



Summer School 2022: Exploring the emerging role of the host microbiome in tumour heterogeneity

July 11-16th 2022 - Hybrid | University of Bucharest





CIVIS

A European Civic University

Alliance of 10 European Universities



Dear participants, dear colleagues,

Welcome to **the CIVIS Summer School “Single-cell approaches and omics”**. Titled **“Exploring the emerging role of the host microbiome in tumor heterogeneity”**, the summer school is addressed to CIVIS master’s and doctoral students.

This CIVIS International School is a multidisciplinary collaborative program that will provide students with intensive, cutting-edge education in the areas of modern cancer biology and immunology. **The general theme chosen is tumor heterogeneity, a phenomenon that influences all aspects of current basic and clinical cancer research.**

Tumor heterogeneity describes the differences between tumors of the same type in different patients, and between cells within the same tumor. It is the result of an overly complex landscape of cellular interactions between (pre)malignant cells and a dynamic tumor ecosystem, which hosts cells of the stroma and the immune system. Understanding the mechanisms underlying tumor heterogeneity is crucial to solving the challenges faced by researchers and clinicians in treating the most lethal aspects of cancer, such as metastasis and resistance to therapy.

Thank you for your participation as well as for your involvement in the future cancer management within Europe.

Best wishes,

CIVIS Summer School Team



SCIENTIFIC PROGRAM

Research lecture

Theoretical course

Practical workshop / Student presentation

Announcement / Social

**Please be advise that the Practical Workshops will take place at a different location.*

Monday, July 11

11:00-14:00	Registration and Orientation - Rectorate
13:00-14:00	Lunch (Cantemir Hall, Rectorship)
Microbiota in Health and disease	
14:30-15:00	Summer School Kick-off <i>Carmen Chifiriuc (Vice-Rector of University of Bucharest, Romania)</i> <i>Sorin Costreie (Vice-Rector of University of Bucharest, Romania)</i>
15:00-16:00	Microbiome and Colorectal cancer <i>David Hughes (UCD, Ireland)</i>
16:00-16:40	Targeting the microbiome in cancer <i>Iulia Balas (MICROBIOTICA, UK)</i>
16:40-17:00	Break
17:00-18:00	Posters from PhD and MSc students

Tuesday, July 12

Biology meets technology	
09:00-10:00	Introduction to bioinformatics of microbiome analysis <i>Larisa Sarghie (The Bioinformatics Institute, Romania)</i>
10:00-10:45	Tumor microenvironment and tertiary lymphoid structures <i>Karen Willard Gallo (Université Libre de Bruxelles, Belgium)</i>
10:45-10:11	Break
11:00-12:00	Predictive model for CRC based on shot-gun gut microbiome <i>Victor Moreno (Catalan Institute of Oncology, Spain)</i>
12:00-12:30	Microbiota anlaysis tools <i>Grațiela Grădișteanu (Research Institute of University of Bucharest, Romania)</i>
12:45-13:30	Lunch (Conference Hall, ICUB)
Practical workshop - Group 1 & 2	
13:30-15:30	Microbiota analysis workflow <i>Cristian Butnaru (Antisel, Romania)</i>
Practical workshop – Bioinformatics	
15:30-18:00	Bioinformatics of chemical structures wth biological activity <i>Speranța Avram (Faculty of Biology, University of Bucharest, Romania),</i> <i>Marius Surleac (Research Institute of University of Bucharest, Romania)</i>

Wednesday, July 13

Microbiome and big data analytics	
09:00-09:30	Transcriptomics in cancer <i>Sorina Dinescu (University of Bucharest, Romania)</i>
09:45-10:30	Cancer and exosomes as particles key in tumor progression <i>Gemma Dominguez (Universidad Autónoma de Madrid, Spain)</i>
10:00-10:15	Break
10:30-11:15	Targeting the gut and tumor microbiota in cancer <i>Laurence Zitvogel (AMU, France)</i>
11:15-12:00	Analyze and Sort up to 40 color Immuno oncology panels with Cytex spectral technology <i>Riccardo Pasculli (Accela, Prague)</i>
12:00-12:45	Microbiome differences between healthy tissue and adenoma of CRC <i>Ainhoa Garcia (Catalan Institute of Oncology, Spain)</i>
12:45-13:45	Lunch (Cantemir Hall, Rectorship)
Microbiome and big data analytics	
14:00-15:00	Bioinformatics of microbiome data analysis <i>Ozan Gundogdu (LSHTM, UK)</i>
15:00-16:00	Metabolomics and the microbiome <i>Stefano Cacciatore (ICGEB, South Africa)</i>
Practical workshop	
17:00-18:15	Multidimensional data analysis of cytometry data: a Business Intelligence approach <i>Antonio Cosma, (Institute of Health, Luxembourg)</i>

