THEMATIC MINI-CONFERENCE WITH MATCHMAKING

PERSONALISED MEDICINE

October 26-27, Bucharest

With the mini-conference organized on October 26-27 in Romania and hosted by the University **of** Medicine and Pharmacy Carol Davila UMFCD from Bucharest, Alliance4Life Project has ended its thematic mini-conferences which aimed to share research ideas of intellectual origin in Central and Eastern European countries and to create the opportunity for matchmaking with the pharma and Meditech industry.

The conference and trigger event have been organized together with yearly University Congress, celebrating together the great values of cooperation within a higher education network and increase research and administrative capacity in an Easter and Central European University environment.

Both events were opened by the project's coordinating representative from UMFCD, Professor Iuliana Ceausu, together with the rector of the university, Professor Viorel Jinga, the vice-rector for scientific research, Professor Simona Ruță, the vice-deans for scientific research of the 4 faculties of UMFCD and the health advisor to the President of Romania, Professor Diana Loreta Păun.

The speakers and participants consisted of research and development leaders in the areas of PERSONALISED MEDICINE. As Personalised Medicine represents an effective way to improve individual health based on family history, personal medical data, and genetic information, this event aimed to create and strengthen a community of specialists, bringing together health professionals from different fields.

Focusing on whole - person patient centered health, uniting the Alliance for Life community and bringing together healthcare professionals not only from Europe, but also from US and New Zealand, this Conference has attracted more than 50 participants from the most prestigious universities and institutes which are either partners in this project or important guests of this

conference and hopefully future partners in beautiful collaborative projects, more than 30 oral presentations of health professionals from all disciplines, who are committed to advancing personalized and integrative medicine and healthcare.

The field of healthcare continues to move from the inefficient, one-size-fits-all-patients medicine of today, toward the data-driven and personalised medicine of tomorrow.

The 7 sessions of topics subjects ranged from descriptions of revolutionary techniques, new approaches and unique pathways in what is called personalized medicine, providing many opportunities for an extraordinary dynamic of discussions and shared information.

Human genetic variation may lead to different responses from patients who are subjected to the same treatments. This is why bioanalytics represents an efficient support tool for personalized medicine tools for enabling precision medicine **(Osvalds Pugovičs)**.

Session 1 (Genetic Diagnostics and Personalized Medicine) was focused on children with presentations by Daniela Gasperikova, PhD, DSc Research Director, Biomedical Research Centre, Slovak Academy of Sciences entitled "Genetic risk score for T1D in children with newly diagnosed diabetes" and Dana Craiu, Deputy Vice-Dean of Research, Professor at the Faculty of Medicine, UMFCD with the presentation "The role of genetics in the personalized treatment of epilepsy in children". The finding regarding Epimutation in the Mmachc Promoter as a Cause of Vitamin B12 Metabolism Disorder presented by **Martina Škopková,** RNDr., PhD researcher, Biomedical Research Center, Slovak Academy of Sciences will have an impact on diagnosis, and genetic counselling in families with genetic diseases, as well as in the development of new therapeutic approaches.

From an engineering point of view, precision medicine involves the use of technologies to acquire and validate population-wise data (**Srecko Gajovic, Professor, Medical Univ. Zagreb, Croatia:** The tehnological entities between person-centered care and personalized medicine)

Session 2 (Engineering for Personalized Therapies) has provided important data on novel biocompatible therapeutic solution for bone regeneration (**Nikola Štoković**) and offered interesting information concerning to the significant advancements in bone grafts and bone graft substitutes in order to augment spinal fusion **(Aleš Hampl).**

The tehnological entities between person-centered care and personalized medicine (**Srecko Gajovic, Professor, Medical Univ. Zagreb)**

Technology is very active in shaping knowledge landscapes, and it is the base of tremendous advancements in the health digital environment. Technology provides the means by which the user and system can handle the contents of knowledge landscapes.

Cardiovascular disease, the leading cause of death worldwide, was assessed in Estonia in relation to a risk prediction algorithm based on data obtained from electronic health and social records

(Nikita Umov). Along with the known risk factors of cardiovascular diseases (CVDs) constituting metabolic syndrome (MS), the gut microbiome and some of its metabolites, in particular trimethylamine-N-oxide (TMAO), are actively discussed. Many studies have established a link between the metabolism of certain microbes and the development of cardiovascular disease (**Maija Dambrova, Professor, Head of Laboratory of Pharmaceutical Pharmacology, Latvian Institute of Organic Synthesis).** Non-coding RNAs have been identified as critical novel regulators of cardiovascular risk factors and cell functions and are thus important candidates to improve diagnostics and prognosis assessment (**Fabio Martelli Director of the Molecular Cardiology Laboratory at Policlinico San Donato, Italy)**

Professor Dr Mircea Ivan, Indiana University School of Medicine had discovered the ancient enzymatic machinery that allows all metazoan cells to monitor O2 abundance in their environment, the resulting paper being recognized as essential for the 2019 Nobel Prize in Medicine. This work paved the way for the development of a new class of pharmaceutical agents that mimic the hypoxic response by inhibiting HIF prolyl hydroxylases, conducting to one of the first few examples of noncoding RNAs being involved in adaptive responses.

