



**UNIVERSITY: Public University of Navarre (UPNA)**

**WIT PROGRAMME'S RESEARCH LINE NAME: Preventive Medicine**

Prevention and treatment of hepatic steatosis in children with overweight or obesity

**DOCTORAL PROGRAMME:** Doctorate in Health Sciences

<https://www.unavarra.es/escuela-doctorado/doctorate-programs/current-plan/Health+Sciences/doctorate-in-health-sciences?languageId=1>

### **COMPLETE DESCRIPTION OF THE LINE**

Metabolic associated fatty liver disease (MAFLD) is an obesity associated comorbidity affecting up to 35% of children with overweight and the most common chronic hepatic disease in developed countries. MAFLD is an important public health problem with high impact in health care systems because of its elevated comorbidity and expected growth in the middle and short time.

The aetiology, physiopathology and natural history of paediatric MAFLD are poorly understood, mainly due to the diagnosis difficulties. Therefore, the objectives of this research line are: 1) To develop a predictive algorithm based on artificial intelligence to stratify the risk of MAFLD in children with overweight or obesity using a multiomic approach and medical imaging markers in order to identify personalized health care needs in Primary Care Clinic, and 2) To design and implement a family-based intervention to reduce hepatic fat content and metabolic risk in children with overweight/obesity.

**RESEARCH GROUP NAME:**

Nutrition and Physical activity for health, ELIKOS research group



## **COORDINATOR: Idoia Labayen Goñi**

- Last and first name; link to the “Portal of scientific production”:
- Labayen, Idoia.  
<https://academicos.unavarra.es/CawDOS/?id=862816e018a8035d&idoma=es&tipo=activ&elmeucv=N>
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## **MEMBERS OF THE LINE RESEARCH:**

Idoia Labayen Goñi (UPNA & IDISNA, Tutora)-Physiology and Nutrition

Félix Sánchez Valverde (Navarrabiomed & CHN, Tutor)-Paediatrics

Javier Campión Zabalza (Making Genetics, <https://www.making-genetics.eu>)-  
Molecular Biology

Arantxa Villanueva Larre (UPNA & IDISNA) – Medical Imaging

Rafael Cabeza Laguna (UPNA) - Medical Imaging

Carlos López Molina (UPNA & Navarrabiomed)- Artificial Intelligence

Luis Moreno Aznar (UNIZAR, Campus Iberus) – Childhood Obesity

## **ANOTHER RESEARCH LINES OF THE GROUP: list of them**

Prevention and treatment of obesity and cardiovascular disease

Physical activity, fitness and cardiometabolic health

Programming cardiovascular health

## Nutrigenetic and nutrigenomic

- Entities involved in research lines and contact person:
- ✓ Academic entities:
  - ELIKOS group: Public University
  - Campus Iberus Action Group, Personalized Nutrition and Healthy Lifestyle: <https://www.campusiberus.es/grupo-de-accion-peanut/>:  
Campus Iberus, Idoia Labayen Goñi
  - Department of Health, Medicine and Caring Sciences. Linköping University, Pontus Henriksson
- ✓ Industrial entities:
  - Making Genetics, Javier Campión Zablaza (<https://www.making-genetics.eu>)
    - Nutrición 3G, Adriana Moleres (<https://www.nutricion3g.es>)
- ✓ Brief group overview

The ELIKOS group is multidisciplinary research team with a long lasting experience investigating on childhood obesity. The group has developed European, national and local funded investigation projects and has published more than 200 scientific articles in the field of obesity and related comorbidities. Since 2013, the research line of the ELIKOS group is focused on the investigation of the aetiology, physiopathology, prevention and treatment of hepatic steatosis in children. The group in collaboration with paediatricians and researchers on medical imaging has investigated the effects of diet and physical activity on fatty liver disease, as well as the role genetic, epigenetic, microbiota and medical imaging biomarkers on MAFLD.



This research line has been recognised with national awards and has produced articles in the best scientific journals such as Diabetes Care or Journal of Hepatology.

✓ Pictures, links... to academic or industrial partners (if any)

- <https://www.making-genetics.eu/es/>
- <https://www.nutricion3g.es>

#### **REQUIREMENTS:**

Degree: Medical sciences

Additional requirements:

Languages: at least B2 level (or equivalent) of english and spanish languages