

Componenta 9 Suport pentru sectorul privat, cercetare, dezvoltare și inovare  
Investiția 8 „Dezvoltarea unui program pentru atragerea resurselor umane  
înalt specializate din străinătate în activități de cercetare, dezvoltare și  
inovare”

PNRR/2022/C9/MCID/I8

**Nr.contract de finanțare:** 760281/26.03.2024

**Titlul proiectului:** Reactivation of hypermethylated genes and  
correction of pathogenic mutations by genome-editing technolo-  
gies in personalized medicine approaches in HCC organoids models  
(NEXTgenED)

**Numele beneficiarului:** INSTITUTUL CLINIC FUNDENI

**Codul proiectului:** 150/ 31.07.2023

# “NEXTgenED” WORKSHOP

- LECȚII ÎNVĂȚATE ȘI DIRECȚII VIITOARE  
- LEARNED LESSONS AND FUTURE DIRECTIONS

# PROGRAM

3-4 Iunie 2026

Institutul Clinic Fundeni

# MIERCURI 3 iunie 2026 / Wednesday JUNE 3, 2026

Locație: CEMT, Amfiteatru etaj 4

## 10:00-10:10 WELCOME & OPENING REMARKS - Proiect NEXTgenED

Chairs: Prof. Dr. Simona-Olimpia DIMA, Prof. Dr. Choon Kiat ONG

## 10:10-10:30 Multiplexed gRNA design and generation for CRISPR-based epigenetic demethylation of the CDKN2A promoter.

**Marton Fogarasi**, Corina Roman, Simona-Olimpia Dima, Choon Kiat Ong

## 10:30-10:50 Modulation of epigenetic factors to enhance the response to sorafenib in hepatocellular carcinoma.

**Andrei Șorop**, Alina-Veronica Ghionescu, Livia Sima, Cristin Coman, Cristina Elena Dinu-Pîrvu, Simona-Olimpia Dima

## 10:50-11:10 Molecular mechanisms underlying drug resistance in hepatocellular carcinoma.

**Alina-Veronica Ghionescu**, Andrei Sorop, Daniela Lixandru, Norica Nichita, Simona-Olimpia Dima

## 11:10 - 11:15 Discutii / Discussions

## 11:15-11:45 Pauza de cafea/ Coffee break / ROUNDTABLE DISCUSSION

## 11:45-12:05 CfDNA characteristics in a cirrhosis-HCC cohort

**Ioana Manea**, Speranta Iacob, Razvan Iacob, Alina-Veronica Ghionescu, Andrei Sorop, Daria Gheorghe, Roxana Saizu, Delia Prisecariu, Simon-Olimpia Dima, Liliana Gheorghe

## 12:05-12:25 Interleukin profile (IL-2, IL-10, and IL-35) in patients with mature T-cell lymphomas at diagnosis

**Alexandru Bardas**, Mihaela Uta, Ana Manuela Crisan, Miruna Elena Timovan, Valeria Tica, Camelia Sandu, Alina Buse, Horia Mihail Sandu, Camelia Dobreă, Daniel Coriu

## 12:25-12:45 Mutational profile and epigenetic reactivation of Wnt pathway inhibitory genes in hepatocellular carcinoma.

**Robert Gabor**, Corina Roman, Marton Fogarasi, Daniela Cucu, Alina-Veronica Ghionescu, Maria-Gabriela Croitoru, Simona-Olimpia Dima, Choon Kiat Ong

## 12:45-13:00 Discutii / Discussions

## 13:00-14:00 Pauza de pranz / Lunch break CEMT, 4th floor

**14:00-14:20** KRAS inhibitors and statins in PDAC: synergistic effect and resistance mechanisms.

**Alexandru Pinte**, Daniela Lixandru, Claudia Vâlcu, Robert Gabor, Andrei Șorop, Alina-Veronica Ghionescu, Elena-Mihaela Vrabie, Mihai Adrian Eftimie, Traian Dumitrascu, Vladislav Brasoveanu, Adina Croitoru, Simona-Olimpia Dima

**14:20-14:40** Interventional Endoscopy in the early molecular diagnosis of pancreatic ductal adenocarcinoma: integration ERCP and EUS.

