



### Glioma MR imaging 2.0 3<sup>rd</sup> Annual Meeting

28-30 September 2022
Pine Bay Resort
Kuşadasi, Turkey







Welcome to the third GliMR 2.0 COST Action meeting.

This will be a meeting where the COST Action membership will come together and work towards reaching the deliverables as set out by the <u>Memorandum of Understanding</u>.

We will discuss current state-of-the-art glioma imaging diagnostics and how to increase the role of advanced imaging biomarkers within clinical research and practice.

We are looking forward to seeing you in Kusadasi!

The organization committee

Esin Osturk Izik Harish Poptani Ivar Wamelink Soetkin Beun Patricia Clement Vera Keil

Esther Warnert

Join us on Whatsapp: https://chat.whatsapp.com/EswYtdnQY31BfhqAWQdPwn



## Program



#### Wednesday 28 September 2022 - Potpourri of glioma science

Time (GMT+3)	Торіс	Speaker	Moderators
08.45-09.00	Welcome	Dr. Esin Ozturk Isik (TR) Dr. Vera Keil (NL)	
09.00-09.30	WHO 2021 Classification of Brain Tumours	Dr. Ayca Ersen Danyeli (TR)	Prof. Dr. Yelda Ozsunar (TR) Barbara Abecassis (NL)
09.30-10.00	Advanced MR Imaging of Genetics in Adult Gliomas	Dr. Stephanie Thust (UK)	
10.00-10.30	Imaging of Paediatric optic pathway gliomas	Dr. Shivaram Avula (UK)	
10.30-11.00	Coffee break		
11.00-11.30	Pearls of Dublin: Integrating genetic data into Neuro-Oncology	Dr. Esin Ozturk Isik (TR)	Fatemehsadat Arzanforoosh
11.30-12.45	Scientific oral session Radiogenomics (C01-C07; P01-P11)	Membership	(NL) Hamail Ayaz (IR)
12.45-14.00	Lunch		
14.00-14.30	Glioma Animal Models: an overview	Prof. Dr. Robrecht Raedt (BE)	Dr. Gilbert Hangel (AT) Maisa van Genderen (NL)
14.30-15.00	Preclinical diffusion and perfusion imaging in glioma models	Prof. Dr. Harish Poptani (UK)	
15.00-15.30	Validating multiparametric MRI signatures of the glioma TME by optical imaging	Dr. Michael Breckwoldt (GE)	
15.30-16.00	Coffee break		
16.00-16.30	Translational MRSI	Dr. Rui V. Simões (PT)	
16.30-17.00	Translational CEST MRI	Dr. Verena Hörr (GE)	Jan Petr (GE)
17.00-17.30	Brainstorming session: Building bridges between preclinical and clinical glioma imaging	All speakers above + membership	Buse Buz-Yalug (TR)
17.30-18.00	Brainstorm session WG1 review	Dr. Gilbert Hangel (AT)	



### Thursday 29 September 2022 - Day of data

Time (GMT+3)	Торіс	Speaker	Moderators
09.00-09.45	Intellectual property	Erdem Kaya (TR)	Dr. Vera Keil (NL)
09.45-10.30	Data curation	Dr. Sebastian van der Voort (NL)	Alexandros Ferles (NL)
10.30-11.00	Coffee break		
11.00-11.45	GDPR What to do when you realised that shipping a USB is not a clever plan?	Prof. Nils Broekx (BE) Dr. Sebastian van der	Dr. Patricia Clement (BE) Beatriz Padrela
11.45-12.15	Expert panel discussion: Networking obstacles and chances	Voort; Erdem Kaya; Prof. Nils Broekx; Dr. Robert Oostenveld; Dr. Remi Gau	(NL)
12.15-13.15	Scientific oral session Radiogenomics (ASL), preclinical, data-management and other (C08-C12; P12-P19)	Membership	Hamail Ayaz (IR) Fatemehsadat Arzanforoosh (NL)
13.15-14.45	Lunch break		
14.45-15.15	Case-based Anatomy and Physiology for non-physicians	Dr. Vera Keil (NL)	Prof. Radim
15.15-15.45	Brainstorm session GliMR's future	Membership	Jančálek (CZ) Soetkin Beun (BE)
15.45-16.15	Coffee break		
16.15-16.45	Connecting to BIDS initiatives	Dr. Robert Oostenveld (NL)	Dr. Patricia Clement (BE)
16.45-17.30	Community building GitHub workshop	Dr. Remi Gau (BE)	Genevieve Hayes (UK)
18.00	GliMR's 3 <sup>rd</sup> Treasure Hunt at Pine Bay		



