



Second Annual Meeting

2-4 July, 2025

“Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania

BOOK OF ABSTRACTS

<https://net4brain-cost.eu/>



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2nd Edition

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Faculty, Geneva College of Longevity Science;

**Faculty, Geneva School of Business Administration;
University of Applied Sciences of Western Switzerland;**

World EWA (European Women's Association) Ambassador;

Stress Congress Chair

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WG2 Leader	Dr Anna GOLEBIEWSKA
WG3 Leader	Prof Tugba BAGCI-ONDER
WG4 Leader	Prof Gabriel FERNANDEZ CALVO
WG5 Leader	Prof Sebastian BRANDNER
WG6 Leader	Dr Terezia KISKOVA

Additional roles

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WG3 Co-Leader	Dr Yasin KAYMAZ
WG4 Co-Leader	Prof Claudio ANGIONE
WG5 Co-Leader	Dr Alkinoos ATHANASIOU
WG6 Co-Leader	Dr Claudia MAZO
Young researcher group	Dr Annalisa OCCHIPINTI

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Second Annual Meeting

2-4 July, 2025

“Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania

SCIENTIFIC PROGRAM

Location: University of Medicine and Pharmacy "Carol Davila", Eroii Sanitari Bvd., no. 8, sector 5, Bucharest, Romania

Day 1, Wednesday, July 2nd / THE BOARDROOM

First part of the first day - MC Meeting – THE BOARDROOM (SALA DE CONSILIU)

08:30– 9:30

Registration/ Registration desk

09:30 - 11:00

Net4Brain Core Group Meeting (only for core group members) PART I

11:00 - 11:30

Finger Foods and Tasty Bites (only for core group members)

11:30 - 13:00

Net4Brain Core Group Meeting (only for core group members) PART II

The second part of the first day -

THE BOARDROOM (SALA DE CONSILIU)

13:00 - 14:00

Welcome Reception of all attendees/ Meet and greet

14.00 - 14.05

Institutional Welcome: Prof. Univ. Dr. Luiza Spiru & Prof. Xinzhong Li

14.05 – 15:30

Doctor honoris causa ceremony

Session Chair:

Prof. Viorel Jinga Prof. Luiza

Spiru

Moderators: **Professor Viorel Jinga, Professor Univ. Dr. Luiza Spiru and Professor Cornelia Nişipir**

Prof. Univ. Dr. Luiza Spiru: *Laudatio* for Prof. Dr. Anca- L. Grosu, member of Leopoldin Academy – a career of excellence in the service of radiation oncology

Prof. Univ. Dr. Luiza Spiru Professor of Geriatrics, Gerontology, Old Age Psychiatry and Longevity Medicine “Carol Davila” University of Medicine and Pharmacy;

Saint Luca’s Clinical Hospital; Faculty, Geneva College of Longevity Science;

Faculty, Geneva School of Business Administration; University of Applied Sciences of Western Switzerland ; World EWA (European Women’s Association) Ambassador; President "Ana ASLAN International" Foundation; Stress Congress Chair

Prof. Dr. Viorel Jinga: Rector at Carol Davila University of Medicine and Pharmacy

Senate Resolution to confer the doctor honoris causa degree to Prof. Dr. Anca L.

Award Presentation - the title of doctor honoris causa of the Carol Davila University of Medicine and Pharmacy in Bucharest is awarded to Professor Anca L. Grosu.

Acceptance Lecture by Anca- L.Grosu, MD, FACR, Professor, Chair, Department of Radiation Oncology Medical Center – University of Freiburg, Germany

Major Memberships and Awards

- Member of the German National Academy of Sciences Leopoldina. Senator of Radiology Section, German National Academy of Sciences Leopoldina
- Member of the Review Board (Fachkollegium) for Nuclear Medicine, Radiation Therapy, Molecular Radiation Biology of the German Research Foundation (DFG)
- Member of the Advisory Board of German Cancer Aid (DKH)
- University Council Member, University of Freiburg, Germany
- Honorary Fellow of the American College of Radiology (FACR)
- President of the German Society of Radiation Oncology (DEGRO), elected at the DEGRO 2025 Congress
- Alfred Breit Award of the German Society of Radiation Oncology (DEGRO)

Keynote Talk 1

Acceptance Lecture by Anca- L.Grosu, MD, FACR, Professor, Chair, Department of Radiation Oncology Medical Center – University of Freiburg, Germany

Whole-brain irradiation with hippocampal sparing and dose escalation on metastases: neurocognitive testing and biological imaging (HIPPORAD) – a prospective randomized multicenter trial (NOA-14, ARO 2015- 3, DTK-ROG)

15:30 – 16:15

Chair: Prof. Xinzhong Li

Special Talk

Prof. Paul Brennan, Translational Neurosurgery, Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, UK

Journey from bench to actual bedside for brain tumour liquid biopsy test

16:15 – 16:30

Chair: Aida Hajdarpasic

Honorary Lecture of Affinity by Prof. Rodica Anghel , Prof. Dr. Liviu Bîlteanu, “Carol Davila” University of Medicine and Pharmacy