Thursday, July 14

Cancer-host-microbiome interplay

09:00-09:40	Microbiome Inflammatory Biomarkers and Colorectal Cancer Patients' Stratification <i>Elena Ionica (Faculty of Biology, University of Bucharest, Romania)</i>
09:45-10:45	The tumor microenvironment <i>Florina Bojin (OncoGen, Romania)</i>
10:45-11:00	Break
11:00-11:30	Flow cytometry potential applications in characterization of solid tumors <i>Claude Lambert (FRE-CNRS, France)</i>
11:30-11:50	TBA <i>Horia Bumbea (University of Medicine and Pharmacy "Carol Davila", Bucharest, Romania)</i>
11:50-12:30	NOVEL CO-DRIVERS IN MELANOMA PROGRESSION AND HETEROGENEITY <i>Gabriela Negroiu (Institute of Biochemistry, Romania)</i>
12:30-12:45	Switching from biological to biosimilar drugs in oncological diseases: Clinical evidence <i>Horia Bumbea (University of Medicine and Pharmacy "Carol Davila", Bucharest, Romania)</i>
12:45-13:30	Lunch (Conference Hall, ICUB)

Practical workshop - Group 1

13:30-18:00

Analysis of check points receptors by flow cytometry

Claude Lambert (FRE-CNRS, France), Luminița Măruțescu (Faculty of Biology, University of Bucharest, Romania), Bianca Gălățeanu (Faculty of Biology, University of Bucharest, Romania), Miruna Stan (Faculty of Biology, University of Bucharest, Romania)

Practical workshop - Group 2

15:30-18:00

Aurora 3L- Immuno-oncology training

Marta Brewinska (Accela, Olchowik)

**The 2 workshops will take place simultaneously; students will switch classes at 15.30*



Friday, July 15

A translation of omic data into the clinic

09:00-10:00	Basics of nutrigenomics <i>Cosmin Arsene (Genetic Centre, Romania)</i>
10:00-10:45	Mechanism of resistance of immunotherapy in solid cancer <i>Andrea Botticelli (Sapienza Università di Roma, Italy)</i>
10:45-11:00	Break
11:00-11:45	Gut metagenome associations with health data in Estonian Microbiome cohort <i>Elin Org (Institute of Genomics, University of Tartu)</i>
11:45-12:30	Nutrition, microbiome-Immunotherapy <i>Aristidis Iliopoulos (National and Kapodistrian University of Athens, Grece)</i>
12:30-13:30	Microbiota and cancer therapy. fact or fiction? <i>Aristotelis Bamias (National and Kapodistrian University of Athens, Grece)</i>
13:30-14:30	Lunch (Cantemir Hall, Rectorship)
Student Workshop-'Elevator pitch'	
14:30-17:00	Student presentations - Innovative research ideas
17:00-17:15	Closing – Luminița Măruțescu (Faculty of Biology, University of Bucharest, Romania)



Saturday, July 16

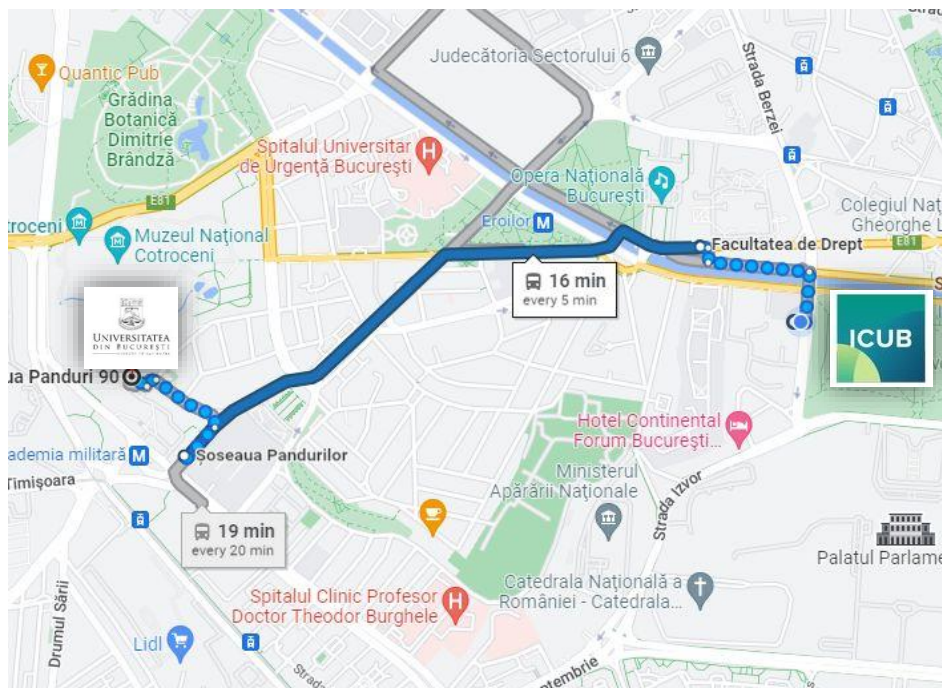
Visit to the Peleş Castle, Sinaia, Romania



Departure time: 9.00 am

Departure location: ICUB, University of Bucharest, Strada Splaiul
Independenței, Bucharest

Location



*ICUB, University of Bucharest,
Splaiul Independenței, Bucharest*



*Rectorship University of Bucharest,
Șoseaua Pandurii 90, Bucharest*

THANKS TO OUR PARTNERS

