



An *in-vitro* sensor for early-stage neoplastic disease

Introduction:

Blood has been shown to contain trace quantities of proteins secreted or leaked by the tissues that it irrigates. These substances are indicative of their tissues of origin and of their physiological state. The invention leverages this property for detecting the presence of neoplastic and preneoplastic disease in a person's blood, for a timely and correct diagnosis. The invention should aid the detection and diagnosis of cancers that are typically detectable only in advanced stages (e.g. GI cancers).

Technology description:

The invention is an *in vitro* method for the sensitive detection of neoplastic or preneoplastic disease in human blood. It is based on mass spectrometry and makes use of a 9-amino acid peptide from the Immunoglobulin superfamily 5 (IGSF5) protein. The peptide is unique to the IGSF5 protein and proteotypic, and as such, confers specificity to the method. For the same reasons, a targeted proteomic technique can measure its levels in blood with precision. The said peptide also constitutes an antigen or an antigenic epitope that can enable antibody-based assays or IVDs.

Key features:

- ▶ Sensitive and specific method of detection and diagnosis
- ▶ Can be performed at speed
- ▶ Level of peptide marker in blood can be measured by targeted mass spectrometry for the development of a classifier
- ▶ Peptide is a candidate antigen for antibody development for antibody-based assays.

Development Status:

Patent filed for, quantitation in patient plasma in progress

Commercial offer:

Exclusive/non-exclusive license to know-how and data

Ownership:

Institute of Molecular and Translational Medicine, Faculty of Medicine and Dentistry, Palacky University, Olomouc

Contact:

More information is available upon signing a CDA/NDA. Please contact the director's office at IMTM (director@imtm.upol.cz) or the technology transfer office (tto@imtm.upol.cz)

