



1st Collaborative session

MOLECULAR BIOMARKERS AND STATISTICAL LEARNING IN PREDICTIVE, PREVENTIVE AND PERSONALISED MEDICINE

COOPERATION EVENT BETWEEN GENETICS ALBANIA AND NANOALKAN REGIONAL CENTER

Tirana, Albania (September 30, 2025)

This session on Molecular Biomarkers and Statistical Learning in Predictive, Preventive, and Personalised Medicine, is part of the nanoBalkan Conference in proud collaboration with Genetics Albania.

This session stands at the intersection of nanotechnology, genetics, and molecular biology, reflecting a growing movement toward precision healthcare. By harnessing cutting-edge developments in molecular biomarkers and the power of statistical learning, we are redefining how diseases are predicted, prevented, and treated - moving from reactive to proactive medicine.

Our discussions will highlight the transformative potential of nanotechnological tools in biomarker discovery, data-driven models in patient stratification, and how collaborative frameworks between disciplines and institutions - such as this unique partnership between nanoBalkan and Genetics Albania - can accelerate progress toward truly personalised medicine.

Join us as we explore how cross-sector synergy and innovation are shaping the future of healthcare.

LOCATION:

NanoBalkan2025 will take place in Hotel Tirana International, Albania

DATE: September 30, 2025

ORGANISERS:

Event organized by Phantoms Foundation (Spain), NanoBalkan Regional Center and Albanian Society of Human Molecular Genetics (ASHMG) with the support from Albania Academy of Sciences and University of Tirana.

ORGANISING COMMITTEE

Antonio Correia (Phantoms Foundation, Spain) - Coordinator
Arben Merkoçi (NanoBalkan, ICN2, Spain) - Co-coordinator
Merita Xhetani (ASHMG, University of Tirana)
Majlinda Vasjari (NanoBalkan, University of Tirana, Albania)
Pirro Hysi (King's College, London)

TENTATIVE PROGRAM

Chair person: Pirro Hysi

09:00-09:30 Mahantesh Biradar (Moorfields Eye Hospital, London, United Kingdom)- *"Big data from epidemiological cohorts and analyses of disease-causing DNA variations";*
09:30-10:00 Chris Bell (Queen Mary University of London, United Kingdom)" *Epigenomic Insights into Human Health & Disease*",
10:00-10:30 Bani Tamraz (University of California San Francisco, USA)- *"Point of care use of pharmacogenetics "*,

Coffee break/poster session

11:00-11:30 Ajda Pristavc (King's College London, United Kingdom)- *"Machine learning exploration of the human metabolism in health and disease"*,
11:30-12:00 Mario Falchi (King's College London, United Kingdom)- *"Microbiome: the human species' evolutionary waltz with bacteria"*.
12:00-12:30 Pirro Hysi (King's College London, United Kingdom)- *"Future opportunities and challenges in genomic medicine"*

Lunch

14:00-14:30 Merita Xhetani (University of Tirana, Albania)- *"Exploring the Relationship Between Pregnancy Loss and Genetic Factors: An Examination of Fetal Chromosomal Abnormalities."*
15:00- 15:30 Sidorela Dunolli (University Hospital Koço Gliozheni, Albania)- *"Artificial Intelligence in embryo selection: integrating genetic profile with morphology"*
15:30-16:00 Arta Lugaj (University of Tirana, Albania)- TBD
16:00-16:30 Ariol Rama (University of Tirana, Albania)- TBD