FLASH Effect by Plasma-generated Carbon Ions within a Large Scale Romanian National Laser Project (DR. LASER) - Perspectives Towards High Precision Neurosurgery

16:30 – 16:40

WG1 Dialog on! (10 mins)

16:40 – 17:00

Coffee Break

17:00 – 17:45
Chair: **Helene Castel**

Keynote Talk 2:

Prof. Bozena Kaminska-Kaczmarek, Laboratory of Molecular Neurobiology, Nencki Institute of Experimental Biology, Polish Academy of Sciences, Poland
Understanding the immune microenvironment of brain tumors with single-cell and spatial levels reveals new therapeutic opportunities

17:45 – 18:30

Session 2 talk (20mins):

Barbara Breznik, National Institute of Biology, department of Genetic Toxicology and Cancer biology, Ljubljana, Slovenia
Neuro-Oncology in 3D: Organoids, Avatars, and the Future of Brain Tumor Research

Short talk (10mins):

Helene Castel, Universite De Rouen Normandie, France
Mechanical cues alter glioblastoma cell nuclei and mRNA processing associated with aggressiveness

WG2 Dialog on! (10 mins)

19:30

Dinner (At own expense)

Day 2, Thursday, July 3rd / THE LARGE AMPHITEATER (AMFITEATRUL MARE)

08:15 – 09:00

Registration/ Greetings/ Coffee

09:00 - 09:05

Welcoming to the second day

09:05 - 09:50
Chair: **Prof. Tugba Bagci- Onder**

Keynote Talk 3:

Gaetano Gargiulo, Max-Delbrück- Center for Molecular Medicine (MDC), Germany
(Targeting) Cell states in glioblastoma

09.50 – 11.10

Session 3 Talk (30 mins)

Prof. Tugba Bagci- Onder, Koc University, Istanbul, Turkey
Identifying epigenetic regulators of chemoresistance in medulloblastoma

- Short Talk 1 (10 mins):

Milica Pesic, Institute for Biological Research "Sinisa Stankovic", Serbia
LB-100, an inhibitor of protein phosphatase 2A, sensitises glioblastoma cells to anticancer drugs by modulating P-glycoprotein expression

- Short Talk 2 (10 mins):

Sagar Acharya- High-field MR Center, Department of Biomedical Imaging and Image-guided Therapy, Medical University of Vienna, Vienna, Austria
Quantitative validation of 7T MRSI in gliomas by targeted mass spectrometry

- Short Talk 3 (10 mins):

Diana Agullar Morante, University of Seville-Institute of Biomedicine of Seville, Spain
Replication Stress and Transcription in Glioblastoma: new aproches

WG3 Dialog on! (20 mins)

11:10 – 11:30

Coffee Break

11.30- 13.00

Chair: **Prof. Radim Jancalek**

Mega Talk

Session Talks 1 - (20 mins)

Marcello Leopoldo, University of Bari Aldo Moro, Italy

Towards a Positron Emission Tomography (PET) radiotracer for molecular imaging of purinergic P2X7 receptor in glioma

Session Talks 2 - (20 mins)

Thomas C. Booth, King's College London, United Kingdom

Radiogenomics in adult high-grade diffuse glioma: consensus statement on the promise of multimodal neuro-oncology machine learning models

- Short Talk 1 (10 mins):

Thomas Altendorfer-Kroath, Institute for Biomedical Research and Technologies (HEALTH), Joanneum Research Graz, Austria

Assessing temporal metabolic evolution in the tumor environment of glioblastoma using the cOFM Xenograft in vivo model.

- Short Talk 2 (10 mins):

Yasin Kaymaz, Ege University, Faculty of Engineering, Bioengineering Department, Izmir, Turkey

Towards a Comprehensive Database for Brain Cancer Research: Integrating Multi-Omics, Imaging, and Spatial Atlases

- Short Talk 3 (10 mins):

Sedef Sarac Yalcinkaya, Koc University, Istanbul, Turkey

Uncovering the roles of KDM6A and KDM6B to identify novel therapeutic targets in IDH1-mutant gliomas

- Short Talk 4 (10 mins):

Javed Bilal, Technological University Dublin, Ireland

Advanced 3D Cell Culture Models and Microfluidic Lab-on-Chip Devices for Glioblastoma Therapy Evaluation

13:00 - 14:00

Break / Finger Foods and Tasty Bites

14:00 - 14:45

Chair: **Gabriel Fernandez Calvo**

Keynote Talk 4:

Nelbla Priego, Spanish National Cancer Research Centre (CNIO), Spain

Targeting brain metastasis through the pro-tumoral microenvironment

14:45 - 15:50

Session 4 Talk (20 mins)

Yahir Y. Calderon-Silva, University of Castilla-La Mancha (UCLM), Spain

Supporting mathematical research on brain metastases: Datasets of high-resolution MRI images with clinical data

- Short Talk 1 (10 mins):

Milana Frenkel-Morgenstern, Reichman University, Israel

AI-Enhanced Liquid Biopsy for Non-Invasive Glioblastoma Detection

- Short Talk 2 (10 mins):

José Antonio Romero Rosales, University of Castilla-La Mancha, Spain

Modeling and Clinical Implications of the VC-Resist Glioblastoma Cell-State: A PDE-Based Simulation Approach.

