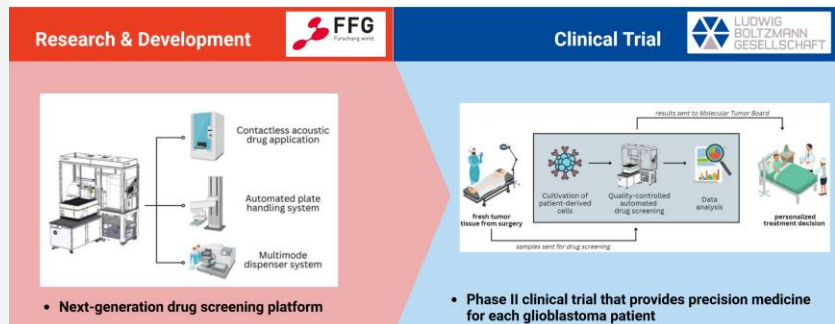


**Project 2.22/ Austrian COMET
K1 Centre for Biomarker
Research**

Programme: COMET – Competence
Centers for Excellent Technologies

Programme line: COMET-Centre K1

Type of project: Next-generation
drug-screening platform for
precision oncology services,
duration, 01.01.2019 – 31.12.2023,
multi-firm



NEXT GENERATION DRUG SCREENING FACILITATES PRECISION MEDICINE IN GLIOBLASTOMA THERAPY

THE DRUG SCREENING PLATFORM AT CBMED IS A SUBSTANTIAL PART OF AN AUSTRIAN-WIDE INITIATIVE TO REALIZE PERSONALIZED THERAPIES FOR GLIOBLASTOMA TREATMENT.

Glioblastoma, an exceptionally aggressive form of brain cancer, presents an unsolved challenge in oncology. With a grim prognosis—typically, patients survive no more than 16 months—it poses a threat across all age groups. Despite extensive research and scientific strides, an effective treatment remains elusive and currently used therapies are challenged the significant tumor variability among patients. Consequently, personalized medicine approaches emerge as the most promising avenue for tackling glioblastoma.

CBmed has established and further developed a unique automated drug screening platform that relies on testing a comprehensive panels of multiple anti-

cancer drugs or combination of drugs, on cells isolated directly from patient samples. This method, which was established together with international partners and supported by COMET funding from FFG, only requires ~21 days from start to finish- therefore allowing for rapid drug-matchmaking to allow the right patient to be treated with the right drug. CBmed has put a lot of efforts to further developed the original research-only platform for future patient treatment by introducing highly standardized procedures and enabling fully traceable workflows. In collaboration with scientific partners from overall Austria, patients were effectively enrolled in a pilot study aimed at establishing a nationwide Austrian database and assessing the potential of drug

SUCCESS STORY

screening for potential use in a clinical trial. Furthermore, in collaboration with Shimadzu EU, metabolic differences between tumor cells in responsive and resistant patients were investigated, aiming to uncover fundamental deregulation patterns within cancer cells.

Armed with very promising results, an Austrian-wide initiative termed ATTRACT (Advanced Brain Tumor Therapy Clinical Programme) was initiated and a grant for an Austrian wide clinical study was submitted by the consortium and received funding in October 2023.



Figure 1: The Austrian-wide clinical sites participating in the ATTRACT study concept. © CBmed

ATTRACT aims to recruit and treat patients from across five clinical sites- namely, Graz, Vienna, St. Pölten, Linz and Innsbruck.

Impact and effects

The implementation of personalized medicine approaches for the treatment of cancer has the potential to have a monumental impact on society. As medicine moves further away from classic one-size-fits-all treatment models, it becomes increasingly necessary to investigate and develop novel routes that permit personalized treatment.

The drug screening platform developed within this project constitutes such a novel approach that will undoubtedly change the landscape of current glioblastoma standard-of-care. The clinical study ATTRACT will challenge the concept of drug screening, empowering glioblastoma patients in Austria with access to personalized medicine for the very first time.

Project coordination (Story)

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- Aimed Bio Inc., South Korea
- AVATAMED, Singapore
- Shimadzu EU, Germany

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