

Genetics & Applications

An Aspiring Interdisciplinary Journal of Genetic Research

Vol. 3, No. 2
October, 2019

*1st Congress of Geneticists
in Bosnia and Herzegovina
with International Participation*



Special edition
BOOK OF ABSTRACTS



The Official Publication of the
Institute for Genetic Engineering and Biotechnology
University of Sarajevo

Genetic Association in B&H



ISSN 2566-2937

Genetics & Applications

An Aspiring Interdisciplinary Journal of Genetic Research

Volume 3, Number 2

Special edition

Book of abstracts

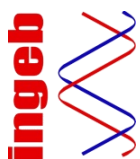
1st Congress of Geneticists in Bosnia and Herzegovina with
International Participation

October, 2019

Indexed/Abstracted

This journal is indexed or abstracted by:

EBSCO, DOAJ, CAB Abstracts, Google Scholar, Global Health database and Crossref.



The Official Publication of the
Institute for Genetic Engineering and Biotechnology
University of Sarajevo

Organizing Committee

Doc. dr. Anja Haverić, secretary of the Association

Prof. dr. Emina Kiseljaković

Prof. dr. Kasim Bajrović, president

Katarina Vukojević, MD

Prof. dr. Lejla Pojskić

Mr. Marija Vuković

Mr.med.sci Mensuda Hasanhodžić, MD

Doc. dr. Mirela Mačkić-Đurović

Doc. dr. Naida Lojo-Kadrić

Mr. Radmila Malešević

Prof. dr. Semina Hadžiabulić

Scientific Board

Prof. dr. Adaleta Durmić- Pašić

Prof. dr. Andrew Collins

Prof. dr. Azra Skender

Doc. dr. Belma Kalamujić Stroil

Prof. dr. Borut Peterlin

Prof. dr. Dalibor Ballian

Prof. dr. Damir Marjanović

Prof. dr. Dunja Rukavina

Prof. dr. Fuad Gaši

Prof. dr. Izet Eminović

Doc. dr. Jadranka Vraneković

Doc. dr. Jasmina Čakar, secretary of the Board

Prof. dr. Jelena Begović

Prof. dr. Lada Lukić Bilela

Prof. dr. Naris Pojskić

Prof. dr. Nermin Gözukirmizi

Prof. dr. Rifat Hadžiselimović, academician, president of the Board

Prof. dr. Sanin Haverić

Prof. dr. Slavka Ibrulj

Prof. dr. Sonja Šiljak-Yakovlev

Prof. dr. Stojko Vidović

Prof. dr. Vesna Hadživdić

Prof. dr. Zoran Galić

Technical support

Mr. Abdurahim Kalajdžić,

Mr. Amela Pilav,

Mr. Anesa Ahatović

Mr. Jasna Hanjalić

Mr. Maida Hadžić,

Mr. Mirela Džehverović,

Mr. Tamara Četković.

Editor in Chief of Genetics & Applications

Kasim Bajrović, University of Sarajevo, Institute for Genetic Engineering and Biotechnology, B&H

President of Editorial Board of Genetics & Applications

Rifat Hadžiselimović, University of Sarajevo, Institute for Genetic Engineering and Biotechnology, B&H

Executive Editor of Genetics & Applications

Jasmina Čakar, University of Sarajevo, Institute for Genetic Engineering and Biotechnology, B&H

Language Editor of Genetics & Applications

Adaleta Durmić-Pašić, University of Sarajevo, Institute for Genetic Engineering and Biotechnology, B&H

Technical Editors of Genetics & Applications

Jasna Hanjalić, University of Sarajevo, Institute for Genetic Engineering and Biotechnology, B&H

Mujo Hasanović, University of Sarajevo, Institute for Genetic Engineering and Biotechnology, B&H

Abdurahim Kalajdžić, University of Sarajevo, Institute for Genetic Engineering and Biotechnology, B&H

Publisher of Genetics & Applications

Institute for Genetic Engineering and Biotechnology, University of Sarajevo

Zmaja od Bosne 8, 71000 Sarajevo, Bosnia and Herzegovina

www.ingeb.unsa.ba

Phone: +387 33 220-926

Fax: +387 33 442-891

ingeb@ingeb.unsa.ba

Abstract number: PS10

ASSESSMENT OF DNA DAMAGE IN BLOOD, LIVER AND KIDNEY CELLS IN A HYPERTENSIVE RAT MODEL USING COMET ASSAY

Marija Bruić¹, Jelica Grujić-Milanović², Lada Živković¹, Dijana Topalović¹, Biljana Spremo-Potparević¹

¹University of Belgrade, Faculty of Pharmacy, Department of Pathobiology, Belgrade, Serbia

²University of Belgrade, Institute for Medical Research, Belgrade, Serbia

Hypertension is one of the primary risk factors for heart disease and stroke, the leading causes of death worldwide. Numerous factors have been implicated in the pathophysiology of hypertension: endothelial dysfunction, arterial remodeling and vascular inflammation. Common to all these processes is increased bioavailability of reactive oxygen species in the vessels, heart, brain and kidneys. Oxidative stress and increased reactive oxygen species levels damage all macromolecules, with DNA being particularly susceptible to oxidative damage. The aim of this study was to determine whether there is a difference in the level of DNA damage between normotensive and hypertensive rats using the alkaline comet assay. Blood samples and cells suspension from liver and kidney from three male spontaneously hypertensive rats were obtained. Three normotensive male Wistar rats were used as a control. Increased level of DNA damage was detected in blood and both of the studied tissues of hypertensive rats compared to the control, where significant difference was present in the liver and kidney cell suspensions. These results indicate that untreated hypertension in rats leads to an increased DNA damage in all of the studied samples, detected by comet assay.

Presenting author's e-mail: marija.bruic9@gmail.com