University of Otago (New Zealand) researchers have used high-resolution electron microscopy images to reveal how an anti-cancer virus interacts with tumor cells, increasing its potential to save lives. Seneca Valley Virus (SVV), a newly discovered virus which infects cancer cells but not normal tissue, has become a main research project in the laboratory of **Dr Mihnea Boștină**, Academic Director of Otago's OMNI Electron Microscopy unit and senior lecturer in the Department of Microbiology and Immunology: Building viruses for fighting diseases.

A4L universities' industry partners were represented by BioVendor (Veronika Chladova) and Ericsson (**Zoran Topolnjak).** BioVendor brings new technology fastGEN for examination of the mutation status of oncomarkers in samples. Technology is base on ultra-deep sequencing of short amplicons obtained by a single polymerase chain reaction with special tagged hybrid primers. Ericsson Nikola Tesla's health care portfolio in Croatia consists of a plethora of services and products that range from standalone systems targeting specific health care services like patient management, electronic health care records, e-referral, e-prescription up to comprehensive and integrated health care information systems like health information exchange, hospital information system or remote patient monitoring.

The conference opened doors for like-minds from all parts of the health space to step out of silos and to come together for two days of stimulating, evidence-based and informed sharing and learning.

FROM A4L to A4L _BRIDGE: SEED FUNDS, SEEDS FOR EXCELLENCE IN RESEARCH, HIGH EDUCATION AND CLINICAL PRACTICE - Trigger Event

As SEEDS FOR EXCELLENCE IN RESEARCH, HIGH EDUCATION AND CLINICAL PRACTICE was the goal of the Trigger Event, the two projects won by UMFCD in partnership with other universities within the SEED FUNDS were presented by their coordinators and teams, namely:

-Dr. Alexandru Scafa: Intelligent Monitoring of Heart Failure Improving Disease Management (My AI Heart), in partnership with University of Zagreb – Medical School si Medical University Sofia. The project goal is heart failure patients' management to achieve stability through the holistic approach, including management of comorbidities, treatment of cardiac insufficiency, lifestyle adjustment, and frequent doctor follow-ups.

-Dr. Poliana Leru Evaluation of respiratory allergies burden in particular urban areas and identification of best practices to improve their management and prevention (ERAllergies), in partnership with International Clinical Research Center, St. Anne's University Hospital, Medical University of Lodz, Medical University Sofia. The goal of the project is to establish the consortium with partners from four different countries and to create joint actions based on the expertise of the participants in the field of respiratory allergies and to collect relevant data from different regions in terms of disease burden, environmental exposure and health policies.

Seminars for innovative collaborative ideas were the subject of presentations on promoting inter-university collaboration to accelerate health research and innovation in Central and Eastern Europe while preserving the professional independence of the physician and researcher (Dr. Stfen Busnatu and Dr. Sorin Păun).

With debates around these topics we together celebrated the great values of cooperation within a higher education network and increase research and administrative capacity in an Easter and Central European University environment.


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Meldonium decreases L-carnitine
concentration


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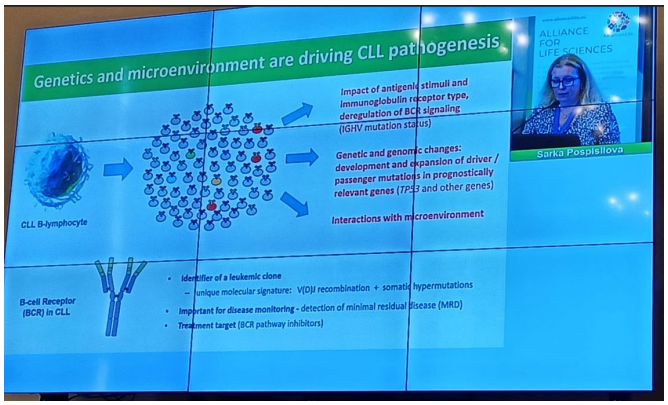
Genetics and microenvironment are driving CLL pathogenesis
Impact of antigenic stimuli and immunoglobulin receptor type, deregulation of BCR signaling (IGHV mutation status)
Genetic and genomic changes: development and expansion of driver / passenger mutations in prognostically relevant genes (TP53 and other genes)
Interactions with microenvironment
CLL B-lymphocyte
B-cell Receptor (BCR) in CLL
Identifier of a leukemic clone
unique molecular signature: V(DJ recombination + somatic hypermutations
Important for disease monitoring - detection of minimal residual disease (MRD)
Treatment target (BCR pathway inhibitors)
ALLIANCE FOR LIFE SCIENCES
Sarka Pospisilova