#### Friday 30 September 2022 - GliMR Festival

Time (GMT+3)	Торіс	Speaker	Moderators
09.00-09.05	The Pipeline Inventory Project (WG1)	Dr. Patricia Clement (BE)	_
09.05-09.15	OSIPI - Software Inventories and Contributions	Dr. Jan Petr (GE)	
09.15-09.25	MRSHub	Dr. Gilbert Hangel (AT)	Dr. Esin Ozturk Isik (TR)
09.25-10.25	Software and pipeline presentations	Membership	Rui Duarte (USA)
10.25-10.30	Brainstorm - Pipeline Inventory Project	Dr. Patricia Clement (BE) Dr. Gilbert Hangel (AT)	
10.30-11.00	Coffee break		
11.00-12.15	Speed dating in memory of GLINDER: Project finds data finds researcher	Registration during the conference!	Dr. Vera Keil (GE) Ivar Wamelink (NL)
12.15-13.00	Monitoring biomarkers - a summary of the published GliMR position statement & a workshop to kickstart GliMR guidelines	Dr. Tom Booth (UK)	Prof. Harish Poptani (UK)
13.00-13.30	Closing and award ceremony		
13.30-15.00	Lunch		
15.00-17.00	Management committee meeting	Management committee	



# Travel and stay



#### Hotel

All annual meeting speakers and attendees will be accommodated in the <a href="Pine Bay">Pine Bay</a>
<a href="Holiday Resort">Holiday Resort</a> Kuşadası, Turkey. Please, don't contact the hotel or book via booking.com. If you would like to make your reservations, send all relevant information to <a href="mailto:glimr.cost.wg5@gmail.com">glimr.cost.wg5@gmail.com</a>.

**Room prices (including breakfast, lunch and dinner)**: single room €72, double room €90.

#### **MAP**

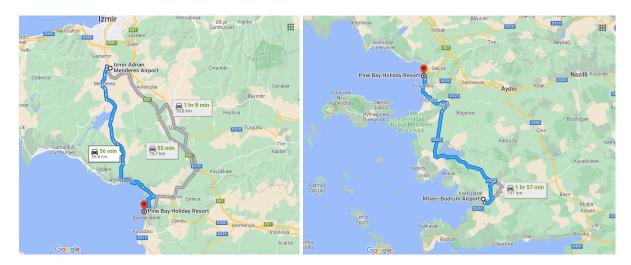


#### **Travel**

When flying to Turkey, both Izmir and Bodrum Airport are in proximity of the venue. The Izmir Airport is located approximately one-hour drive from the hotel, while Bodrum Airport approximately two hours. We recommend traveling via Izmir!

From Izmir Airport, a shuttle transfer can be booked towards the Pine Bay Resort. Please, make this reservation before arrival via whatsapp (+90(256)614-5555), the current price is 90TL. More information: <a href="https://www.kusadasihavalimaniservis.com/en/izmir-kusadasi-transfer.asp#">https://www.kusadasihavalimaniservis.com/en/izmir-kusadasi-transfer.asp#</a>.

From Bodrum Airport, a shuttle transfer can be booked towards the hotel for 2000 TL (~110 euro) for 6 people shuttle or 2500 tl for 16 people shuttle. More information:





#### Reimbursements

Before the meeting, you will receive an official meeting invitation via the eCOST system. Only by accepting this invitation you are eligible for reimbursement. During the meeting, an attendance list will be present, which needs to be signed by yourself on each day you attend the event. As an example, if you attend all three days, you will have to sign on all three days. To accommodate all those that have pre-registered, the remaining budget for this Grant Period is redistributed and a new daily allowance and maximum amount of international travel per participants is set for this meeting, following the Management Committee e-vote from 23 August 2022.

The rate of the daily allowance set for this meeting is: 75 euro / day.

The maximum amount of international travel per participant set for this meeting is: 400 euro.

After the annual meeting, you can submit your reimbursement claim via the eCOST portal. For international travel costs, receipts and tickets will be required. To help you cover the costs for short distance transportation (<100 km), accommodation, meals and other costs, you receive a set daily allowance. For this, no receipts are required. Make sure you submit your claim as soon as possible after the meeting, as GliMR will have to process all payments before the end of October 2022 due to the ending of the Grant Period of the COST Action. Any claims submitted after October 15th 2022 will not be able to be processed and reimbursed.

NB. All rules and regulations about travel reimbursements can be found in the COST Annotated Rules document, which you can find here:

https://www.cost.eu/uploads/2021/10/COST-094-21-Annotated-Rules-for-COST-Actions-Level-C-2 021-11-01-1.pdf



# **Speakers**





#### Dr. Ayca Ersen Danyeli

Ayca completed her fellowship in neuropathology, in Mayo Clinic, Rochester. She works in Acibadem University, Pathology Department as a neuropathologist. She works in the field of neuro-oncology and molecular pathology. Her main research interests include molecular pathogenesis of gliomas and meningiomas.



