



Portorož – Slovenia
Grand Hotel Bernardin
September 22 – 24, 2022

ESHG Pharmacogenetics Course

University of *Ljubljana*
Faculty of *Medicine*



EUROPEAN SOCIETY OF HUMAN GENETICS

This course aims at delivering up-to-date knowledge on pharmacogenetics to clinicians, pharmacists, clinical pharmacologists, genetic counsellors, clinical and molecular geneticists in training or certified as well as PhD students and researchers. It creates an opportunity for interaction and discussion with experts from all over Europe. The faculty combines experts from many fields of pharmacogenetics known for their teaching skills. Participants are encouraged to submit an abstract for on-site presentation of a clinical or genetic case in a Poster format or as short presentation.

Directors of the course:

Vita Dolžan (Ljubljana, Slovenia)
William Newman (Manchester, United Kingdom)
Munir Pirmohamed (Liverpool, United Kingdom)
Cristina Rodriguez-Antona (Madrid, Spain)
Ron van Schaik (Rotterdam, Netherlands)

Faculty:

Nada Božina (Zagreb, Croatia)
Erika Cecchin (Aviano, Italy)
Vita Dolžan (Ljubljana, Slovenia)
Raffaella Franca (Trieste, Italy)
Vladimir Gašić (Belgrade, Serbia)
Katja Goričar (Ljubljana, Slovenia)
Magnus Ingelman-Sundberg (Stockholm, Sweden)
Nikola Kotur (Belgrade, Serbia)
Metka Lenassi / Marija Holcar (Ljubljana, Slovenia)
John McDermott (Manchester, United Kingdom)
William Newman (Manchester, United Kingdom)
Sonja Pavlović (Belgrade, Serbia)
Sir Munir Pirmohamed (Liverpool, United Kingdom)
Cristina Rodriguez-Antona (Madrid, Spain)
Ron van Schaik (Rotterdam, Netherlands) TBC
Biljana Stanković (Belgrade, Serbia)
Julia C. Stingl (Aachen, Germany)
Gabriele Stocco (Trieste, Italy)
Branka Zukić (Belgrade, Serbia)

Local Organizing Committee (Ljubljana, Slovenia):

Vita Dolžan, chair
Katja Goričar, Sara Redenšek Trampuž, Tanja Blagus, David Vogrinc

PROGRAMME

Day 1: THURSDAY SEPTEMBER 22ND

8:00 – 8:30 **Registration**

Introduction to Pharmacogenetics

8:30 – 8:45 **Course Welcome: Vita Dolžan** (Slovenia)

8:45 - 9:30 **Opening lecture:** Improved individualized drug treatment using novel pharmacogenomic biomarkers; an update - **Magnus Ingelman-Sundberg** (Sweden)

9:30 - 10:15 Pharmacogenetics and drug-drug-gene interactions for precision dosing - **Julia C. Stingl** (Germany)

10:15 - 11:00 Coffee break

Pharmacogenomics of Adverse Drug Reactions

11:00 - 11:45 Pharmacogenomics of drug adverse events - **Sir Munir Pirmohamed** (United Kingdom)

11:45 - 12:15 Drug-drug-gene interactions as mediators of adverse drug reactions in statin treatment - **Nada Božina** (Croatia)

12:15 - 12:30 Hepatotoxicity and rhabdomyolysis in kidney transplant patient with COVID-19: possible role of remdesivir and atorvastatin drug-drug-gene interactions - **Nada Božina** (Croatia)

12:30 – 14:00 Lunch

Pharmacogenomics Resources

14:00 - 15:30 **Workshop:** Interpreting pharmacogenetic data in clinical practice: databases and resources - **John McDermott, William Newman** (United Kingdom)

15:30 – 16:30 Coffee break and poster viewing

Short Talks

16:30 - 18:00 Short talks selected from abstracts

19:00 **Welcome reception**

Day 2: FRIDAY SEPTEMBER 23RD

Clinical Topics in Pharmacogenetics

8:30 - 9:10 Pharmacogenetics and the brain - **Julia C. Stingl** (Germany)

