



MS-QUANTA

info@msquanta.com • www.msquanta.com

ULiège Gabriel.Mazzucchelli@uliege.be

UMons Ruddy.Wattiez@umons.ac.be

In collaboration with



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L'UNION EUROPÉENNE ET LA WALLONIE
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MS-QUANTA

The MS-QUANTA platform is dedicated to the identification and the absolute quantification of (poly)peptide biomarkers. Based on two perfectly complementary facilities, located at the University of Liège (GIGA) and at the University of Mons (BioProfiling UMONS/ULB). MS-QUANTA is a collaborative research platform funded by the European Union and Wallonia, under the 2014-2020 framework program of the European Regional Development Fund.

A COMPLETE OFFER FOR BIOMARKERS VALIDATION

As an initiative to improve the biomarker development chain, the MS-QUANTA multi-site platform offers cutting-edge and promising technologies for the validation of biomarkers (molecular signatures, multiplexed analyses) in complex biological matrices such as plasma, urine, cerebrospinal fluid. This challenge fits within a priority field of research for the European Commission.

MS-QUANTA wishes to strengthen the analytical capacity of all academic and industrial actors in the health sector in Wallonia, thus enabling them to benefit from recent technological developments in the field of mass spectrometry and biomarkers validation.

MS-QUANTA is also an analytical platform useful for other growing and economically important areas such as food safety, agri-food, environment, industrial microbiology, etc.

A methodological development project - the KIT-QUANTA project - comprising Kaneka-Eurogentec, originally a spin-off from ULiège, as partner will be closely linked to MS-QUANTA. This standardization kit will be developed in such a way as to ensure traceability and compliance with procedures in an equivalent manner on both sites. The common management and procedures will allow the analyses to be carried out independently of the equipment used. The PREDIMID research project from the GIGA "BIOMED HUB" portfolio will be one of the first beneficiaries of MS-QUANTA platform for cross-validation of biomarkers on the two facilities.

PROCEDURES FOR MAKING EQUIPMENTS AVAILABLE TO THE SCIENTISTS

One of the particularities of the MS-QUANTA platform is the «Labhotel» concept, already implemented within the ULiège GIGA platforms. Intended for industrialists and academic experts in the field, this innovative business facility concept consists in making exceptional equipments available upon reservation and prior training before first use.

AN INNOVATION IN BIOMEDICINE AND HEALTH TECHNOLOGIES

The Liège unit of the MS-QUANTA platform focuses on proteomics guided by mass spectrometry imaging, a high-performance biomarker identification and quantification tool. The approach at ULiège consists in guiding proteomics through MALDI imaging to identify areas of interest, micro-dissecting the identified areas by laser and performing a proteomic analysis on a minimal number of micro-dissected cells.

The quality and efficiency requirements defended by MS-QUANTA are met within the platform by the implementation of a common quality assurance system - thanks in particular to the experience acquired and recognized by the CART (Center of Analytical Research and Technology) and the GIGA Proteomics Facility of ULiège - as well as standardization and harmonization of the operational procedures and a common computerized management of resources and follow-up of analyses.

GIGA PROTEOMICS FACILITY (ULIÈGE)

The GIGA Proteomics Facility offers services ranging from mass determination to identification and relative quantification of thousands of proteins from biopsies, cells extracts or laser microdissected FFPE tissues for differential label-free proteomics.

The GIGA Proteomics Facility offers access to many different mass spectrometers: Triple quadrupole, two ESI-Q-ToF with ion mobility, MALDI-TOF/TOF, ESI-ion trap, two quadrupole orbitraps, two FT-ICR (both ESI and MALDI sources). This diversity of mass spectrometers allows a broad range of possible analyses from the basics to the more sophisticated ones like MS imaging.

