

## SCIENTIFIC PROGRAMME

2<sup>nd</sup> Congress of Geneticists in Bosnia and Herzegovina with International Participation,  
September, 13 - 17<sup>th</sup>, 2021.



### MONDAY 13<sup>th</sup> September (CET 16:00 – 19:45)

*Human and Medical Genetics Session*

Chaired by *Lejla Alić* (University of Sarajevo, Faculty of Medicine, Bosnia and Herzegovina) and  
*Marija Vuković* (Clinical Centre Banja Luka, Bosnia and Herzegovina)

- 16:00 – 16:15** **Opening note** (*Kasim Bajrović*, President of the Genetic Association in Bosnia and Herzegovina, **Anja Haverić**, President of the Organising Committee)
- 16:15 – 16:50** **Borut Peterlin** (University Medical Center Ljubljana, Clinical Institute of Genomic Medicine, Ljubljana, Slovenia): GENOMICS INTEGRATED HEALTH SYSTEMS: ENVISION THE FUTURE
- 16:50 – 17:20** **Tatjana Damjanović** (University of Belgrade, Faculty of Medicine, Institute of Human Genetics, Belgrade, Serbia): THE EFFECTIVENESS OF POSTNATAL GENOMIC DISEASES DIAGNOSTICS BY ARRAY CGH
- 17:20 – 17:50** **Maja Barbalić** (University of Split School of Medicine Department of Medical Biology, Split, Croatia; Genom Ltd, Zagreb, Croatia): GENETICS OF MALE INFERTILITY
- 17:50 – 18:10** **Poster viewing / Coffee Break**
- 18:10 – 18:40** **Biljana Jekić** (University of Belgrade, Faculty of Medicine, Institute of Human Genetics, Belgrade, Serbia): THE ROLE OF GENETICS POLYMORPHISMS IN COVID-19 DISEASE COURSE AND OUTCOME – WHAT DO WE KNOW SO FAR?
- 18:40 – 19:10** **Nazif Alić** (University College London, Institute of Healthy Ageing, Research Department of Genetics Evolution and Environment, London, United Kingdom): POPULATION GENETIC ANALYSES IMPLICATE BIOGENESIS OF TRANSLATION MACHINERY IN HUMAN AGEING
- 19:10 – 19:30** **Dino Pecar** (Alea Genetic Center, Sarajevo, Bosnia and Herzegovina): CHALLENGES IN OPTIMIZATION OF ION GENESTUDIO S5 NGS PROTOCOL FOR SARS-CoV-19 GENOME SEQUENCING
- 19:30 – 19:45** **Amina Aščerić** (University of Sarajevo, Medical Faculty, Center for Genetics, Sarajevo, Bosnia and Herzegovina): SEX-DEPENDENT INFLUENCE OF GLUTATHIONE-S TRANSFERASE GENE POLYMORPHISM ON ASTHMA CONTROL IN CHILDREN OBSERVED AT THE AGE OF 8 TO 10 YEARS

### TUESDAY 14<sup>th</sup> September CET (16:00 – 18:40)

*Genetics of Natural Resources*

Chaired by *Fuad Gaši* (University of Sarajevo, Faculty of Agriculture, Bosnia and Herzegovina)

- 16:00 – 16:40** **Elena Bužan** (University of Primorska, Faculty of Mathematics, Natural Sciences and Information

*Technologies, Koper, Slovenia; Environmental Protection College, Velenje, Slovenia): GENETIC DATA ARE CRUCIAL TO CONSERVE AND MANAGE WILDLIFE IN SOUTHEAST EUROPE*

**16:40 – 17:00** **Belma Kalamujić Stroil** (*University of Sarajevo, Institute for genetic engineering and biotechnology, Sarajevo, Bosnia and Herzegovina*): TWO-DECADE'S EXPERIENCE OF GENETIC MONITORING OF BROODSTOCK FROM SEVERAL FISH FARMS IN BOSNIA AND HERZEGOVINA

