Biomarkers from Research to Market

Modern medicine aims to treat diseases in a precisely targeted manner. Thus, the development of biomarkers can make a significant contribution to personalized medicine. For small and medium-sized enterprises (SMEs) developing new biomarkers, it is quite a challenge to obtain high-quality patient samples due to various hurdles. In this online seminar diagnostics developers will receive a detailed introduction how to validate biomarkers and the importance of biomarker quality.
This online seminar is part of the Interreg NWE project Codex4SMEs which aims to support SMEs along the full diagnostics development value chain.

Agenda

Date: July 6th, 2021 at 14:00 – 16:00 CEST

14:00 – 14:05   Words of welcome and short Codex4SMEs project introduction

14:05 – 14:35   The Art of Validating Biomarkers
by Monica Marchese, Integrated Biobank of Luxembourg
- Biomarkers and data (ir)reproducibility
- Biomarkers in Translational Personalized Medicine
- Pre-Analytical and Analytical Validation of Biomarkers
- Case studies from the Codex4SMEs experience

14:35 – 15:05   Neuroscience biomarkers in diagnostic and drug development
by Isabelle Molina-Batxelli, Eurofins ADME Bioanalyses, France
- Key role of Biomarkers in neurodegenerative disease research such as Alzheimer's disease (AD) or Parkinson's disease (PD)
- The Amyloid, Tau, Neurodegeneration (ATN) Research Framework – an organized approach to group imaging and CSF Biomarkers for AD-based pathological processes.
- Enhanced monitoring of clinical trials with approaches to pharmacodynamics, safety, or endpoints by measuring Biomarkers in blood or CSF.

15:05 – 15:35   Quality of Biomarkers and Testing Cycle: Biomarkers Meet Biobanks
by Pablo Zardoya Laguardia, Biobank Graz, Austria
- Importance of biobanks in Biomarker quality
- Testing Cycle of Biomarkers: pre-analytical, analytical and post analytical phases
- Types of errors, importance and how to avoid them
- How diagnostics developers can benefit from high-quality Biomarkers

15:35 – 16:00   Q&A

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Speakers

Dr. Monica Marchese
Integrated Biobank of Luxembourg

MONICA MARCHESE holds a PhD in Biology and Pathology of Aging from the University of Genoa, Italy. After receiving a fellowship from the Federal Government of Canada, she moved to Hamilton (ON) to lead and work on several grant-funded projects at McMaster University.
During her post-doc years, she shifted her interest from autoimmunity onto neurodegenerative diseases and their link with the immune system.
Monica was then hired as laboratory manager for the Canadian Longitudinal Study on Aging where she set up, from the ground up, an automation-friendly laboratory equipped with a high throughput platform for biomarker reliable and reproducible measurements.
In February 2016, after 11 years overseas, Monica has returned to Europe to be enrolled as Biomarker Validation Scientist at IBBL (Integrated Biobank of Luxembourg).
In 2020, as Translational Biomarker Group Leader, she is aiming to encompassing biomarker discovery into the biomarker development LIH pipeline, leveraging on the expertise gained validating biomarkers.

Dr. Isabelle Molina-Batxelli
Eurofins ADME Bioanalyses, France

ISABELLE MOLINA BATXELLI is a biochemist with an immunology specialty. She joined the Eurofins group and Eurofins ADME Bioanalyses (CRO) in 2020 as Biomarker Unit Manager supporting discovery to clinical studies in different clinical areas and biological pathways. She has previously worked at Bio-Rad (2003-2019), a diagnostic and life sciences company, in the biomarker discovery unit. She led diagnostic programs in human health diseases: infectious, metabolic and neurological diseases and using different sensitive technologies. Between 2003-2009, she was project and team leader at the UMR3145 CNRS/Bio-Rad 'Modeling and Engineering of complex biological systems for Diagnostic, SysDiag'. She completed her doctorate in 2010 at the Faculty of Sciences in Montpellier in France, in neurobiology with the theoretical and practical combination of mass spectrometry (SELDI and MALDI-TOF MS) and neurosciences of the brain. Projects resulted in high throughput proteomic and biostatistical analysis, this permitting to elaborate protein profiles correlated to neurodegenerative diseases

Dr. Pablo Zardoya Laguardia
Biobank Graz, Austria

PABLO ZARDOYA-LAGUARDIA studied Biomedical Sciences in Spain, worked as a researcher in Pharmacology in the UK and finished his PhD in Reproductive Biology at the Medical University of Graz (Austria). Additionally, he worked as an assistant policy officer at the European Commission in Brussels in Health and Food Safety and as product manager for precision devices back in Austria. Since November 2020, he is project manager at the Biobank Graz