- Short Talk 3 (10 mins):

Ibrahim Ozturk, Osmaniye Korkut Ata University, Turkey

Applying Spiking Neural Networks for Brain Cancer Data Modeling and Classification

WG4 Dialog on! (15 mins)

15:50 – 16:15

Coffee Break

16:15 - 18:00
Prof. Li Xinzhong/
Prof. Radim Jancalek

MC MEMBERS MEETING (Strictly MC) -THE LARGE AMPHITEATER (AMFITEATRUL MARE)

16:15 - 18:00

Poster presentation (All Members)

Ending of the second part of the second day **-THE BOARDROOM'S LOBBY**

Day 3, Friday, July 4th / THE BOARDROOM (SALA DE CONSILIU)

08:30 – 09:00

Registration/ Greetings/ Coffee

09:00 – 09:45
Chair: **Aikinoose**
Athanasiou

Keynote Talk 5:

Prof. Mauricio Reyes, University of Bern - ARTORG Center for Biomedical Engineering Research, Switzerland

Automated segmentation with DeepBraTumIA, in applications such as IDH1 mutation classification, and leveraging these segmentations to scale hypothesis-driven research in neuro-oncology.

09:45 – 10:50

Session 5 Talk (20 min)

Prof. Radim Jancalek, Department of Neurosurgery, St. Anne's University Hospital, Brno, Czech Republic

Major Clinical Challenges in Brain Cancer Research

- Short Talk 1 (10 mins):

Carla Vitorino, Faculty of Pharmacy, University of Coimbra, Portugal

Enhancing glioblastoma treatment with pitavastatin and miRNA co-delivery via nanostructured lipid carriers

- Short Talk 2 (10 mins):

Suheda Duran, Koç University Research Center for Translational Medicine (KUTTAM), Istanbul, Turkey

Discovery and characterization of a novel kinase regulator of the autophagy pathway in pediatric gliomas

Short Talk 3 (10 mins):

Miguel Perales-Patón, University of Castilla-La Mancha (UCLM), Spain

Optimizing chemoradiotherapy for malignant gliomas using a validated mathematical model and in silico trials

WG5 Dialog on! (10 min)

10:50 – 11:10

Coffee Break

11:10 - 12:10

Chair: **Terézia Kisková**

Session 6 Talk (20 min)

Terezia Kiskova, Institute of Pathology, Faculty of Medicine, Pavol Jozef Šafárik University in Košice, Slovakia

Net4Brain: Moving Forward Activities That Make a Difference

- Short Talk 1 (10 min):

Ilaria D'agostino, University of Pisa, Italy

Searching for New Anticancer Agents: Spotlight on Aldehyde Dehydrogenase Enzymes

- Short Talk 2 (10 min):

Aleksandar Stepanović, Faculty of Medicine, University of Belgrade, Belgrade, Serbia

- Short Talk 3 (10 min):

Aleksandar Stepanović, Faculty of Medicine, University of Belgrade, Belgrade, Serbia

MicroRNA-10b expression above median value: insights into progression-free survival in glioblastoma

WG6 Dialog on! (15 min)

**12:10 – 12:30 Prof. Luiza Spiru/
Prof. Xinzhong LI**

Poster Award Presentation & Closing Remarks

12:30

End of the event

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Utilization of Parallel Artificial Membrane Permeability Assay and Chemometric Modeling for Predicting Blood–Brain Barrier Permeability of Protein Kinase Inhibitors for Brain Anticancer Therapy

.....

Milan Jovanovic^{1,2}, *Milica Radan*³, *Marija Carapic*⁴, *Nenad Filipovic*⁵, *Katarina Nikolic*^{1*}, and *Milkica Crevar*¹

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This study investigates the passive diffusion of protein kinase inhibitors across the blood-brain barrier (BBB) for brain anticancer therapy and develops a predictive model for their permeability. The parallel artificial membrane permeability assay was employed to determine the logPe values for 34 compounds. Descriptors for these compounds were then calculated to facilitate quantitative structure–property relationship (QSPR) modeling, generating various regression models. LogPe values were obtained for all 34 compounds, with support vector machine regression emerging as the most reliable method. Descriptors, including CATS2D 09 DA, CATS2D 04 AA, B04[N-S], and F07[C-N], were identified as key factors influencing passive BBB permeability of the protein kinase inhibitors. The QSPR model developed in this study provides an effective tool for the preliminary screening of BBB permeability of new analogs for brain anticancer therapy.