

PROYECTOS EUROPEOS

NUTRITECH

Responsable en la UCO: Prof. José López Miranda.

Tiempo de ejecución: 1 de enero de 2012 hasta 31 de diciembre de 2015.



NutriTech is a European Commission funded FP7 research project (2012-2015)

The goal of NutriTech is to quantify the effect of diet on “**phenotypic flexibility**”. Phenotypic flexibility extends on metabolic flexibility (the capacity to adapt fuel oxidation to fuel availability) and includes all underlying mechanisms and physiological processes of adaptation when homeostasis is challenged. Methods will in the first instance be evaluated within a human intervention study, and the resulting optimal methods will be validated in a number of existing cohorts against established endpoints.

In doing so, we evaluate the use of **cutting-edge analytical technologies** and methods to study the diet-health relationship and critically assess their usefulness for the future of nutrition research and human well-being. Technologies include genomics, transcriptomics, proteomics, metabolomics, laser scanning cytometry, NMR based lipoprotein profiling and advanced imaging by MRI/MRS.

The impact of NutriTech will be multifold and exploitation is crucial as major breakthroughs from our technology and research are expected. Overall, NutriTech will lay the foundations for successful integration of emerging technologies into nutrition research.

WORKPLAN

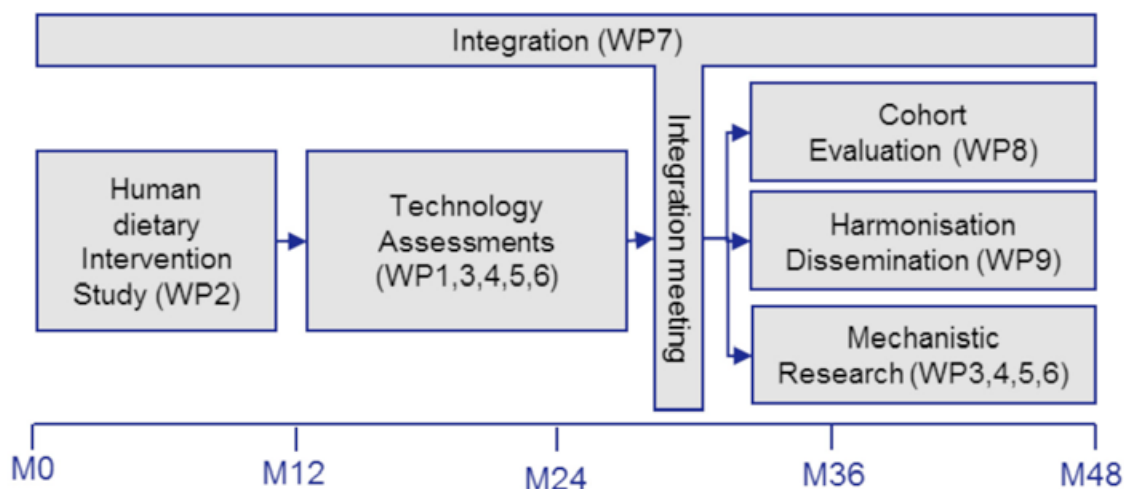
NutriTech, during its 4-year period, is structured in two major phases:

1. Perform, analyze and evaluate an “extensive phenotyping human intervention study” applying multiple omics technologies to quantify improvements in phenotypic flexibility.
2. Validate the results of the intervention studies in a series of cohorts.



Prof. José López Miranda team

The scheme below provides an overview and indicates the various workpackages:



- WP1** - Food intake quantification.
- WP2** - The human intervention study.
- WP3** - Systemic biomarker analysis.
- WP4** - Imaging.
- WP5** - Organ flexibility.
- WP6** - Genome Analysis.
- WP7** - Integration.
- WP8** - Cohorts.
- WP9** - Harmonisation & dissemination.

3. **Imperial College London**, UK (the Gary Frost, Jimmy Bell and Alex Blakemore teams).
4. **University of Oslo** (Norway), the Christian Drevon team.
5. **Wageningen University** (Netherlands), the Michael Müller & Lydia Afman team.
6. **University College Dublin** (Ireland), the Lorraine Brennan team.
7. **Medical University Varna** (Bulgaria), the Diana Ivanova team.
8. **IARC** (France), the Augustin Scalbert team.
9. **CEINGE** (Italy), the Luigi Fontana team.
10. **University of Cordoba** (Spain), the José Lopez-Miranda team.
11. **NuGO** (Netherlands) (Fre Pepping and Ingeborg van Leeuwen).
12. **ILSI Europe** (Belgium) Stephane Vidry and team).

CONSORTIUM

NutriTech is a consortium of 23 Partners including 6 non-EU groups. Together, we will disseminate the harmonised and integrated technologies on a global scale and by providing an integrated and standardised data storage and evaluation platform.

Partners:

1. **TNO**, Netherlands (the Ben van Ommen and Marjan van Erk team, coordinator).
2. **Technical University Munchen**, Germany (the Hannelore Daniel team).

13. **EDI** (Germany).
14. **Paprika Bioanalytics BT** (Hungary), Ralph Ruehl.
15. **VITAS AS** (Norway), Thomas Gundersen.
16. **Biqualy** (Netherlands), Jacques Vervoort.
17. **Biocrates** (Austria), Rania Kovaïou.
18. **University of Alberta** (Canada), David Wishart team.
19. **University of Toronto** (Canada), Ahmed el Sohemy team.
20. **CSIRO** (Australia), Michael Fenech team.
21. **University of Auckland** (New Zealand), Lynn Ferguson team.
22. **IMDEA** (Spain) Jose Ordovas team.
23. **TUFTS University** (USA), Jose Ordovas team.

www.nugo.org/nutritech

