

## VITASTEVE

**Design and development of Low GI foods based on sweetening compounds isolated from *Stevia rebaudiana* cultivated in China and fortified with vitamins A and D.**

## Consortium

YOTIS SA, JIANGSU Provincial Center for Disease Control and Prevention-  
Institute of Food Safety and Assessment, University of Athens – Medical School –  
Evgenidio Institute, University of Athens – Medical School – Laboratory of  
Biological Chemistry, SMR Consulting, SEVT



## **Title of the description of the results**

Design and development of Low GI foods based on sweetening compounds isolated from *Stevia rebaudiana* cultivated in China and fortified with vitamins A and D.

## **Reference to the project**

Hellenic Operational Programmes «Competitiveness and Entrepreneurship» and Regions in Transition, National Strategic Reference Framework 2007-2013

## **Authors**

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## **Work period covered**

1/10/2012 – 30/9/2015

## Background and Aims

- The development and quality assessment of an innovative, low cost, low glycaemic index/ low glycaemic load, Stevia based product [cereal bar], enriched with Vitamins A and D.
- The evaluation of this new bio-active product through clinical and laboratory studies, and its connection with health benefits.
- The creation of transnational co-operations between industries, scientific communities and dissemination results managers, in order to promote innovation and competitiveness.

## What are the tangible results for the practice: data, findings, statements, methods, project results/solutions?

- The development of innovative bioactive food product - **cereal bar**.
- The results of the clinical trials which are referred to:
  - the assessment of the innovative product concerning its effects in anthropometric parameters, total fat and regional fat reduction (showing a reduction in total body fat) and in metabolic and hormonal profile (showing an improved blood glucose control) with the continuous consumption of the innovative product. In both intervention studies vitamins A and D plasma levels was evaluated before and after intervention in order to assess the impact of fortification.

## **What are the tangible results for the practice: data, findings, statements, methods, project results/solutions?**

- The assessment of health benefit and claim on the reduction of post-prandial blood glucose response additionally will focus in evaluation of post-prandial impact on glycaemic response as also its impact in several cardiovascular biomarkers compared to a standard sweet snack.
- The assessment of the significance of vitamin D in relation to glucose homeostasis with a dynamic method, in healthy subjects, the consumption of the product compared to a standard sweet, mitochondrial function.
- The assessment of the impact of hypovitaminosis D in all biochemical and cardiovascular parameters.

## Significance and benefits

The results of the clinical trials can be used for the design and development of other low GI food products.

## Impact

Up to now there is a lack in the market of snacks based in Stevia glycosides and fortified with vitamins A and D- although cereal based products have gained an increasing portion of the market.

Consequently, this **innovative bio-active snack will help compliance of overweight/obese, pre-diabetic and diabetic people undergoing nutritional programs and will introduce healthy dietary habits in population.**

## Successful applications

The cereal bar of the project.