**17:00 – 17:20** **Poster viewing / Coffee Break**

**17:20 – 17:40** **Toni Eterović** (*University of Sarajevo, Faculty of Veterinary Medicine, Department of Microbiology and Infectious Diseases, Sarajevo, Bosnia and Herzegovina*): THE ROLE OF GENE BANK IN CONSERVATION OF BIODIVERSITY

**17:40 – 18:00** **Emina Šunje** (*University of Sarajevo, Faculty, Sarajevo, Bosnia and Herzegovina; Herpetological Association in B&H - ATRA (BH-HU: ATRA), Sarajevo, Bosnia and Herzegovina; University of Antwerp, Laboratory of Functional Morphology, Antwerp, Belgium*): GENETIC DIVERSITY AND DIFFERENTIATION OF ALPINE SALAMANDERS FROM THE DINARIDES – AN EVOLUTIONARY PERSPECTIVE WITH INSIGHTS FOR SPECIES CONSERVATION

## **WEDNESDAY 15<sup>th</sup> September (CET 16:00 – 19:30)**

*Bioengineering, Biotechnology and Bioinformatics*

*Chaired by Adaleta Durmic Pašić (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Bosnia and Herzegovina)*

**16:00 – 16:40** **Yiping Qi** (*University of Maryland, College of Agriculture and Natural Resources, USA*): CUTTING-EDGE CROP BREEDING WITH CRISPR-CAS TECHNOLOGIES

**16:40 – 17:20** **Carlos Jiménez** (*Universidad de Coruña, Facultade de Ciencias and Centro de Investigacións Científicas Avanzadas (CICA), Departamento de Química, A Coruña, Spain*): FROM GENOME TO MOLECULES: PRACTICAL CASES OF STRUCTURAL ELUCIDATION OF SIDEROPHORES BY USING GENOME MINING

**17:20 – 17:50** **Lada Lukić Bilela** (*University of Sarajevo, Faculty of Science, Aquatic Molecular Biology, Sarajevo, Bosnia and Herzegovina*): GENOME MINING STRATEGIES IN NATURAL PRODUCTS IDENTIFICATION

**17:50 – 18:10** **Poster viewing / Coffee Break**

**18:10 – 18:30** **Igor Pongrac** (*Merck Life Science | Research Solutions, Zagreb, Croatia*): EXPERIENCE THE FUTURE OF DRUG DISCOVERY AND DISEASE MODELING RESEARCH WITH GENETIC ENGINEERING SOLUTIONS AND ORGANOID FROM MERCK

**18:30 – 18:50** **Kamelija Madacki-Todorović** (*University Sarajevo School of Science and Technology, Sarajevo Medical School, Sarajevo, Bosnia and Herzegovina*): CORTICOSTEROID-INDUCED EXPRESSION OF MICROBIAL VIRULENCE CAN ENHANCE DEVELOPMENT OF HOST INFECTIOUS DISEASE

**18:50 – 19:05** **Amina Hadžiemrić** (*University of Sarajevo, Faculty of Science, Laboratory for Plant physiology, Sarajevo, Bosnia and Herzegovina*): ALLELOPATHIC EFFECT OF CEDARWOOD AND GERANIUM ESSENTIAL OILS ON SEED GERMINATION OF SELECTED PLANT SPECIES

## THURSDAY 16<sup>th</sup> September (CET 16:00 – 18:15)

*Biomonitoring and Genetic Toxicology*

Chaired by **Nurşen Başaran** (*Hacettepe University, Faculty of Pharmacy, Department of Pharmaceutical Toxicology, Ankara, Turkey*) and **Goran Gajski** (*Institute for Medical Research and Occupational Health, Zagreb, Croatia*)