9:10 - 9:50 Pharmacogenetics in treatment of cardiovascular diseases - is it cost-effective? – **Lana Ganoci** (Croatia)

9:50 - 10:30 Pharmacogenetics lessons from clinical genetics - **William Newman** (United Kingdom)

10:30 – 11:00 Coffee break

Cancer Pharmacogenomics I

11:00 - 11:30 From somatic variants to targeted cancer treatment - **Cristina Rodriguez-Antona** (Spain)

11:30 - 12:00 Cancer pharmacogenetics in the era of chronic treatment with oral anticancer drugs – **Erika Cecchin** (Italy)

12:00 - 12:30 Pharmacogenomics and pharmacotranscriptomics of acute leukemia in children: a path to personalized medicine - **Sonja Pavlović** (Serbia)

12:30 – 14:00 Lunch

Cancer Pharmacogenomics II

14:00 - 15:00 **Workshop:** Detection of somatic mutations: CAST vs. dPCR - **Nataša Toplak** (Slovenia)

15:00 - 15:30 Pharmacogenomic and epigenomic biomarkers in radiotherapy - **Katja Goričar** (Slovenia)

15:30 – 16:30 Coffee break and poster viewing

Novel Biomarkers of Treatment Response

16:30 – 17:00 Extracellular vesicles as biomarkers (of treatment response) -
Metka Lenassi / Marija Holcar (Slovenia)

17:00 – 17:30 Extracellular vesicles as innovative tools for assessing adverse effects of immunosuppressant drugs - **Gabriele Stocco** (Italy)

17:30 – 18:00 Peptide biosensors for diagnosis and monitoring of genetic-driven oncohaematological diseases - **Raffaella Franca** (Italy)

18:00 – 18:30 Pharmacogenomics landscape of COVID-19 therapy response in Serbian population - **Branka Zukić** (Serbia)

19:00 **Conference dinner**



Day 3: SATURDAY SEPTEMBER 24TH

Clinical Implementation of Pharmacogenetics I

8:30 - 9:10 How to make pharmacogenomic information accessible to healthcare: the UK experience - **William Newman** (United Kingdom)

9:10 - 9:50 Clinical implementation of pharmacogenetics for routine drug prescription: what are the unmet needs? - **Ron van Schaik** (The Netherlands)

9:50 - 10:30 Clinical implementation of germline variants in cancer therapy - **Erika Cecchin** (Italy)

10:30 – 11:00 Coffee break

Clinical Implementation of Pharmacogenetics II

11:00 - 11:30 Pharmacogenetic testing in routine clinical practice: it's about time - **John McDermott** (United Kingdom)

11:30 - 12:00 Implementation of panel pharmacogenomics testing: lessons learnt from the PREPARE study - **Vita Dolžan** (Slovenia)

12:00 - 12:30 Short talks selected from abstracts

12:30 – 14:00 Lunch

Workshop: Extracting Pharmacogenetic Information from NGS Data

14:00 - 14:20 Next Generation Sequencing (NGS) Technology - **Branka Zukic** (Serbia)

14:20 - 14:50 Bioinformatic preprocessing of NGS data: from raw data to genetic variants - **Biljana Stankovic** (Serbia)

14:50 - 15:10 Interpretation of NGS Results: analysis of pharmacogenomic variants - **Vladimir Gasic** (Serbia)

15:10 - 15:30 Bioinformatics resources in pharmacogenomics research - **Nikola Kotur** (Serbia)

15:30 – 16:30 Coffee break and poster viewing

16:30 – 17:00 Clinical pharmacogenetic analysis from diagnostic exome sequencing data - **Cristina Rodriguez-Antona** (Spain)

17:00 - 17:45 **Closing lecture:** Pharmacogenetics – future directions - **Sir Munir Pirmohamed** (United Kingdom)

18:15 A guided tour of Piran

19:30 Farewell dinner in Piran

This course is endorsed by:

HORIZON-WIDERA-action: **PharmGenHUB** (GA No. 101059870);

H2020 MSC ITN-action: **TranSYS** (GA No. 860895);

H2020 research and innovation programme: **ERA Chair CONI** (GA No. 951851)
