

The NucleoGlio Project secures EUR 2.2 million in Wallonia funding for early detection of glioblastomas

After the launch of call 38 by **BioWin**, the NucleoGlio project emerged as a consortium between the coordinating company **Belgian Volition SRL**, in collaboration with **QUALIblood SA**, and the institutes **UNamur-NARILIS** and **UCLouvain-IREC**.

Belgian Volition SRL, QUALIblood, UNamur and UCLouvain, working together as a consortium, have been granted EUR 2.2 million in funding from Wallonia as part of a call for projects launched by BioWin, the health cluster of Wallonia. Their project, named NucleoGlio, set to run for 48 months with a total budget of EUR 3.1 million, aims to explore liquid biopsy for detecting glioblastomas through circulating nucleosomes and their epigenetic modifications, thereby improving the diagnosis and treatment.

Glioblastomas are highly aggressive forms of brain cancer, representing a major clinical challenge, especially in cases of recurrence following surgical resection. In this regard, a team of researchers has focused on a non-invasive liquid biopsy approach for both the initial diagnosis or recurrence of glioblastoma, as well as for the personalisation of therapeutic management for the patient.

Under the coordination of Marielle Herzog, R&D Director of Belgian Volition, NucleoGlio focuses on utilizing circulating nucleosomes and their epigenetic modifications – biochemical markers attached by specific enzymes as potential biomarkers for the diagnosis of glioblastomas. *"The alterations in the epigenetic signature of nucleosomes, the elementary units of chromatin, provide a unique opportunity for detecting glioblastomas. Their release into the blood or other bio-fluids during cell death makes them ideal candidates as biomarkers,"* explains Marielle Herzog.

The project will be carried out in two phases. Firstly, the team will work with cell and/or mouse models of glioblastoma to identify epigenetic modifications of nucleosomes potentially linked to the pathology. Secondly, the presence of these markers will be investigated in blood or cerebrospinal fluid samples from glioblastoma patients. This will provide a proof of concept for the development of a diagnostic test.

One of the particularities of this research is the need to develop ultra-sensitive detection tools. As Jonathan Douxflis, CSO and Founder of QUALIblood, explains, *"the concentrations of circulating nucleosomes carrying specific epigenetic modifications are probably very low in plasma, particularly in the case of glioblastoma. It is therefore imperative to design analysis methods capable of detecting these biomarkers at very small concentrations"*.

The consortium is delighted with this new project: *"The implications of this research are vast, offering the possibility of earlier and more accurate diagnosis of glioblastoma, particularly in the case of recurrence, as well as better adaptation of treatments for each patient. Ultimately, this project could pave the way for a more personalised and effective approach in the fight against this aggressive form of brain cancer"*.

Contacts

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Useful links

Belgian Volition SRL : <https://volition.com/>

QUALIblood SA: <https://www.qualiblood.eu/>

UCLouvain-IREC: <https://uclouvain.be/fr/instituts-recherche/irec>

UNamur-NARILIS: <https://www.narilis.be/>

About BioWin

BioWin is the health cluster in Wallonia, Belgium, the regional reference for all stakeholders in health, biotech and medtech research, and innovation projects. It includes 250 members from the private, public and academic sectors.

Biowin's mission is to accelerate innovation to meet tomorrow's public health challenges and develop the knowledge, employment and competitiveness of all players in the health sector ecosystem. By bringing together all the innovation players in Wallonia's life sciences field, BioWin aims to stimulate regional economic redeployment. The cluster is also involved in implementing the sector's industrial policy (industrial innovation and research, training, support for business growth), to develop and anchor skills, knowledge and jobs.

www.biowin.org

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