

# **PUBLIC WORKSHOP**

Methodological aspects of biomarker discovery and validation:

BIOMARGIN as a case study

February 21st 2017, BioPark, 11 Rue Watt, 75013 Paris France



#### Introduction

The discovery, confirmation and validation of candidate biomarkers of disease conditions, treatment efficacy or toxicity may require a number of experimental and clinical steps to achieve sufficient evidence to become transferable to the clinics, and to convince physicians to incorporate them in their practice. In this workshop, we will mostly address the methodological bottlenecks, or in contrast differentiating designs, that could be identified in different research programs on biomarkers, taking biomarkers of allograft lesions in transplantation as an example.

#### Programme

# Session I – Methodology of clinical studies and levels of evidence of biomarkers

While in the past most laboratory tests underwent very light clinical validation, modern biomarkers are now expected to undergo formal clinical validation before being approved and adopted. The types and succession of desirable or necessary clinical trials will be discussed.

#### Session II – Nucleic acids as biomarkers: technical aspects and constraints

mRNA and miRNA discovery and validation generally rely on drastic sample collection and storage conditions, as well as on different types of analytical techniques, all of which can represent a limit to their clinical transferability.

# Session III – Mass spectrometry for proteomic and metabolomics biomarkers: methodology and clinical transfer

Mass spectrometry has become a ubiquitous technique for the discovery, validation as well as imaging of many types of biomolecules, including proteins and peptides, lipids and metabolites. It relies on different types of instrumental settings, which may influence the results.

### **Invited speakers**

Petra Reinke, Charité, Germany Vladimír Havlicek, Academy of Sciences of the Czech Republic, Czech Republik Ekkehard Schütz, Chronix Biomedical, Germany Anna Honorata Baud, UCL IRIS, UK

# With the participation of the following BioMargin members

Wilfried Gwinner, University of Hanover, Germany Pierre Marquet, Inserm, France Maarten Naesens, KULeuven, Belgium Dany Anglicheau, hôpital Necker, France Inge Mertens, VITO, Belgium Jochen Metzger, Mosaiques, Germany

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