- 16:00 – 16:35** **Nurşen Başaran** (*Hacettepe University, Faculty of Pharmacy, Department of Pharmaceutical Toxicology, Ankara, Turkey*): HERBAL PRODUCTS: ARE THEY SAFE BECAUSE THEY ARE NATURAL?
- 16:35 – 17:10** **Vanessa Moraes de Andrade** (*University of Southern Santa Catarina, Laboratory of Translational Biomedicine, Postgraduate Program in Health Sciences, Criciúma, Brazil*): BRAZIL NUT CONSUMPTION REDUCES DNA DAMAGE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS PROBABLY THROUGH CHANGES IN OXIDATIVE STATUS
- 17:10 – 17:25** **Poster viewing / Coffee Break**
- 17:25 – 18:00** **Goran Gajski** (*Institute for Medical Research and Occupational Health, Zagreb, Croatia*): APPLICATION OF BLOOD AND BUCCAL MICRONUCLEUS ASSAY IN MONITORING CHILDREN EXPOSED TO DIAGNOSTIC RADIATION IN CLINICAL SETTINGS
- 18:00 – 18:15** **Anja Haverić** (*University of Sarajevo, Institute for genetic engineering and biotechnology, Sarajevo, Bosnia and Herzegovina*): CHROMOSOME ABERRATIONS IN MEDICAL PERSONNEL OCCUPATIONALLY EXPOSED TO LOW-DOSE IONISING RADIATION

## FRIDAY 17<sup>th</sup> September (CET 16:00 – 17:45)

*Forensic Genetics*

Chaired by **Jasmina Čakar** (*University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Bosnia and Herzegovina*)

- 16:00 – 16:35** **Damir Marjanović** (*International Burch University, Sarajevo, Bosnia and Herzegovina Institute for Anthropological Research, Zagreb, Croatia*): DNA IDENTIFICATION OF THE VICTIMS OF WAR CONFLICTS AND VARIOUS MASS DISASTERS: OVERVIEW OF THE WESTERN BALKAN EXPERIENCE
- 16:35 – 17:10** **Ana Banjac Čanak** (*DNA Center for Genetics, Belgrade, Serbia*): PRIVATE FORENSIC PRACTICE IN SERBIA: EXPERIENCE AND PERSPECTIVES
- 17:10 – 17:45** **Zlatko Jakjovski** (*Ss Cyril and Methodius University in Skopje, Faculty of Medicine, Skopje, Republic of North Macedonia*): BENEFITS OF X AND Y-STR ANALYSIS IN SEXUAL ASSAULT CASES AND KINSHIP RELATEDNESS
- 17:45 – 18:00** **Ondrej Krsicka** (*QIAGEN GmbH, Hilden, Germany*): EZ2 CONNECT FX: APPLICATIONS IN HUMAN IDENTIFICATION AND FORENSICS
- 18:00 – 18:15** **Poster viewing / Coffee Break**
- 18:20 – 18:35** **Rijad Konjhodžić** (*Alea Genetic Center, Sarajevo, Bosnia and Herzegovina*): NGS IN FORENSICS: CURRENT PRACTICES, POSSIBILITIES AND OBSTACLES
- 18:35 – 18:50** **Una Morankić** (*Agency for Forensic and Expert Examinations, Sector for Biological, DNA and Chemical-Physical Expertise, Department for Biological and DNA Expertise, Sarajevo, Bosnia and Herzegovina*): LABORATORY FOR BIOLOGICAL EXPERTISE AND DNA ANALYSIS OF THE AGENCY FOR FORENSIC AND EXPERT EXAMINATIONS, OVERVIEW OF PREVIOUS ACTIVITIES
- 18:50 – 19:05** **Amira Kekić** (*Ministry of Internal Affairs of Canton Sarajevo, Sarajevo, Bosnia and Herzegovina*): THE

