



## Mediterranean Enriched Diet for tackling Youth Obesity

**Encontro Ciência 2022 - May 17<sup>th</sup> , 2022**

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DIETA MEDITERRÂNICA  
ENRIQUECIDA NO  
COMBATE À

**OBESIDADE  
JUVENIL**

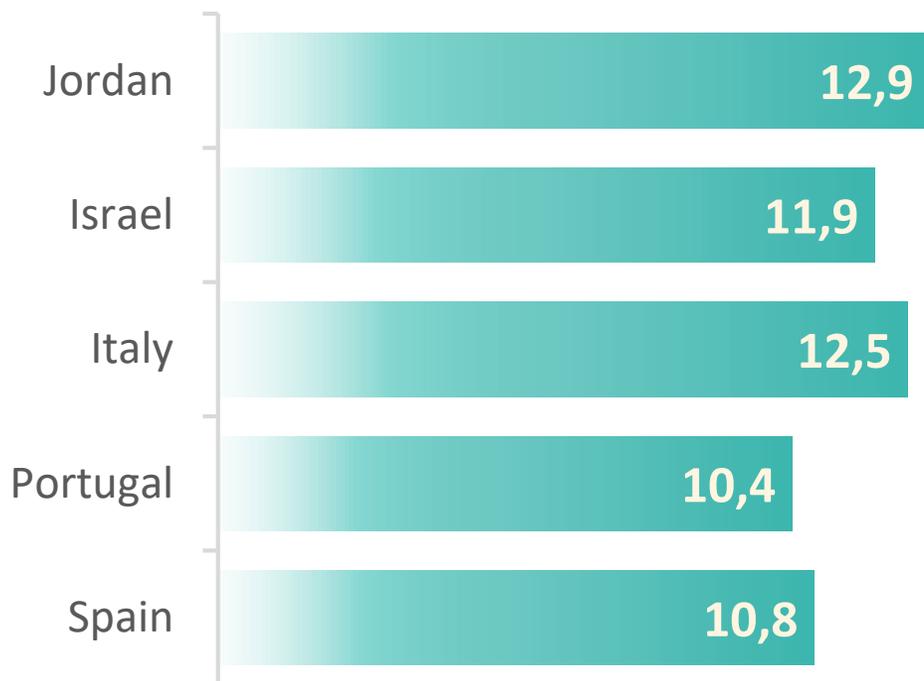
Um estudo de  
intervenção orientado  
para 240 adolescentes  
com obesidade



# THE CONTEXT

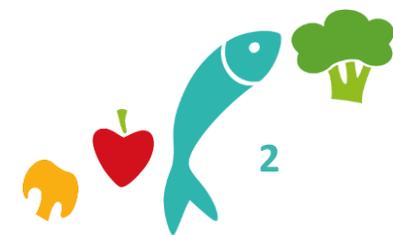


## % OBESITY IN MEDITERRANEAN COUNTRIES



According to the World Health Organization, in 2016, **18%** of children and adolescents aged 5-19 suffered **obesity** or **overweight**

Source: OECD 2014 Health Statistics



# CONSORTIUM

*The success of MED4Youth project builds on the expertise of a multidisciplinary team of 6 partners from 5 countries*

1 Farming  
Company



2 SMEs



Scientific  
Food Center

NOVAPAN S.L.

