



THERAPEUTICS & DRUG TARGETS

Unique gene transcript and protein biomarkers for early prediction of Type 1 Diabetes prior to seroconversion

Background:

The DIPP (Type 1 Diabetes Prediction and Prevention Project) is an extensive Finnish screening program which starts from birth and spans the entire childhood. Recruiting is based on the genetic susceptibility of T1D.

Since the launch in 1994, >150 000 children have been screened and >8500 children carrying HLA risk alleles enrolled, with >300 of them having progressed to clinical diabetes. All samples are age/risk/gender matched with samples from healthy volunteers.

Description:

The unique longitudinal samples of DIPP spanning the pre-diabetic period have provided exceptional material for finding unique gene transcript and protein biomarkers for the unmet clinical need for early prediction of T1D in genetically susceptible children. The markers show substantial potential for:

- Detecting the emerging threat of T1D prior to seroconversion of islet cell autoantibodies
- Stratification of patients with expected distinct clinical outcomes for preventive interventions and therapeutic trials
- Focused clinical surveillance of children with the highest risk and preparation for early intervention
- Monitoring the effectiveness of preventive actions/therapy

Application Areas:

Establishing new practical assays for predictive and preventive medicine. Stratification of high-risk persons to clinical trials for preventive interventions and therapies.

The IP is available for licensing from the TTO of the University of Turku (UTU).

ID: UTU310

Title: MEANS AND METHODS FOR DETERMINING RISK OF TYPE-1 DIABETES BY SERUM PROTEIN BIOMARKERS

PCT Publication: WO2015193552 (A2)

Title: METHOD OF PREDICTING RISK FOR TYPE 1 DIABETES

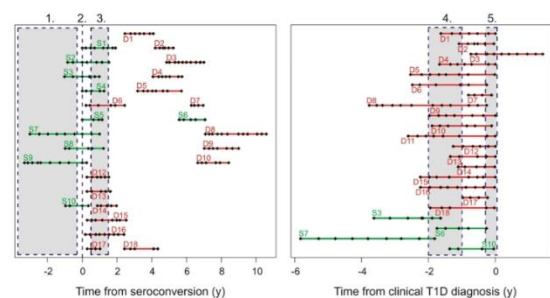
PCT Publication: WO2014207312 (A2)

+ Unpublished applications

Status: Technology Readiness Level (TRL) 3-4

Further analysis of longitudinal sample series and cross-validation in independent cohorts in progress.

Results of analysis according to defined time-windows



1. Before seroconversion

2. At seroconversion

3. 6-18 months after seroconversion

4. 1-2 y before diagnosis

5. At clinical diagnosis

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