ALGORITHM FOR INDIVIDUAL CHARACTERIZATION OF GLUCOTYPES AND RESPONSE TO DIET (GLIA)

Researchers from the IMDEA alimentación, Universitat Autònoma de Barcelona (UAB) and the Consorcio Centro de Investigación Biomédica en Red (CIBER), have developed an algorithm for characterization of glucotypes

The Need

Eating is a conscious social action that strongly influences health. However, dietary choices today are guided by general recommendations rather than by each person's unique physiological needs.

Cardiometabolic diseases are common and costly in healthcare. Lifestyle interventions can be effective, as demonstrated by PREDIMED, PREDIMED-Plus, and CORDIOPREV, which have reduced the incidence by up to 30%. However, these interventions face low adherence and individual variability in dietary response.

The Solution

A group of researchers has developed an algorithm for characterizing glucotypes (GLIA) that addresses the social and economic impact of cardiometabolic diseases through nutrition, but also overcomes the limitations associated with nutritional interventions.

Innovative Aspects

- The algorithm, which is the subject of this invention, applies innovative artificial intelligence (AI) and machine learning (ML) methods and integrates data obtained through continuous glucose monitoring (CGM) sensors and dietary surveys to:
  1. Identify glucotypes with a chronobiological component
  2. Monitor changes in glucotype membership in response to specified interventions as an indicator of effectiveness
  3. Provide personalized dietary advice to maintain glucose homeostasis

- It captures biologically significant parameters for understanding how subjects respond to food in terms of glycemic control.

- It empowers individuals, regardless of their metabolic status, to improve their dietary choices, maintain metabolic flexibility, and prevent cardiometabolic diseases.

Stage of Development:
Validated and protected technology waiting to be exploited.

Intellectual Property:

Software and data based designed registered by i-DEPOT evidence Universitat Autònoma de Barcelona.

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

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