GLIOTRAIN is a multi-sectoral industry-academia collaboration, funded by the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie ITN initiative, that will work to identify novel strategies to treat Glioblastoma (GBM) as well as investigating resistance mechanisms in this devastating disease.

GBM in Brief: Facts & Figures

An estimated 240,000 cases of brain and nervous system tumours are diagnosed every year, worldwide.

GBM is the most frequent and aggressive brain tumour.

New treatment options and effective precision medicine therapies are urgently required.

Overall research objective of GLIOTRAIN

GLIOTRAIN will address currently unmet translational research and clinical needs in the GBM field by investigating therapeutic strategies and improving the mechanistic understanding of disease resistance.

We will do this by identifying and interrogating novel therapeutic strategies for application in GBM, while simultaneously implementing state of the art next generation sequencing (NGS) and ‘omics technologies to unravel disease resistance mechanisms. The GLIOTRAIN network brings together leading European and international academics, clinicians and private sector partners which cover the fields of tumour biology, genomics, proteomics, drug development, clinical research, data integration, computational modelling and systems biology.

GLIOTRAIN unites multiple disciplines, including tumour biology, multi-omics, drug development, clinical research, data integration, computational modelling and systems biology, thereby providing the foundation for a comprehensive research strategy that goes significantly beyond the current state-of-the-art in GBM translational research. Two major R&D work packages (GLIOTREAT and GLIORESIST) address complementary objectives consisting of Individual Research Projects (IRPs) for 15 Early Stage Researchers (ESRs). Each R&D Work Package comprises individual tasks, each of which is addressed through intersectoral and interdisciplinary research in which individual ESRs conduct clinically relevant studies appropriately informed by systems medicine/ integrative ‘omic analyses approaches within both academic and private sector environments. Drawing on unique consortium expertise each ESR project will further...
be underpinned by innovative systems medicine and/or integrative genomic analysis approaches.

The GLIOTRAIN programme commenced on 1st September 2017 and comprises 9 “Beneficiaries” (Parties who receive funding from the EC and recruit students) and 14 “Partner” organisations who will offer students invaluable training opportunities. Eight countries within Europe are involved. Since September we have been busy recruiting our 15 ESRs, who will all be enrolled on PhD programmes. Over the next 3 – 4 years ESRs will receive state-of-the-art scientific training in tumour biology, multi-omics, drug development, clinical research, data integration, computational modelling and systems biology, and will further participate in a broad transferable skills programme including modules in entrepreneurship, scientific innovation, project management, commercialisation, grant writing, communication skills, and gender balance in research. ESRs will engage with the International Brain Tumour Alliance over the course of the project to consider bench to bedside research from the patient’s perspective. By the end of the GLIOTRAIN programme we expect to produce 15 scientists who have been trained in a multi-sectoral environment and who can therefore navigate confidently between clinical, academic and private sector settings to progress applied research findings towards improved patient outcomes. Please visit our website (https://www.gliotrain.eu) for full details on the GLIOTRAIN scientific strategy.

**GLIOTRAIN News**

**Kick-off Meeting**

A successful kick-off meeting for GLIOTRAIN was held on 25th September 2017 at the Royal College of Surgeons in Ireland. All beneficiary organisations were represented. Programme management, ESR training, network-wide training were discussed as well as scientific details underpinning individual research projects.

**Talks and Presentations**

**Dr Martine Lamfers** gave a talk at the Dutch Working Group Neuro-Oncology in Utrecht (Netherlands) entitled “Drug screening of clinically available anti-cancer agents for the personalized treatment of glioblastoma patients” (September 2017).

**Prof Markus Morrison** delivered a seminar entitled “Cell death control – from mechanisms to applications” at the Seminar Series of the Fraunhofer Institute for production technology and automatization, Stuttgart, Germany (January 2018) and “Modelling cancer cell death – from mechanistic insight to systems-based patient prognosis” at the 3rd Open MultiMed Training School (Multi-scale and Multi-level Modelling Methodologies in Biomedicine), Erlangen, Germany, February 2018.

**Prof Simone Niclou** presented an invited lecture entitled “Tumour-host interactions in Glioblastoma” in the Tumor Niche and Microenvironment workshop at the Journées Cancéropôle Grand Sud-Ouest held in November 2017, Poitiers.
Dr Ahmed Idbaih presented at the European Society of Medical Oncology Asia 2017 Congress (Singapore, November 2017) in the session focussed on CNS tumours: Molecular alterations in clinical perspective: From discovery to everyday application in patient management.