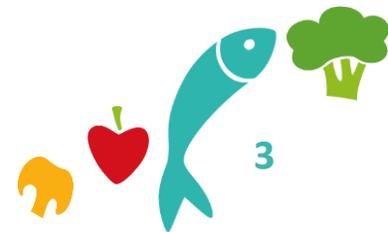
3 Research  
institutions



UNIVERSITÀ  
DI PARMA



FACULDADE DE MEDICINA  
UNIVERSIDADE D  
COIMBRA





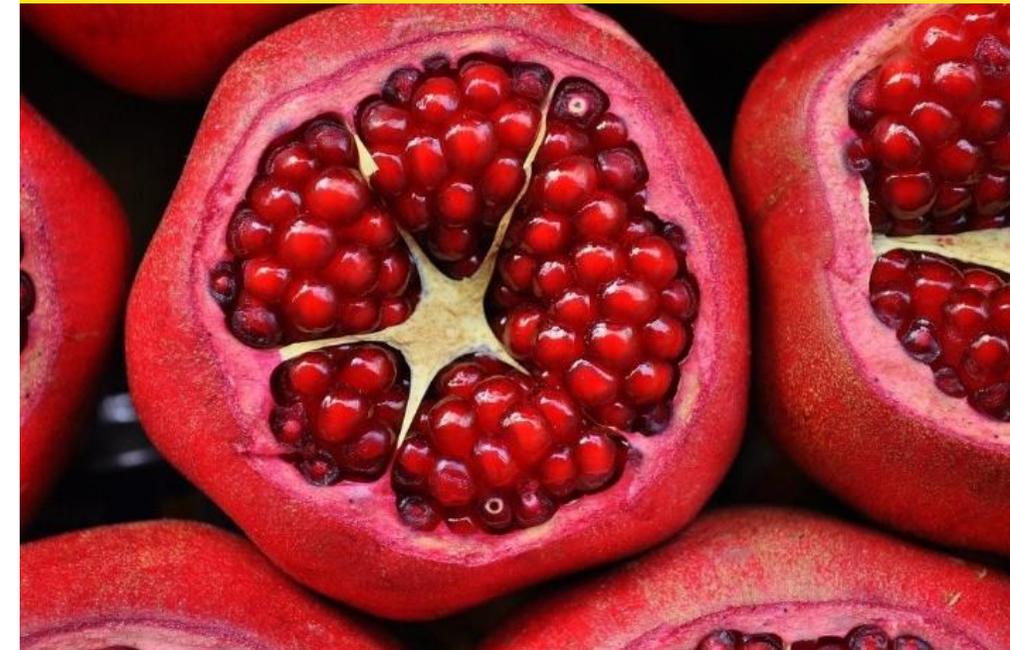
## ABOUT MED4YOUTH

Tackling youth obesity with an energy-restricted Mediterranean Diet

-  MED4Youth project aims to demonstrate how an energy-restricted Mediterranean-style diet intervention is effective against youth obesity and associated cardiovascular disease risk factors.
-  The project uses omics technologies to elucidate whether the changes in gut microbiota and gut-derived metabolites are associated with the health effects of a Mediterranean Diet.

# MULTICENTRE CLINICAL INTERVENTIONAL STUDIES

240 teenagers will participate in a Mediterranean Diet-based clinical study for 4 months.



## MULTICENTRIC CLINICAL INTERVENTIONAL STUDY

Teenagers are participating in the study during a 4-month period and being assigned to two different intervention groups



240 teenagers from  
Portugal, Spain and Italy



### A Mediterranean Diet group

Instructed to follow an energy-restricted MD that will incorporate sourdough bread, pomegranate, hummus and mixed nuts.



### A conventional Low-fat diet group

This diet is the most used diet for obesity treatments in adolescents. This second group will follow a diet based on a low consumption of fats.



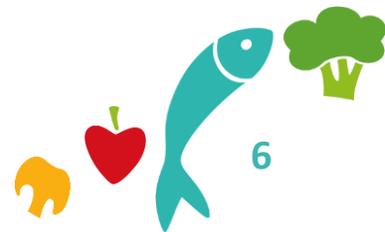
# MED4YOUTH APP

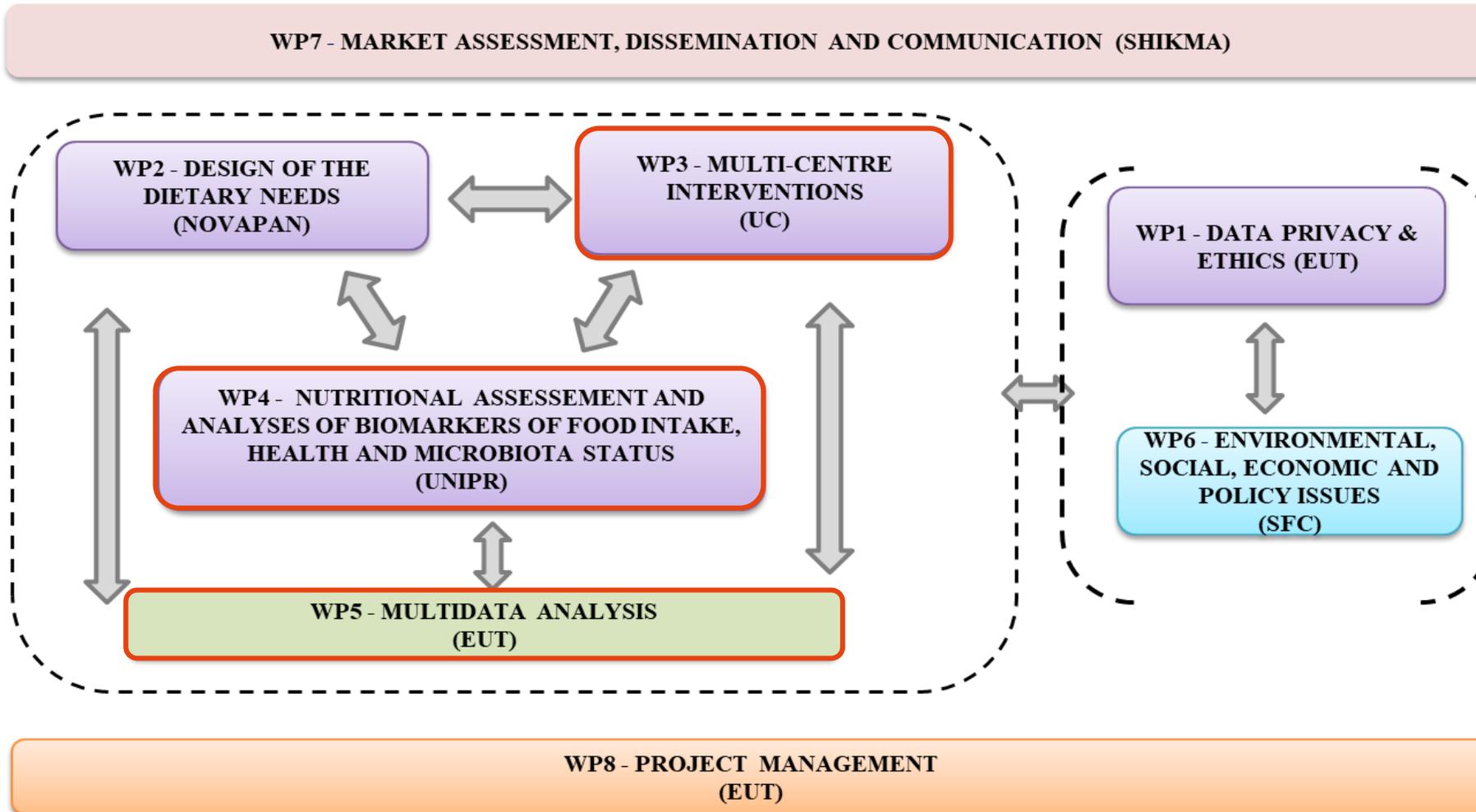
An educational web-application to encourage healthy behaviours