SIGNIFICANCE OF DETERMINING THE ABO BLOOD GROUPS FROM DRIED BLOOD TRACES FOUND AT CRIME SCENE

**19:05 – 19:20** **Nejira Handžić** (*Alea Genetic Center, Sarajevo, Bosnia and Herzegovina*): DETERMINING THE FORENSICALLY SIGNIFICANT SNP-s OF THE MITOCHONDRIAL HVIII REGION IN POPULATION OF BOSNIA AND HERZEGOVINA

**19:20 – 19:30** **Closing remarks** (**Rifat Hadžiselimović**, *President of the Scientific Board*)

## Posters

### Human and Medical Genetics

**Marija Dusanovic Pjevic** (University of Belgrade, Faculty of Medicine, Institute of Human Genetics, Belgrade, Serbia): ANALYSIS OF THE ASSOCIATION BETWEEN TUMOR NECROSIS FACTOR-A -308 G/A POLYMORPHISM AND THROMBOLYTIC THERAPY SIDE EFFECTS IN ACUTE ISCHEMIC STROKE PATIENTS

**Milka Grk** (University of Belgrade, Faculty of Medicine, Institute of Human Genetics, Belgrade, Serbia): ANALYSIS OF IL10RB GENE HAPLOTYPES IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS AND RHEUMATOID ARTHRITIS

**Lucija Zunic** (Genom Ltd, Zagreb, Croatia) PANEL ANALYSIS OF EVIDENCE-BASED INFERTILITY GENES IN SERTOLI CELL-ONLY SYNDROME PATIENTS

**Azra Licina Sinanovic** (Association for Nutrition and Dietetics "Food for Health", Tuzla, Bosnia and Herzegovina): GENETIC DIVERSITY OF THE MALE POPULATION OF THE BIJELO POLJE MUNICIPALITY THROUGH THE PRISM OF THE Y CHROMOSOME

**Alma Mudrov** (University of Tuzla, Faculty of Pharmacy, Tuzla, Bosnia and Herzegovina): KAUFMAN OCULOCEREBROFACIAL SYNDROME: PHENOTYPIC LANDSCAPE AND LITERATURE REVIEW

**Aldijana Avdic** (University of Tuzla, Faculty of Natural Sciences and Mathematics, Department of Biology, Tuzla, Bosnia and Herzegovina): MOLECULAR-GENETIC CHARACTERIZATION OF ApoE GENE POLYMORPHISM AND VNTR POLYMORPHISM OF eNOS GENE IN HUMAN POPULATION OF TUZLA CANTON

**Maja Milosevic Markovic** (University of Belgrade, School of Dental Medicine, Department of Human Genetics, Belgrade, Serbia): THYMUS SERPYLLUM AND MENTHA PIPERITA ESSENTIAL OILS AFFECT SHH AND NOTCH SIGNALING PATHWAYS IN BASAL CELL CARCINOMA IN VITRO

**Nora Pušeljić** (Institute of Emergency medicine OBŽ, Osijek, Croatia): CLINICAL MANIFESTATIONS OF A PATIENT WITH MICRODUPLICATION 12q23 AND DELETION Xp22

**Maja Zekavica** (University Medical Center "Zvezdara", Department of Microbiology and Genetics, Belgrade, Serbia): PRESENCE OF HLA-Cw\*06 ALLELE IN PATIENTS WITH PSORIASIS VULGARIS - THE FIRST REPORT FROM OUR CENTER

**Lejla Caluk Klacar** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): ASSOCIATION OF SELECTED THROMBOPHILIA GENETIC MARKERS WITH RECURRENT PREGNANCY LOSS IN BOSNIA AND HERZEGOVINA

### Genetics of Natural Resources

**Jasna Hasanbegovic** (University Dzemal Bijedic of Mostar, Agromediterranean Faculty, Mostar, Bosnia and Herzegovina): GENETIC STRUCTURE AND DIVERSITY OF INTERNATIONAL CULTIVARS OF ALMONDS (PRUNUS AMYGDALUS L.) IN HERZEGOVINA

**Dalila Destanovic** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): IS DNA BARCODING A FEASIBLE TOOL FOR BIODIVERSITY ASSESSMENT IN THE PROTECTED AREAS OF CANTON SARAJEVO?