#### **Dr. Stephanie Thust**

Steffi is a Consultant in Diagnostic Neuroradiology and Honorary Associate Professor at University College London. Her expertise includes all aspects of brain tumour imaging, in particular MRI techniques for glioma genotyping and imaging of CNS lymphoma.



#### Dr. Shivaram Avula

Shivaram Avula is a Consultant Paediatric Radiologist at Alder Hey Children's Hospital, Liverpool, UK. He is the Radiology Research lead and has a special interest in Paediatric Brain tumours. Shivaram has been the lead radiologist in developing the intraoperative MRI service for brain tumour surgery and has published and presented extensively in this area. Shivaram has a research interest in Advanced MRI for brain tumours. He is an Honorary Clinical Associate Professor at the Faculty of Health and Life Sciences at the University of Liverpool.



#### Dr. Esin Ozturk Isik

Esin Ozturk Isik has been conducting research in the field of magnetic resonance imaging (MRI) for more than 20 years. The main goal of her projects has been developing novel molecular MRI techniques to allow for a better understanding of underlying biochemistry of diseases in order to improve patient health. The technical projects at her laboratory have focused on designing new algorithms for molecular MR imaging data acquisition, post-processing and quantitation. Her laboratory has also worked on developing computational methods based on machine learning for MR image analysis to understand disease mechanisms..



#### Prof. Dr. Robrecht Raedt



Robrecht Raedt obtained his Masters degree in Biology at Ghent University (Belgium) in 2002. In 2007, he successfully completed his PhD research at the Faculty of Medicine and Health Sciences of Ghent University. The topic of his PhD research was 'Cell Therapy for Epilepsy'. He worked as a postdoc at the Laboratory for Clinical and Experimental Neurophysiology, Neurobiology and Neuropsychology at Ghent University (LCEN3). Since he was appointed as a Assistant Research Professor at Ghent University in 2011, Robrecht Raedt is doing research on the neural basis of behavioural control (cognitive and emotion control) using intracranial recording and neuromodulatory techniques during cognitive testing both in humans as in animal models. Robrecht Raedt was also associated with the University of Lethbridge (Dr. McNaughton lab) from 2012 to 2014 to investigate the neural dynamics leading to the development of spontaneous epileptic seizures using high density recordings in the hippocampus of rodent models for epilepsy. Currently, Robrecht Raedt is appointed as Associate Research Professor at Ghent University focusing on glioma-associated epilepsy, modulation of epileptic brain networks using opto- and chemogenetics. Since januari 2018 he is appointed as Department Head of Animal Facility of the Faculty of Medicine of Ghent University.



Prof. Dr. Harish Poptani

Professor Harish Poptani is the Chair of the centre for preclinical imaging at the University of Liverpool, UK. His expertise is in the development and application of MR imaging biomarkers for assessing treatment response in rodent models of glioblastomas. His clinical research focus is in the application of advanced MR techniques in the diagnosis and monitoring response in gliomas.





Dr. Breckwoldt is a physician scientist, board certified clinical neuroradiologist and head of the division "Immuno-Imaging" at the University Hospital Heidelberg and German Cancer Research Center (DKFZ). He has trained as an MD/PhD in molecular imaging of neuroinflammation at the Technical University of Munich and Harvard Medical School with post-doctoral training at the DKFZ. His group, funded by an Emmy Noether grant of the German Research Foundation, investigates hallmarks of glioma by MRI and correlative optical methods (light sheet microscopy) to identify imaging biomarkers of tumor cell invasion and immune cell dynamics during target therapies in glioma models and clinical trials.



#### Dr. Rui V. Simões



Expertise in preclinical MR imaging, spectroscopy, and spectroscopic imaging of cancer models, including mouse brain tumors. Applications to tumor metabolism ranging from proton to heteronuclear spectroscopy, such as in vivo deuterium metabolic imaging. Currently, associate researcher and head of the new Preclinical MRI unit at the Institute for Research and Innovation in Health (i3S), University of Porto, Portugal.



Dr. Verena Hörr

Associate professor of Cardiovascular Imaging at the Medical Faculty of the Rhenish Friedrich Wilhelm University of Bonn, Germany. More than 15 years of experience in small animal MRI and biological fluid 1H NMR with focus on MRI sequence/method development to gain insight into molecular processes and cardiovascular function.



**Dr. Gilbert Hangel** 

Gilbert Hangel finished his PhD in medical Physics in 2015, and has since continued his research at the Medical University of Vienna. His interests include 7T MRSI, its application to brain tumours and epilepsy, intraoperative MRI and the translation of advanced MRI into neurosurgical navigation. Since 2019, he is a university assistant the Department of Neurosurgery and the High-Field MR Centre and he finished his habilitation in June of 2022. Beyond MRI, his Band Gradient of Disorder just released their debut album "misEntropic", available on most streaming services.