**Teodor Cabel**, Daniela Lixandru, Claudia Vâlcu, Robert Gabor, Andrei Șorop, Alina-Veronica Ghionescu, Oana Plotogea, Christopher Pavel, Madalina Ilie, Gabriel Constantinescu, Simona Olimpia Dima

**14:40-15:00** Predicted mRNA/miRNA networks driving liver disease progression: new insights and emerging research perspectives.

**Daniela Lixandru**, Andrei Șorop, Alina-Veronica Ghionescu, Cristin Coman, Diana Larisa Ancuța, Maria-Gabriela Croitoru, Marton Fogarasi, Simona-Olimpia Dima

**15:00-15:20** Personalized therapy through pharmacogenomics: current perspectives.

**Diana-Roxana Constantinescu**, Andrei Șorop, Alina-Veronica Ghionescu, Gheorghe Potlog, Vlad Herlea, Daniela Lixandru, Nicolae Bacalbașa, Cristina Elena Dinu-Pîrvu, Simona-Olimpia Dima

**15:20-15:30** Discutii / Discussions

**15:30-17:00** Vizita CEMT /CEMT Visit

# JOI 4 iunie 2026 / THURSDAY JUNE 4, 2026

Locație: Amfiteatru Thomas Starzl, Institutul Clinic Fundeni, Clădirea B

## 10:00-10:10 WELCOME & OPENING REMARKS - Proiect NEXTgenED

Chairs: Prof. Dr. Simona-Olimpia DIMA, Prof. Dr. Choon Kiat ONG, Prof. Dr. Bin Tean TEH

## 10:10-10:50 KEYNOTE SESSION

**Prof. Bin Tean TEH**, National Cancer Centre Singapore  
Molecular Changes Underlying Cholangiocarcinoma Heterogeneity and their Clinical Implications.

## 10:50-11:30 KEYNOTE SESSION

**Prof. Choon Kiat ONG**, National Cancer Centre Singapore  
Treatment Advances in Natural Killer/T-cell lymphoma.  
Research Update on NEXTGenED Project – Developing Resources and Challenges

## 11:30-11:40 Discutii / Discussions

## 11:40-12:00 Pauza de cafea/ Coffee break / ROUNDTABLE DISCUSSION

**12:00-12:15** Immune microenvironment in hepatocellular carcinoma-immunohistochemical analysis  
**Nicolae-Catalin Pecheanu**, Elena Stoica-Mustafa, Augustina Hutanu, Florina Almarii, Andrei Sorop, Alina-Veronica Ghionescu, Irina-Oana Petre-Lixandru, Vlad Brasoveanu, Florin Botea, Nicolae Bacalbasa, Simona-Olimpia Dima, Vlad Herlea

**12:15-12:30** Association between genomic alterations and clinical features in resectable liver cancer patients.  
**Victor-Ștefan Ionescu**, Maria-Gabriela Croitoru, Andrei Șorop, Alina-Veronica Ghionescu, Claudia Vâlcu, Corina Roman, Marton Fogarasi, Mihaela Gheorghiu, Daniela Cucu, Elena-Mihaela Vrabie, Mihai Adrian Eftimie, Traian Dumitrascu, Vladislav Brasoveanu, Vlad Herlea, Simona-Olimpia Dima, Choon Kiat Ong

**12:30-12:45** Establishment of patient-derived organoids from liver tumors: success rate, growth potential, and molecular characterization.  
**Maria-Gabriela Croitoru**, Victor Ionescu, Andrei Șorop, Alina-Veronica Ghionescu, Claudia Vâlcu, Daniela Lixandru, Marton Fogarasi, Mihaela Gheorghiu, Elena-Mihaela Vrabie, Mihai Adrian Eftimie, Traian Dumitrascu, Vladislav Brasoveanu, Daniela Cucu, Vlad Herlea, Simona-Olimpia Dima, Choon Kiat Ong

**12:45-13:00** Exploring public databases for Liver Disease Research  
**Irina Oana Petre-Lixandru**, Maria-Gabriela Croitoru, Ion Maruntelu, Andrei Șorop, Alina-Veronica Ghionescu, Daniela Lixandru, Simona-Olimpia Dima

## 13:00-14:00 Pauza de pranz / Lunch break CEMT, 4th floor

## KEYNOTE SESSIONS

### Bin Tean TEH

Deputy CEO (Enterprise & Research), National Cancer Centre Singapore, Singapore  
Professor, Duke-NUS Medical School, Singapore