## **Bioengineering, Biotechnology and Bioinformatics**

**Anesa Ahatovic** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): IDENTIFICATION OF ACC DEAMINASE PRODUCING METAL TOLERANT BACTERIA INHABITING *Medicago lupulina* L. RHIZOSPHERE

**Belmina Saric** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): GLU288 AND LYS137 OF SARS-CoV-2 MAIN PROTEASE AS TARGETS FOR INHIBITION BY SELECTED THYME PHYTOCONSTITUENTS

**Tarik Corbo** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): IMPORTANCY OF MACHINE LEARNING IN BIOLOGICAL STUDIES

## **Biomonitoring and Genetic Toxicology**

**Maida Hadzic** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): SELECTIVE GENOTOXICITY OF HALOGENATED BOROXINE, K<sub>2</sub>(B<sub>3</sub>O<sub>3</sub>F<sub>4</sub>OH) IN UT-7 LEUKEMIA CELL LINE AND NORMAL PERIPHERAL BLOOD MONONUCLEAR CELLS

**Selma Behmen** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): EVALUATION OF DNA DAMAGE IN ORAL LYMPHOCYTES USING COMET ASSAY METHOD IN THE GROUP OF HEALTHY INDIVIDUALS FROM SARAJEVO

## **Forensic Genetics**

**Belma Jusic** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): PATERNITY TESTING WITH TWO AUTOSOMAL STR MISMATCHES: CASES REPORT

## **Students Session**

### **Human and Medical Genetics**

**Milica Gulic** (University of Belgrade, Faculty of Medicine, Institute of Human Genetics, Belgrade, Serbia): ANALYSIS OF THE ASSOCIATION BETWEEN I/D POLYMORPHISM WITHIN ACE GENE AND COVID-19 OUTCOME IN SERBIAN POPULATION

**Ana Djuranovic** (University of Belgrade, Faculty of Medicine, Institute of Human Genetics, Belgrade, Serbia): STUDY OF IL1B AND iNOS GENES POLYMORPHISMS AS A RISK FACTOR FOR THE DEVELOPMENT OF CEREBRAL PALSY

**Dijana Majstorovic** (University of Rijeka, School of Medicine, Department of Medical Biology and Genetics, Rijeka, Croatia): FUNCTIONAL DNMT3B PROMOTER POLYMORPHISM (rs1569686) AND RISK FOR CONGENITAL HEART DEFECTS IN DOWN SYNDROME

**Daniel Sosiński** (Daniel's Green Technology, Szczecin, Poland): CO-INHERITANCE OF GENETIC VARIANTS LINKED TO THE RISK OF PREGNANCY LOSS IN BOSNIAN WOMEN- OWN STUDIES REVIEW

**Dzenana Klepo** (International Burch University, Department of Genetics and Bioengineering, Sarajevo, Bosnia and Herzegovina): GENETIC BACKGROUND OF FEMALE INFERTILITY

**Aleksandra Markovic** (University of Kragujevac, Faculty of Science, Department of Biology and Ecology, Kragujevac, Serbia): MICRONUCLEI FREQUENCY IN PATIENTS WITH ENDOMETRIAL CANCER IN RELATION TO STAGE OF DISEASE, AGE AND SMOKING HABITS

**Jovana Tubic Vukajlovic** (University of Kragujevac, Faculty of Science, Department of Biology and Ecology, Kragujevac, Serbia): OXIDATIVE DNA DAMAGE IN PERIPHERAL BLOOD LYMPHOCYTES OF PATIENTS WITH CARDIOVASCULAR DISEASES

**Jelena Vukajlovic** (Mother and Child Health Care Institute of Serbia "Dr Vukan Cupic", Laboratory of Medical Genetics, Belgrade, Serbia): DETECTION OF P2RY8/CRLF2 REARRANGEMENT IN PEDIATRIC B-ALL PATIENTS FROM SERBIA

