

V CONGRESS OF THE SERBIAN GENETIC SOCIETY

BOOK OF ABSTRACTS

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WELCOME TO V CONGRESS OF THE SERBIAN GENETIC SOCIETY!

Dear colleagues,

Welcome to the 5th Congress of the Serbian Genetic Society. The Serbian Genetic Society (SGS) has been founded in 1968 and the first Congress organized by the SGS was held 20 years ago in Vrnjacka Banja. Since then, the Congress of Serbian Genetic Society is held every five years. Over the past 20 years, the Congress has grown from a national to an international meeting. On this occasion we will have participants from 26 countries, so we believe that this conference will successfully provide a platform for regional and international researchers and professionals in genetics to have a productive dialogue and share their views.

The aim of the Congress is to reflect on progress made in genetics, to celebrate the best of contemporary research and to anticipate future developments in the discipline.

The Congress will focus on wide range of topics organized in 8 sessions: Human Genome Variation, Medical Genetics, Genetic Toxicology: From Cell to Ecosystem, Adaptation to Changing Environments, Genetic Diversity, Phylogeny and Conservation, Methodology in Genetic Research, Pre Breeding and Breeding, New Techniques in Breeding. The programme will include 21 plenary lectures, 44 oral and 255 poster presentation and also, a special feature of the Congress will be a roundtable on novel food.

More than 300 participants are expected to attend this year's Congress. Many of the presentations will accordingly be in lecture-like settings, but we hope that there will also be ample opportunities for informal interaction outside the scheduled sessions. We hope that participants will have opportunity not only to attend presentations of cutting-edge research, but also through those interactions to launch new projects and to spend time with co-authors.

The successful organization of the Congress has required the talents, dedication and time of many members of the Scientific and Organizing committees and strong support from sponsors.

I hope that you will find the Congress both pleasant and valuable, and also enjoy the cultural and natural beauty of Kladovo and National park Djerdap.

Yours sincerely,



Branka Vasiljevic
Chair of the Scientific Committee

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III-07 Poster

Detection of genotoxicity *in situ* in fresh water worm *Branchiura sowerbyi* Beddard, 1892 (Oligocheta: Tubificidae) with comet assay

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This study is the first report of application of comet assay for *in situ* detection of genotoxicity on *Branchiura sowerbyi*, a freshwater worm commonly found in organic-rich sediment. This species has detritivorous way of feeding, sediment burrowing way of life characterized by low mobility which makes these organisms easily affected by the presence of xenobiotics in aquatic environment. Sampling was done monthly during 2014 on two sites, one on the Sava River (Duboko) and one on the Danube River (Višnjica). Images of 200 nuclei for each sampling were analyzed with a fluorescence microscope and scored with software (Comet Assay IV). Specimens from the site Duboko were characterized by higher DNA damage in comparison with Višnjica. Significant correlation was observed with DNA damage in specimens of fish and mussels collected in parallel at the selected sites. Physical, chemical parameters and microbiological quality of water assessed each month are in good correlation with comet assay. According to our results, *B. sowerbyi* could be used for *in situ* detection of genotoxicity.

Keywords: comet assay, *Branchiura sowerbyi*, genotoxicity, the Danube River, the Sava River