

## Research lines

The purpose of the Food and Nutritional Metabolomics group is to work on different projects both related to the research of biomarkers of consumption, biomarkers of effect and disease-risk biomarkers, and related to the investigation of polyphenols in food as well as the bioavailability of these components in humans. At present we are working on the following lines of research:

### [Role of feeding in host-gut microbiota](#) [1]

The composition of the intestinal microbiota influence the modulation of body weight, response immune pathogenesis of obesity and concomitant metabolic disorders. However, the mechanisms that relate the composition of the intestinal microbiota and obesity, and the role of diet in modulating cometalisme microbiota and the host must be unraveled.

### [Metabolomics and nutritional biomarkers and disease risk](#) [2]

- Study of new biomarkers robust, reliable and sensitive techniques by applying metabolomic.
- Exploring the metabolic pathways associated with databases (MetaboAnalyst, Keggim, HMP among others) to understand its association with obesity, diabetes, aging and cardiovascular risk reduction (markers of disease risk).
- Evaluation of an environment obesogenic food and incidence of metabolic disorders in clinical / epidemiological studies.

### [Metabolomics study of biomarkers:](#) [3]

- Modifications of the metabolome after food consumption (wine, nuts, olive oil, tea, functional foods...): food metabolome.
- Identification of biomarkers (endogenous metabolome) of the effect of a nutritional intervention.
- Biomarkers of disease-risk in urine, plasma and/or tissues (metabolic syndrome, obesity, cardiovascular disease).

### [Standardization of metabolomics analysis protocols in biological samples.](#) [4]

### [Polyphenols and health. Focused and directed studies:](#) [5]



## Research lines

Published on Biomarkers and Nutritional & Food Metabolomics (<http://www.nutrimetabolomics.com>)

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- Analysis of polyphenols in foods, functional ingredients and biological samples.
- Cocoa, citrus, green tea, wine.
- Metabolites of cocoa flavanols and cocoa flavonols.
- Resveratrol in c-LDL, urine, plasma and tissues.
- Metabolites of catechins and gallates from green tea.
- Metabolites of flavanones in citrus fruits.
- Metabolites of blueberries in the Central Nervous System.

[Development of composition tables of food bioactive components.](#) [6]

[Phenol Explorer 2.0: Development of polyphenol metabolites databases in biological samples.](#) [7]

[Development of biomarker databases of phytochemical consumption and biomarkers of disease-risk.](#) [8]

[Participation in clinical and epidemiological studies on nutrition:](#) [9]

- Cocoa study
- Wine study
- PREDIMED study
- EPIC study
- InCHIANTI study

**Source URL:** <http://www.nutrimetabolomics.com/lineas>

### Links:

- [1] <http://www.nutrimetabolomics.com/Role%20of%20feeding%20in%20host-gut%20microbiota%20>
- [2] <http://www.nutrimetabolomics.com/metabolomics-and-nutritional-biomarkers-and-disease-risk-0>
- [3] <http://nutrimetabolomics.com/en/node/224>
- [4] <http://nutrimetabolomics.com/en/node/94>
- [5] <http://nutrimetabolomics.com/en/node/232>
- [6] <http://nutrimetabolomics.com/en/node/99>
- [7] <http://www.nutrimetabolomics.com/lineas/phenolexplorer>
- [8] <http://nutrimetabolomics.com/en/node/261>
- [9] <http://nutrimetabolomics.com/en/node/92>