Conference and Meeting Attendance

GLIOTRAIN participated in the 22nd Annual Scientific Meeting of the Society for Neuro-Oncology (SNO) held in San Francisco, California in November 2017. Professor Byrne, GLIOTRAIN Coordinator, represented the GLIOTRAIN consortium at the event, meeting with Ms Kathy Oliver of the International Brain Tumour Alliance (IBTA) to discuss GLIOTRAIN’s strategy to address bench to bedside research from the patient’s perspective.

What’s Next

GLIOTRAIN Network-wide Training

The first GLIOTRAIN training event will take place at the Royal College of Surgeons in Ireland, Dublin from the 23rd to the 26th April 2018. It will be the first time all ESRs will meet together. There will be an interaction day with all PIs and ESRs to familiarise the students with the programme.

We are delighted to have Ms Kathy Oliver from the IBTA leading a mini-symposium whereby GLIOTRAIN students will have the opportunity to consider the “bigger picture” impact of their research and to reflect on how GLIOTRAIN findings may ultimately impact patients. Key topics such as research project management, open science and data management will also be covered at this event.

Brain Awareness Week 2018

Prof Annette Byrne, GLIOTRAIN Coordinator, has been invited by Brain Tumour Ireland (https://braintumourireland.com) to present in Dublin during Brain Awareness week on March 9th 2018. Prof Byrne’s talk will be entitled “Searching for new ways to tackle GBM: Fighting the Good Fight”.

GLIOTRAIN will be represented by Drs Brona Murphy and Alice O’Farrell (GLIOTRAIN Programme Manager) at the Research & Healthcare Responses to the Challenge of Brain Conditions, a conference organised by the Irish Brain Council and Neurological Alliance of Ireland (NAI) to be held on 6th March at the Royal College of Physicians in Dublin. Dr Murphy will present “Cyclin dependent kinase inhibitors: a novel treatment strategy to sensitize glioblastoma to TRAIL-induced apoptosis” whilst Dr O’Farrell will present a poster introducing the GLIOTRAIN Programme.

International Conferences

Prof Gabriele Bergers will present at two upcoming international conferences: Firstly at the Cancer Research UK Brain Tumour Conference 2018 (in “The tumour microenvironment and the immune system” session and also at the “Brain Tumors Meeting 2018 - From Biology to Therapy” organised by the Nencki Institute of Experimental Biology and Foundation of Clinical and Experimental Oncology offering a talk entitled “Glioma heterogeneity in space and time”.

GLIOTRAIN has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie ITN initiative (Grant Agreement # 766069)
Meet the Team - The GLIOTRAIN Consortium

Beneficiaries

The Royal College of Surgeons in Ireland (Coordinating Institution)

- Prof Annette Byrne (Project Coordinator)
- Prof Jochen Prehn
- Dr Brona Murphy
- Dr Marc Sturrock
- Dr Alice O’Farrell (Project Manager)

The University of Stuttgart

- Prof Markus Morrison
- Dr Gavin Fullstone

Luxembourg Institute of Health

- Prof Simone Niclou
- Dr Anna Golebiewska

Vlaams Institute for Biotechnology

- Prof Diether Lambrechts
- Prof Gabriele Bergers

Erasmus Medical Centre

- Dr Martine Lamfers
- Dr Sieger Leenstra

ICM Institute for Brain and Spinal Cord

- Dr Ahmed Idbaih
- Dr Maite Verreault

geneXplain GmbH

- Dr Alexander Kel

 Information Technology for Translational Medicine

- Dr Andreas Kremer

Agilent Technologies Belgium NV

- Dr Jurgen del Favero

Partner Organisations

GLIOTRAIN Online

The project website is now online at https://www.gliotrain.eu.

You can also follow the project on Twitter (@gliotrain) and Facebook (@gliotraineu).

Project Flyer

The GLIOTRAIN team have developed a flyer to promote the programme; the flyer can be downloaded from the project website

Contact Information

Prof Annette Byrne
GLIOTRAIN Coordinator
Royal College of Surgeons in Ireland
Mercer Building
Lower Mercer St
Dublin 2
annettebyrne@rcsi.ie

Dr Alice O’Farrell
GLIOTRAIN Programme Manager
aliceofarrell@rcsi.ie

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