

PRET2D SENSOR — EARLY DETECTION OF INSULIN RESISTANCE OR PRE-DIABETES IN TYPE 2 DIABETES

PROBLEM DESCRIPTION

Type 2 diabetes develops well before the onset of clinical symptoms. It is estimated that the current diagnosis of type 2 diabetes is made almost 10 years after the onset of changes, when it is generally too late for any prophylactic treatment. Up until now, there was no available test that would allow easy and inexpensive early diagnosis of insulin resistance or pre-diabetes. Currently used tests are expensive and therefore are not performed during routine medical tests or require specialist equipment available only in specialized clinics. There is therefore a market need for cheap and widely available tests to enable early diagnosis of type 2 diabetes at the very beginning of its development, enabling early prevention and therapeutic actions, and minimizing the effects of this disease.

STAGE OF DEVELOPMENT

DISCOVERY

VERIFIED ON HUMAN SAMPLES

MINIMAL VIABLE PRODUCT

CLINICAL TRIALS DONE

INNOVATION OF THE SOLUTION

PreT2D Sensor combines our novel unique invention and already known standard diagnostic methodologies. The sensor utilizes the idea that concentration of Wnt3a and Wnt4 proteins in blood samples correlates with development of insulin resistance or very early pre-diabetes in Type 2 Diabetes.

THE MOST IMPORTANT ADVANTAGES

PreT2D Sensor is quick, easy to perform and may enable earlier (approximately 5-10 years) detection of insulin resistance compared to current methods thus may be easily included in standard check-up, allowing early lifestyle modifications and better management of type 2 diabetes development.

PROJECT CORE TEAM

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KEY PUBLICATION

Kozinski K, et al. 2016. Adipose- and muscle-derived Wnts trigger pancreatic β -cell adaptation to systemic insulin resistance. DOI: 10.1038/srep31553

KEY WORDS



DIAGNOSTICS



METABOLIC DISORDERS



PROTEIN BIOMARKER



BLOOD BIOMARKER

INTELLECTUAL PROPERTY STATUS

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