetic testing in pediatric hemato-oncological diseases"

17:55-18:03 Short Oral Presentation - Nikola Ilić "Genetic Spectrum of Noonan Syndrome in Pediatric Population"

18:03-18:15 Discussion

HALL "SAVA"

Topic New breeding technologies and perspectives (chair: Dragan Perović, Vuk Đorđević)

17:40-17:55 Invited lecture - Dobrivoje Poštić "Influence of agro-ecological conditions and genotypes on yield of early potatoes in Western Serbia"

17:55-18:03 Short Oral Presentation - Ljiljana Brbaklić "Assessment of hulless winter barley in the Serbian climate"

18:03-18:11 Short Oral Presentation - Desimir Knežević "Gliadin alele composition in wheat genotype (*Triticum aestivum* L.)"

18:11-18:20 Discussion

18:20-19:30 POSTER SESSION

21:00 Gala Diner

SATURDAY October 5th

08:00-09:00 Registration

HALL "MORAVA"

9:00-10:00 Round table "Detection methods for repeat expansion disorders" (**organizer:** "READ-DM1" project)

Topic Bioinformatics and big data analysis (chair: Dušanka Savić Pavićević, Nađa Nikolić)

10:00-10:08 Short Oral Presentation - Maja Stojiljković "A new tool: VUS notifier"

10:08-10:16 Short Oral Presentation - Vladimir Kovačević "CoDi: Contrastive distance reference-based cell type annotation for spatial transcriptomics"

10:16-10:24 Short Oral Presentation - Lana Radenkovic "PCR based nanopore Sequencing Approach for Analyzing Short Tandem Repeat Expansions"

10:24-10:32 Short Oral Presentation - Dušan Lazić "HSLAR model gene co-expression network and comparative transcriptomics reveal key pathways in DM1 pathology"

10:32-10:40 Short Oral Presentation - Lazar Đokić "Comprehensive Biology Knowledge Graph for Multi-Omics Data Interpretation"



HALL "SAVA"

Topic Medical genetics (chair: Nela Maksimović, Milena Janković)

09:00-09:15 Invited lecture - Danijela Drakulić "Establishment of a model system for studying neurodevelopmental disorders using induced pluripotent stem cells derived from patients with 22q11.2 Deletion"

09:15-09:30 Invited lecture - Maja Živković "Ferroptosis-Related Processes Gene Expression and Gene Variants: Relevance for Disease Severity in Patients with Multiple Sclerosis"

09:30-09:45 Invited lecture - Miloš Lazarević "Synergistic Targeting of CD44+ Cancer Stem Cells in Oral Squamous Cell Carcinoma through miRNA-21 Silencing and BET Inhibition"

09:45-09:53 Short Oral Presentation - Gorazd Rudolf "Genomic testing for congenital anomalies in fetuses: a comprehensive approach"

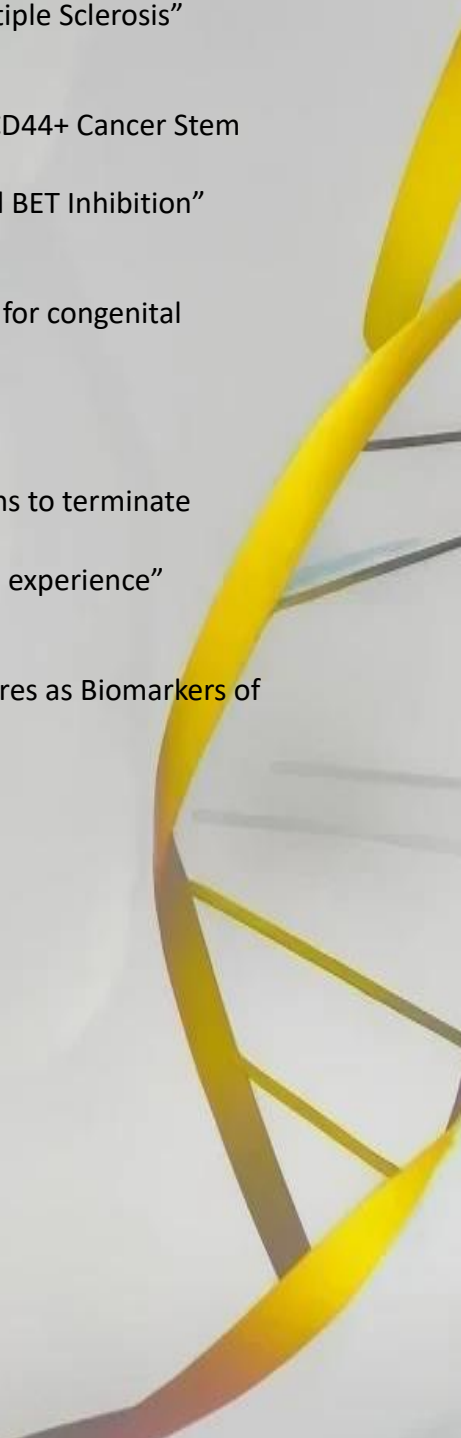
09:53-10:01 Short Oral Presentation - Simona Petrač "Parental decisions to terminate pregnancy in the presence of chromosomal abnormalities: The Slovene experience"

10:01-10:09 Short Oral Presentation - Maja Lončar "Epigenetic Signatures as Biomarkers of Environmental Exposure"

10:10-10:25 Sponsor presentation

10:25-10:40 Sponsor presentation

10:40-10:55 Sponsor presentation



10:55-11:10 Sponsor presentation

10:30-11:10 Coffee break

HALL "TARA"

CLOSING LECTURE (chair: Sanja Jeremić)

11:15-12:00 Ivan Matic "rRNA operon multiplicity as a bacterial genome stability insurance policy"