**Erdem Kaya** 

After studying Electronics Engineering in 1999, Erdem Kaya became a Turkish and European patent attorney in 2001 and a Turkish trademark attorney in 2005. He is the founder of Erdem Kaya Patent, one of the respected IP consultancy firms of Turkey, with a team of more than 45 IP professionals. Throughout his professional life, he and his team have provided IP consultancy services to many institutions including well-known technology/industry companies and universities of Turkey, on the strategic management of intellectual property rights in a wide scope ranging from registration to valuation, and provided basic or advanced training to thousands of people in this field.



#### Dr. Sebastian van der Voort



Sebastian van der Voort is a postdoctoral researcher at the Erasmus Medical Centre, Rotterdam. Here he researches new artificial intelligence methods for the analysis of glioma MR imaging. Specifically, he focuses on bringing AI methods closer to the clinic by producing more valuable clinical information, while at the same time dealing with the inherent heterogeneity in clinical data. For example, he developed a method to automatically turn unstructured clinical MR scans into a structured dataset that can be used for research.

#### **Prof. Nils Broekx**



Nils Broeckx (PhD) is the GDPR lead at Ask Q, a Belgium based legal consultancy firm. While having a broad background in health law, he now focuses on supporting organizations, mainly healthcare organizations and life sciences companies, in lawfully using personal data. Nils is also a visiting professor at the Antwerp Health Law and Ethics Chair (AHLEC) where he teaches the course 'Information technology and data protection in health care'.



Dr. Vera Keil

Dr. Vera Keil is a Clinical Neuroradiologist with expertise in tumor imaging, neurointervention and neurosurgery. Her scientific focus is advanced MRI in brain tumors. She works at Amsterdam UMC and was trained in Bonn, Germany.

#### **Dr. Robert Oostenveld**



Robert's main interest is in developing novel analysis methods for MEG and EEG, which I am sharing in the FieldTrip toolbox, an Open Source project that he has been heading since 15 years. Besides working on MEG/EEG analysis, he cares about Open Data: he has contributed to the Human Connectome Project, am a member of the BIDS steering group, and have contributed to most of the currently published BIDS modalities. Furthermore, he has played a key role in the design and implementation of the Donders Repository, our institutional data sharing and archive platform with more than 200 shared neuroimaging datasets, and co-authored multiple papers on data sharing in relation to informed consent and ethics.



#### **Dr. Patricia Clement**

Patricia Clement is a postdoctoral researcher at the Ghent University and Ghent University Hospital and science communication enthusiast. Her work focuses on the reproducibility of arterial spin labelling MRI by tackling technical and physiological variability. She is also involved in several open science projects, including BIDS, data sharing and GDPR.

#### Dr. Jan Petr



Jan, leader of the GLIMR WG for Clinical translation, is a researcher working at the Helmholtz-Zentrum in Dresden, Germany. Co-author of the ExploreASL, pipeline aiming for harmonizing processing of ASL in multi-center studies, he focuses on analyzing data from contrast-free MRI techniques and joint analysis of multiple datasets with the aim of getting the methods closer to the clinical practice. His main research interests are neurodegenerative diseases and brain tumors including monitoring of the adverse effects of the treatment. Besides GLIMR, he's involved in several other initiatives for standardizing the acquisition and analysis of MRI data like BIDS and OSIPI.

#### **Dr. Tom Booth**



Dr Booth is a Reader in Neuroimaging at King's College London and Consultant Neuroradiologist at King's College Hospital. His PhD focus was on brain tumour treatment response assessment using pre-clinical metabolic imaging as well as adult brain tumour MRI structural images using machine learning at the University of Cambridge a decade ago – something he continues to research now as he is reminded continuously how important neuro-oncology diagnostics are in a busy London teaching hospital. He is the Chief Investigator on 5 UK multicentre and 4 NIHR portfolio-adopted prospective studies: more than 6000 patients across the UK have been recruited to these studies. He was an awardee of the inaugural Royal College of Radiologists Outstanding Researcher Award.

#### Dr. Remi Gau



Remi is a postdoctoral fellow in the Crossmodal Perception and Plasticity laboratory (CPP-Lab) of Olivier Collignon at the Universite Catholique de Louvain (Belgium). He has a background both in biology and psychology. He did his PhD studying the role of serotonergic neurons in the interplay between pain and cardio-vascular regulations in rodents. His current work focuses on the perception of motion and uses high-resolution MRI to address this question in blind and sighted controls by investigating the BOLD response at different depths in the cortical sheet.