**Milica Jaksic Karisik** (University of Belgrade, School of Dental Medicine, Department of Human Genetics, Belgrade, Serbia): OSTEOGENIC DIFFERENTIATION POTENTIAL OF ORAL CANCER STEM CELLS

**Svetlana Janceva** (University Clinic for Rheumatology, Skopje, Republic of North Macedonia): THE IMPORTANCE OF ANTI-dsDNA ANTIBODIES SCREENING AS A USEFUL TOOL FOR EVALUATION AND TREATMENT OF PATIENTS WITH SYSTEMIC RHEUMATIC DISEASE

**Nika Puseljic** (University of Osijek, Faculty of Medicine, Osijek, Croatia): ANORECTAL ATRESIA AS PART OF MICRODUPLICATION SYNDROME 16p13.3

### **Genetics of Natural Resources**

**Lejla Usanovic** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): THE IMPORTANCE OF MONITORING TICKS IN THE URBAN REGION CITY OF SARAJEVO, BOSNIA AND HERZEGOVINA

### **Bioengineering, Biotechnology and Bioinformatics**

**Mujo Hasanović** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): SIDEROPHORE PRODUCTION BY BACTERIA ISOLATED FROM ROBINIA PSEUDOACACIA L. ROOTS AND SERPENTINE SOIL

**Bakir Avdic** (University of Sarajevo, Faculty of Science, Department of Biology): INVESTIGATION OF THE ANTIOXIDANT ACTIVITY OF PHYSALIS ALKEKENGII L. VARIOUS EXTRACTS

**Bakir Avdic** (University of Sarajevo, Faculty of Science, Department of Biology): EVALUATION OF PHYSALIS ALKEKENGII L. AS THE POTENTIAL ANTIMICROBIAL AGENT

### **Biomonitoring and Genetic Toxicology**

**Dea Luzha** (University of Prishtina, Department of Biology, Xhorxh Bush, Kosovo): GENOTOXIC AND ANTIGENOTOXIC PROPERTIES OF THE HYPERICUM PERFORATUM L. EXTRACTS ON ALLIUM CEPA L. ROOT TIP CELLS

**Armina Zatagic** (University of Sarajevo, Faculty of Science, Sarajevo, Bosnia and Herzegovina): SATUREJA HORVATII SILIC AQUEOUS EXTRACT AS A RADIOPROTECTIVE AGENT IN EXPOSED HUMAN LYMPHOCYTES

## **Forensic Genetics**

**Mirela Dzehverovic** (University of Sarajevo, Institute for Genetic Engineering and Biotechnology, Sarajevo, Bosnia and Herzegovina): DNA ANALYSIS OF HUMAN SKELETAL REMAINS FROM THE MEDIEVAL NECROPOLES IN BOSNIA AND HERZEGOVINA – A GENETIC STRUCTURE OF OUR ANCESTORS AND PREDICTION OF THEIR MIGRATIONS

**Tamara Lukic** (University of Sarajevo, Faculty of Science, Sarajevo, Bosnia and Herzegovina): MOLECULAR-GENETIC ANALYSIS OF SKELETAL REMAINS FROM MEDIEVAL ARCHAEOLOGICAL SITES FROM THE TRAVNIK AREA

**Lejla Kovacevic** (University of Sarajevo, Faculty of Science, Sarajevo, Bosnia and Herzegovina): THE EFFECT OF STORAGE CONDITIONS OF BLOOD TRACES ON THE DNA ANALYSIS IN FORENSIC CASES

**Semra Burkic** (University of Sarajevo, Faculty of Science, Sarajevo, Bosnia and Herzegovina): FREQUENCY ANALYSIS OF 12 SELECTED X-STR MARKERS IN POPULATION OF BOSNIA AND HERZEGOVINA