

**Programme of Symposium**  
**„Pharmacogenomics and Personalised Medicine“**

*Online, Friday, May 7th, 2021*

**Organised by:**

Association of Biochemists and Molecular Biologists of Bosnia and Herzegovina



**Co-organised by:**



UNIVERZITET U SARAJEVU  
FARMACEUTSKI FAKULTET

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## **Aim and main topics of Symposium**

Pharmacogenomics is an important part of personalized medicine, and is also pertinent in understanding drug interactions especially in cases of polypharmacy.

The potential consequences of genetic variants (that are the focus of pharmacogenetics / pharmacogenomics) are numerous and include the prolongation and amplification of a pharmacological effect; drug toxicity and development of side effects; absence of prodrug activation; lack of efficacy with the recommended doses and the need for higher doses; activation of alternative and harmful biochemical pathways; drug interactions.

Considering these reasons, it is important to know the patient's metabolic / phenotypic status, especially in the case of drugs with a narrow therapeutic range. Pharmacogenetic data are also increasingly important in evaluating the efficacy and safety of drugs in the regulatory approval process, and the number of drugs containing pharmacogenetic information in the SmPCs is increasing.

There has been a steady increase worldwide in pharmacogenetic testing in clinical practice with the aim of optimizing therapy, reducing the number of side effects and unnecessary medical costs to manage them. Such approach will allow the findings of pharmacogenetics/ pharmacogenomics to be successfully translated to clinical practice and lead to individualized approach for different patient groups. This will significantly improve the safety of medications use.

In Bosnia and Herzegovina, the use of pharmacogenetic tests in clinical practice is negligible, and initial efforts are needed to demonstrate its importance in personalized medicine, which is certainly the future of adequate patient therapy.

The aim of this training is to raise awareness of the importance of pharmacogenetics and personalized medicine, and is intended for academic staff in life and biomedical sciences, clinicians, as well as students from all over Bosnia and Herzegovina and the region. Experts from Europe engaged in the field of pharmacogenetics and personalized therapy for many years, together with experts from Bosnia and Herzegovina and the region, will outline the most important information and discuss future steps in the development of personalized medicine.

It is also an ideal opportunity for networking and potential future collaboration of mentioned experts. This will open up new opportunities for application for joint research projects, as well as provide students with new ideas in their further professional development.

## Opening ceremony

09:00-09:30

Adlija Čaušević

President of the Association of Biochemists and Molecular Biologists of Bosnia and Herzegovina  
Symposium President

Jerka Dumić

Chair of the Integration FEBS working group  
University of Zagreb, Faculty of Pharmacy and Biochemistry

Radivoj Jadrić

Secretary of the Association of Biochemists and Molecular Biologists of Bosnia and Herzegovina  
University of Sarajevo, Faculty of Medicine, Bosnia and Herzegovina

### **Chairs:**

*Adlija Causevic*, President of the Association of Biochemists and Molecular Biologists of Bosnia and Herzegovina

*Tanja Dujic*, University of Sarajevo, Faculty of Pharmacy, Bosnia and Herzegovina

09:30 – 10:15

### *Opening lecture*

Pharmacogenomics and personalized medicine - importance and challenges – *Jerka Dumić*,  
*University of Zagreb, Faculty of Pharmacy and Biochemistry, Zagreb, Croatia*

10:15 – 10:45

Pharmacogenomics and –epigenetics of ADME targets – *Matthias Schwab, Dr Margarete Fischer-Bosch Institute of Clinical Pharmacology, Stuttgart, Germany*

10:45 – 11:00 - Coffee break

11:00 – 11:30

Bioethics and Personalized medicine, *Andrzej Kochanski – Mossakowski Medical Research Institute Polish Academy of Sciences, Warsaw, Poland*

11:30 – 12:00

Pharmacogenomics of type 2 diabetes – *Tanja Dujic, University of Sarajevo, Faculty of Pharmacy, Sarajevo, Bosnia and Herzegovina*

12:00 – 13:00 - Lunch break

13:00 – 13:30

Pharmacogenomics and personalized therapy in oncological diseases – *Timur Ceric, Clinical Center University of Sarajevo, Sarajevo, Bosnia and Herzegovina*

13:30 – 14:00

Effect of CYP2D6 and CYP2C19 gene polymorphisms on escitalopram, sertraline, risperidone and aripiprazole therapy – *Marin Jukic, University of Belgrade, Faculty of Pharmacy, Belgrade, Serbia*

14:00 – 14:15 - Coffee break

14:15 – 15:00 - Discussion

### **Closing ceremony**

Tamer Bego

FEBS Education ambassador for Bosnia and Herzegovina

University of Sarajevo, Faculty of Pharmacy, Bosnia and Herzegovina

Symposium Co-President