

NEUROONCOLOGY MEETS NEUROSCIENCE
The Bordeaux Cancer Neuroscience (BCN) Initiative

Detailed Program of the Meeting

The meeting will address

- The morphological characterization of brain-tumor interactions using advanced high-resolution imaging techniques (shadow-imaging etc..) in *in vitro* and *in vivo* models (brain organoids, sophisticated co-culture models, implant mouse models, genetically modified mice etc..)
- The elucidation of the differences /specificities in the neuro-tumor interactions between different tumor types and locations
- Development of novel original model systems to better study the interaction between tumor cells, neurons, supporting cells, vessels and immune components
- Providing insights into the cross-talk at a cellular and molecular level between tumor cells and components of the nervous system (neurons, astrocytes, other supporting cells etc..) which may be further complexified and include vascular and immune components.
- Investigating the contribution of these interactions to the various phases of tumor development (initiation, expansion, invasion etc..)
- Identification and validation of novel druggable targets for disrupting the neuro-tumor interactions
- Developing of novel medicines that disrupt the neuro-tumor interactions
- Evaluation of how behavioral and psychogenic effects modulate tumor development through neuro-tumor interaction and the participation of additional components (experimentally in models and in patients).

-Participating Institutions and Teams

The participating teams of this meeting: 1/ Scientists at the University Bordeaux campus and represented by the Neurocampus (Broca, Neurocenter Magendie etc..), the SBM department and the Bordeaux part of the "Oncosphère Nouvelle Aquitaine" 2/ Institut du Cerveau et de la Moelle (ICM) Paris, le CRLCL de Lyon, 3/ Members of the GOPA of the "Association de Neurooncologie à Expression Française (ANOCEF), 4/ The patient organization ARTC. We expect around 110 people attending.

Speakers and attendees

All researchers and students at the University of Bordeaux campus as well as patient organisations concerning malignant brain tumors (e.g., ARTC, which is invited to the symposium). For the speakers and titles of talks, see program. We have a mix of speakers. including high-profile researchers (e.g., Frank Winkler, Michelle Monje etc..) and senior and junior scientists working in the area of Neurooncology and Neuroscience. Furthermore, members of the "Association de Neurooncologie à Expression Française" (ANOCEF (and its president) will also be present at the meeting. We will have presentation by junior PIs as well as two poster sessions for presentations by students and post-docs. As a whole, this meeting has a regional, national and international dimension. It will also allow young trainees (students, post-docs..) to meet scientists experts in the field and get input to for their own career development.

Detailed Program

9.00 h – 12.00 h

Educational program with patients (help by ARTC, patient association)

Scientific Session Day 1

14.00 h

Wellcome Introduction

Challenges in brain tumor research: focus on the tumor microenvironment, Andreas Bikfalvi (BRIC, Bordeaux)

Structuration de la neuro-oncologie en France, (François Ducray, President de l'ANOCEF)

The Neurocampus Bordeaux, new directions for interdisciplinary research, Laurent Groc (IINS)

14h45 Session 1: Neuroscience and Neurooncology

Invited guest speaker: The field of Cancer Neuroscience, Frank Winkler (DKFZ Heidelberg, DE)

Neurophotronics – and neurooncology : Valentin Nägerl (IINS, Bordeaux)

Imaging the vasculature in brain tumors : Thomas Mathivet (BRIC, Bordeaux)

Coffee Break and Poster viewing

Cannabinoids cannabinoid receptors in the brain: Giovanni Marsicano (IINS, Bordeaux)

Neuronal control of brain tumors: Gilles Hueberfeld (IPNB, Paris)

Cancer related cognitive impairment: Hélène Castel (INSERM, Rouen)

Scientific Session Day 2

9.00 h Session 2: Glioblastoma: molecular and mechanistic aspects

Plasticity of glioblastoma cells and its vulnerabilities: Marie Pierre Junier (IBPS, Paris)

The lactate cross talk between brain tumors and the nervous system: Thomas Daubon (CNRS)

Autophagy, Lipophagy in glioblastoma, how does this impact on the GB – nervous system interaction : Lucie Brisson (BRIC)

Mitochondria in glioblastoma development: Ahmad Charanek (BRIC)

Coffee break and Poster viewing

Metabolic interactions in the brain microenvironment. Anne-Karine Bouzier-Sore (CNRS, Bordeaux)

Deciphering mechano-biology using super-resolution microscopy. Grégory Giannone (IINS, Bordeaux)

12h30 Lunch and Poster viewing

14h.30 Session 3: Diffuse IDH1 mutant gliomas

New insight's into the biology of IDH mutant gliomas, therapeutic implications. Marc Sanson (ICM, Paris)

Multiparametric analysis of IDH-mutant gliomas. Christèle Etchegaray (INRIA) & Andreas Bikfalvi (BRIC)

Oligodendrogliomas : clinical challenges and new insights from multi-omic studies. François Ducray (CRCL, Lyon)

Cancer Neuroscience and Pediatric Gliomas: Michelle Monje (Stanford, USA)

Best Poster Prize

Round table discussion: How Neuroscience and Neurooncology can cross-fertilize each other & the place of a Bordeaux Cancer Neuroscience initiative in this context:

Andreas Bikfalvi, Francois Ducray, Valentin Nägerl, Marc Sanson, Frank Winkler