

**Biomarker validation
for brain tumor diagnosis:
Repositioning of an imaging radiotracer**

The GLIOMARK project objective is the **clinical validation** of the permeability of the BBB as an *in vivo* biomarker for brain tumor (glioma) diagnosis and grading of gliomas. This will be accomplished by means of the **radiotracer** ^{99m}Tc-tetrofosmin and the imaging technique Single-Photon Emission Computed Tomography (SPECT).

The outcome of GLIOMARK is a **diagnostic radiopharmaceutical kit**, containing tetrofosmin, repositioned specifically for **brain imaging** used in combination with SPECT as a non-invasive method. The diagnosis has an immediate **impact** on the type and aggressiveness of **subsequent therapies**.

pro-ACTINA SA is a research-driven SME based in Athens, Greece, whose vision is to become a leader in the diagnostics for brain abnormalities.

ConsulTech GmbH is a life sciences consulting SME based in Berlin, Germany.

GLIOMARK is an SME instrument Phase 2 project funded by the EC's Horizon 2020 programme.

Start date: July 1st, 2015

Duration: 48 months

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Next Generation of Glioma Diagnostics



Validation of blood-brain-barrier permeability as a glioma biomarker by means of the radiotracer ^{99m}Tc-tetrofosmin and single-photon emission computed tomography



This project receives funding from the European Union's Horizon 2020 Research and innovation programme under grant agreement No. 673737.



www.gliomark.eu

Disease and Aim

Disease

- Gliomas are brain tumors arising from glial cells of the nervous system.
- Glioma is a long-term debilitating and life-threatening disease.
- There is a significant unmet medical need for the diagnosis of gliomas.

Aims

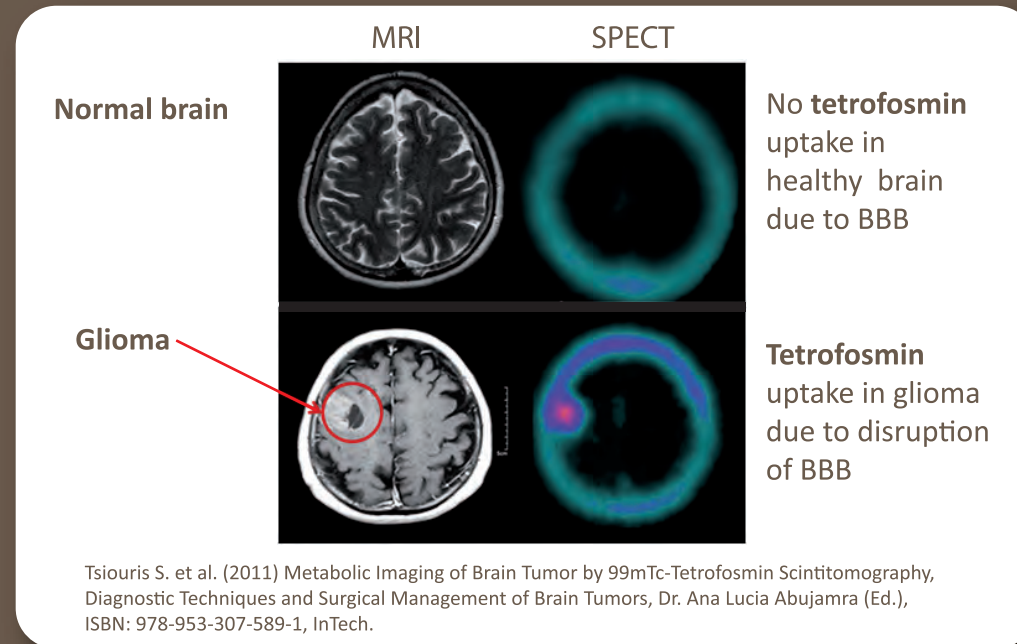
- Clinical validation of imaging biomarker for glioma
- Development of novel diagnostic tool for differential diagnosis and grading of brain tumors
- Repositioning of well-established diagnostic product
- Contribution to the goals of the “International Rare Diseases Research Consortium” (IRDiRC)

Steps of the GLIOMARK project

- ▶ **Clinical Development**
Phase II clinical trial
(EudraCT No: 2015-005573-21)
Phase III clinical trial
- ▶ **Manufacturing (GMP)**
- ▶ **Regulatory development**
Scientific advices by EU authorities
Orphan designation
Paediatric Investigation Plan

Solution

- Non-invasive diagnostic approach to avoid surgery / biopsy
- Improved accuracy compared to standard imaging procedures
- Widespread availability of both tracer and γ -cameras (SPECT)
- Lower cost compared to PET imaging
- Alleviation of healthcare burden



**Blood-brain-barrier (BBB)
permeability disrupted in Glioma**

Commercialisation

- Orphan designation granted by the EC (EU/3/16/1764)
- 10 years of market exclusivity
- Promoting personalised treatment for glioma patients worldwide
- Commercialisation of a radiopharmaceutical kit for brain imaging by SPECT



Next step

- ▶ Commercialisation of the diagnostic kit with the indication under development (differential diagnosis of recurrence of high-grade glioma from treatment-induced necrosis)

Future perspectives

- ▶ Expansion to other indications related to brain abnormalities both tumor-related and unrelated (new clinical trials)

