PhD Thesis Opportunities at the Unitat de Nutrició Humana (UNH)

🔬 About Our Research Group

The **Unitat de Nutrició Humana (UNH)**, part of the **Departament de Bioquímica i Biotecnologia at the Universitat Rovira i Virgili (URV)** in Reus (Catalonia, Spain), is an international reference center in nutrition, nutritional epidemiology, and public health.

What Sets Us Apart

- Over **1,200 scientific publications** in indexed journals.
- More than **50 defended doctoral theses** in nutrition and health.
- Researchers included among the top **2% most influential scientists worldwide** in nutrition and dietetics.
- Leadership in flagship projects such as **PREDIMED, PREDIMED-Plus, CORALS, and LED-Fertyl.**
- Infrastructure with specialized laboratories and metabolomics, biomarker, and microbiome platforms.
- An **international, multidisciplinary** training environment, with research stays at leading centers in Europe and the Americas.
- Real impact on **clinical guidelines and public-health policy**.

🎓 Your PhD at UNH

- Design and implement research protocols in nutrition, epidemiology, and public health.
- Take part in clinical trials, cohort studies, and multi-omics projects.
- Analyze and interpret clinical and molecular data.
- Publish results in **high-impact international journals**.
- Train in **nutrition, metabolomics, microbiome, and biostatistics**.
- Work within an international, multidisciplinary team.
- Undertake research stays at centers of excellence worldwide.
- Disseminate results to society and contribute to the development of public-health recommendations.

📚 Available Thesis Lines

Mediterranean diet and brain health: the role of the gut–brain axis

The **NUTRIBRAIN** project investigates whether long-term adherence to a Mediterranean diet with energy restriction, together with promotion of physical activity within the **PREDIMED-Plus** intervention, is associated with favorable three-year changes in the gut microbiome and cognitive trajectories over time.

Ultra-processed food consumption in Spain

The **UPF-SPAIN** project is a multicenter clinical trial that evaluates, in young adults with overweight, how a diet based on ultra-processed foods, compared with a diet of minimally processed foods, affects body weight, insulin sensitivity, and cardiometabolic biomarkers.

Mediterranean diet and risk of depression in older adults

Within the **PREDIMED-Plus** study, we investigate how adherence to the Mediterranean diet relates to the onset of depressive symptoms in older adults with overweight and metabolic syndrome. We also assess whether inflammation, glucose metabolism, and neurological proteins act as mediators in this association.

Exposome, lifestyle, and mental health in childhood

Within the **CORALS** cohort and the **EXPOCARDI** study, we analyze how diet, lifestyle, and exposure to environmental contaminants influence mental health in childhood. By integrating multi-omics data (metabolomics, exposomics, and microbiome), we aim to identify early biomarkers of mental-health problems in children aged 3 to 6 years.

Adherence to the Mediterranean diet, testicular function, and fertility

The **MEDFERTYL** project is a nutritional intervention study in men of reproductive age whose main objective is to evaluate the effects of a Mediterranean diet on testicular function and fertility. The hypothesis is that adherence to this dietary pattern improves testicular function and reduces the risk of infertility.

Lipidomic profile and early prediction of cardiometabolic risk in childhood

The LIPIDS-CORALS project is a longitudinal study within the **CORALS** framework focusing on lipidomics in boys and girls aged 3 to 6 years. Its primary objective is to identify plasma profiles of fatty acids and ceramides associated with weight status, lifestyle habits, and cardiometabolic risk. The hypothesis is that specific lipidomic signatures are associated with lifestyle—including adherence to the Mediterranean diet, ultra-processed food intake, sleep, and physical activity—and allow early prediction of the progression of cardiometabolic risk in childhood.

🙌 Candidate Profile

Academic Background:

- Bachelor's and master's degree in health sciences or related fields.
- Minimum grade point average of **8.5/10** in the bachelor's degree (Spanish scale).

Skills and Motivation:

- Interest in research in nutrition and public health.
- Proficiency in **Spanish and English** (reading, writing, and speaking).
- Excellent communication and interpersonal skills.
- Ability to work in teams and collaborate across disciplines.

Advanced knowledge or a Master's in biostatistics will be valued.

📍 **Location** Universitat Rovira i Virgili (URV), Reus (Catalonia, Spain).

📩 How to Apply **Send your** CV and cover letter to: **nutriciohumana@urv.cat**

🔥 **Join us to explore the future of food, nutrition, and public health!**