Teenagers participating in the project have access to an application where they can learn about **health, nutrition and food in general**.

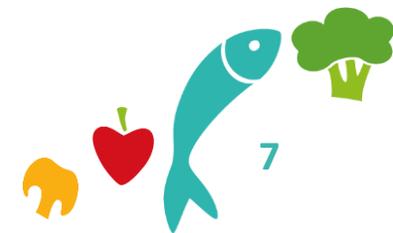
To engage participants a **learning-through-playing** approach is being used.

- Personalised tips to improve health and nutrition habits
- Quizzes and games to improve food literacy
- Daily recipes to prepare tasty and nutritious meals
- Content on the Mediterranean Diet products





# PERT DIAGRAM





## IN PORTUGAL

The project involves a close collaboration between



University of Coimbra is the leader of

Work Package 3  
Multicentre intervention



[www.med4youth.eu](http://www.med4youth.eu)

[@Med4Youth](https://twitter.com/Med4Youth) [info@med4youth.eu](mailto:info@med4youth.eu)

## IN PORTUGAL



Delays in approval from the Ethics Committee due to COVID



Difficulties in the recruitment



Difficulties on customs processes to receive food from Israel



Space available to storage the food at proper temperature



Due to COVID we got a **1-year extension**



Since March we've reached **27 families**



We are working with Cardiology and Obesity services to **increase recruitment**



**Food arrived** last week



**4 teenagers** will **start** the intervention Thursday



# Mediterranean Enriched Diet for tackling Youth Obesity

*Thank you*

## Consortium



NOVAPAN S.L.



FACULDADE DE MEDICINA  
UNIVERSIDADE D  
COIMBRA

## Funding bodies



Generalitat  
de Catalunya



Centro para el  
Desarrollo  
Tecnológico  
Industrial



FCT Fundação  
para a Ciência  
e a Tecnologia

## Supported by



The PRIMA programme is supported under Horizon 2020 the European Union's Framework Programme for Research and Innovation



CONTACT US

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## EXPECTED IMPACTS



### Decrease the BMI z score

A decrease of 0.2 in the MD group versus low-fat group



### WHO-5 Well-Being Index

10% difference before and after the intervention, which can be considered as significant improvement



### Find robust associations

Between the circulating biomarkers of 2-3 specific products associated with the Mediterranean Diet



### Decline waist circumference

Detect, in Mediterranean Diet group versus low-fat diet group, a 2 cm decline in waist circumference (WC)



### Identify beneficial effects after the Mediterranean Diet intervention

Analysis of microbial-derived metabolites (SCFA, organic acids, TMAO, LPS, bile acids) and in microbial genera (*Lactobacillus*, *Bifidobacterium*)



### KidMed Score

Achieve at the end of the study an average of KidMed Score  $\geq 8$  points within the Mediterranean Diet group