Dr. Teh obtained his MD (1992) from the University of Queensland, Australia and his PhD (1997) from the Karolinska Institute, Sweden. His laboratory focuses on Genomics of Asian-Prevalent Cancers including hepatobiliary cancer, herbal carcinogen-related cancer and fibroepithelial tumours of the breast. Dr Teh has published extensively, with over 450 peer-reviewed publications. He is a past and present member of numerous editorial boards for journals including Lancet Oncology, Science Translational Medicine, Cancer Research. Dr Teh is a recipient of the 2015 SingHealth Distinguished Researcher Award, 2015 Singapore President Science Award, 2018 AACR (American Association of Cancer Research) Team Science Award, and the 2021 JCA (Japanese Cancer Association) International Award.

# Molecular Changes Underlying Cholangiocarcinoma Heterogeneity and their Clinical Implications

## Bin Tean TEH

National Cancer Centre Singapore

Cholangiocarcinoma (CCA) is a highly lethal adenocarcinoma of the hepatobiliary system, which can be classified as intrahepatic, perihilar and distal. It is a heterogeneous malignancy with high mortality and dismal prognosis, and an urgent clinical need for effective new therapies. It is therefore important to understand the genomic, epigenomic, proteomic and metabolomic changes underlying the heterogeneity of CCA and identify potential therapeutic targets based on these changes. We previously characterized the genomic alterations by profiling CCA of different etiological groups. Approved therapies based on some of these genomic changes will be reviewed in this talk. More recently, we studied the CCA epigenome by looking at both aberrant DNA methylation and dysregulation of enhancer activities which are known to affect carcinogenesis and potentially targetable therapeutically. Our study elucidates the mechanisms underlying enhancer dysregulation and deepens understanding of different tumorigenesis processes in distinct CCA subtypes, with potential significant therapeutics and clinical implications. Finally, latest advances in CCA research will also be reviewed.

## KEYNOTE SESSIONS

### Choon Kiat ONG

Head, Division of Cellular and Molecular Research, National Cancer Centre Singapore.

Associate Professor, Duke-NUS Medical School, Singapore.

Project Director, Center of Excellence in Translational Medicine (CEMT), Fundeni Clinical Institute (FCI), Romania.



Dr. Ong Choon Kiat obtained his PhD (2006) from the National University of Singapore. His laboratory focuses on understanding aggressive lymphomas and translate their discoveries into clinical applications including developing novel therapeutic strategies to overcome drug resistance. Dr. Ong has published more than 130 peer-reviewed publications in prestige journals such as Blood, Cancer Discovery, Leukemia, etc... Dr Ong, along with other collaborating scientists in the field of cancer research, was awarded the “AACR Team Science Award 2018” by the American Association for Cancer Research (AACR), for furthering the knowledge of Asian prevalent cancers, contributing to the progress of cancer detection, treatment and prevention. He has also received the Outstanding Researcher Award (SingHealth GCEO Excellence Awards 2024).

## (i) Treatment Advances in Natural Killer/T-cell lymphoma. (ii) Research Update on NEXTGenED Project - Developing Resources and Challenges

The therapeutic landscape of Natural Killer/T-cell Lymphoma (NKTL) has evolved dramatically, shifting from the poor outcomes of the anthracycline era to the improved efficacy of L-Asparaginase-based regimens. However, management of relapsed or refractory (R/R) disease remains a significant clinical challenge. While immune checkpoint inhibitors (ICIs) have emerged as a promising salvage therapy, response rates vary across patient cohorts. The ability to stratify patients for effective ICIs treatment will improve the treatment outcome of this aggressive disease. I will describe our efforts in biomarkers discovery, development of drug resistance models and overcoming resistance to ICIs.

The NEXTGenED Project - “Reactivation of hypermethylated genes and correction of pathogenic mutations by genome-editing technologies in personalized medicine approaches in HCC organoid models” was initiated in FCI about 2 years ago. I will give an update on what we have developed and achieved, as well as the challenges we have encountered.



**FUNDENI CLINICAL INSTITUTE**

**Adres: 258, Sos. Fundeni, sector 2, Bucharest**

**Telefon: 0213172194, Fax 021.318.04.44**

**E-mail: [secretariat@icfundeni.ro](mailto:secretariat@icfundeni.ro)**

**[www.icfundeni.ro](http://www.icfundeni.ro)**

**[www.cemt.ro](http://www.cemt.ro)**