



**INTERDEPARTMENTAL RESEARCH CENTER  
NUTRAFOOD**

**NUTRACEUTICALS AND FOOD FOR HEALTH**

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# NUTRAFOOD Center

has been formally founded on 26/07/2013

**Main overall goal:** to establish strong connections and intensive interdisciplinary knowledge exchange among the scientists of the University of Pisa working on **Food, Nutrition and Health.**



Nutrafood Center will foster structured and effective collaborations in order to overcome duplication of efforts and create optimal synergies among the existing research infrastructures of the scientific communities of **Food, Nutrition and Health.**

So far, 174 scientists from 8 Departments answered to the call and have developed a scientific network of expertise, with the capacity of investigating all the factors concerning health-promoting food and nutraceuticals.

The Departments involved are:

- Agriculture, Food and Environment
- Biology
- Civil and Industrial Engineering
- Clinical and Experimental Medicine
- Pharmacy
- Surgical, Medical, Molecular and Critical Area Pathology
- Translational Research and New Surgical and Medical Technologies
- Veterinary Science

# NUTRAFOOD MISSIONS



Pre-clinical and clinical assessments of nutraceuticals and food, active in the prevention and/or cure of illness



Detection and quantification of the nutraceutical compounds contained in plant and animal food, and their biological, biochemical and pharmacological characterization



# NUTRAFOOD MISSIONS

Evaluation of all the factors affecting the content and concentration of nutraceuticals in food during the whole agri-food supply chain (*farm to fork*), from primary production to transformation and commercialization



Implementation of services on authentication, certification and traceability of safe and beneficial food, from production to distribution



# NUTRAFOOD MISSIONS



Organization of education and professional training courses, and promotion of the diffusion of scientific results, in order to improve public awareness of the importance of producing and consuming safe and healthy food

## EXCELLENCE IN TRANSLATIONAL SCIENCE: FROM KNOWLEDGE TO APPLICATION

FROM FOOD PRODUCTION AND TRANSFORMATION TO  
FOOD ANALYSIS, NUTRACEUTICALS EXTRACTION AND  
DETECTION, PRE-CLINICAL TESTS, BEDSIDE CLINICAL  
PRACTICE AND DISSEMINATION

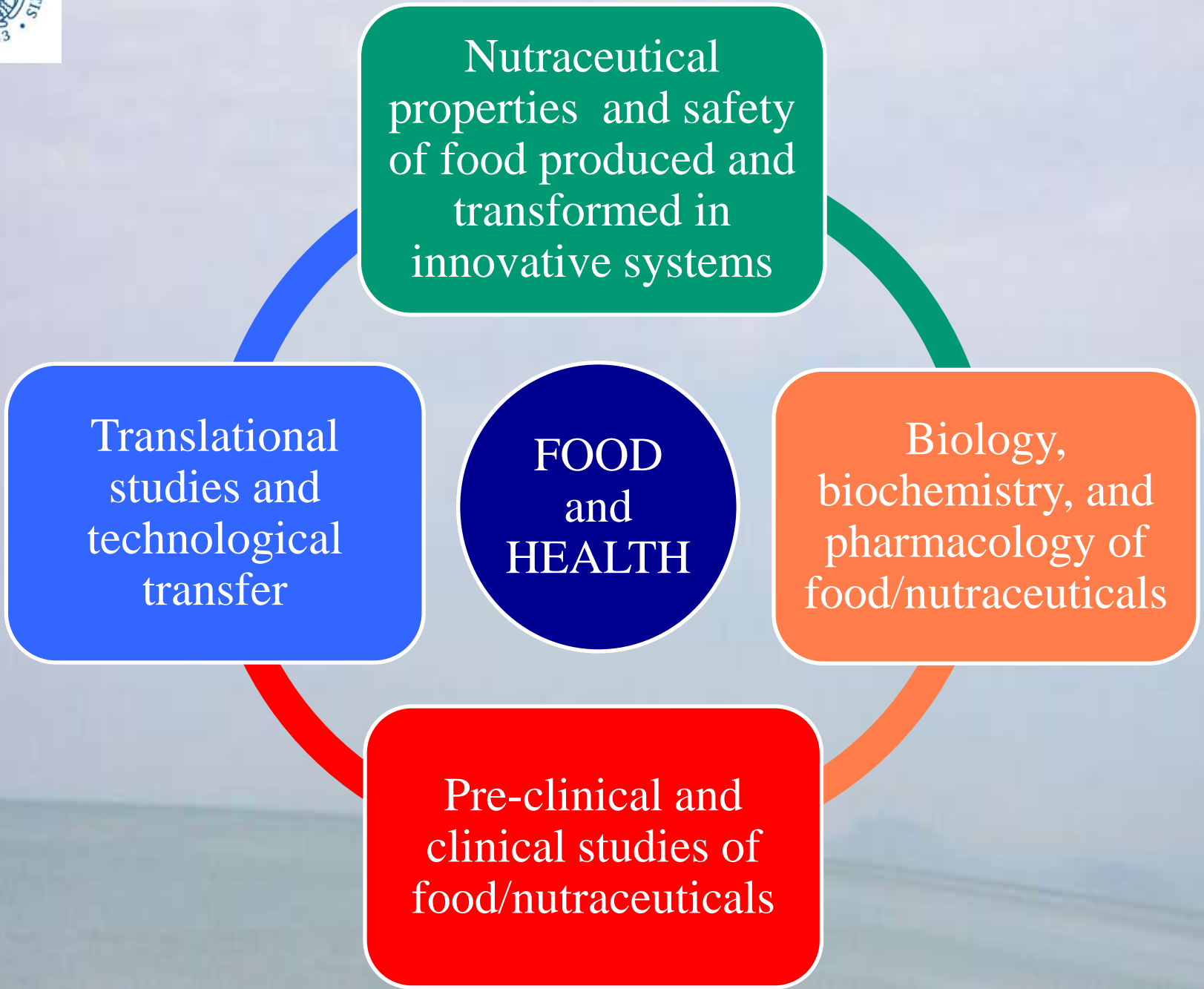


*"There are no such things as applied sciences, only  
applications of science."*

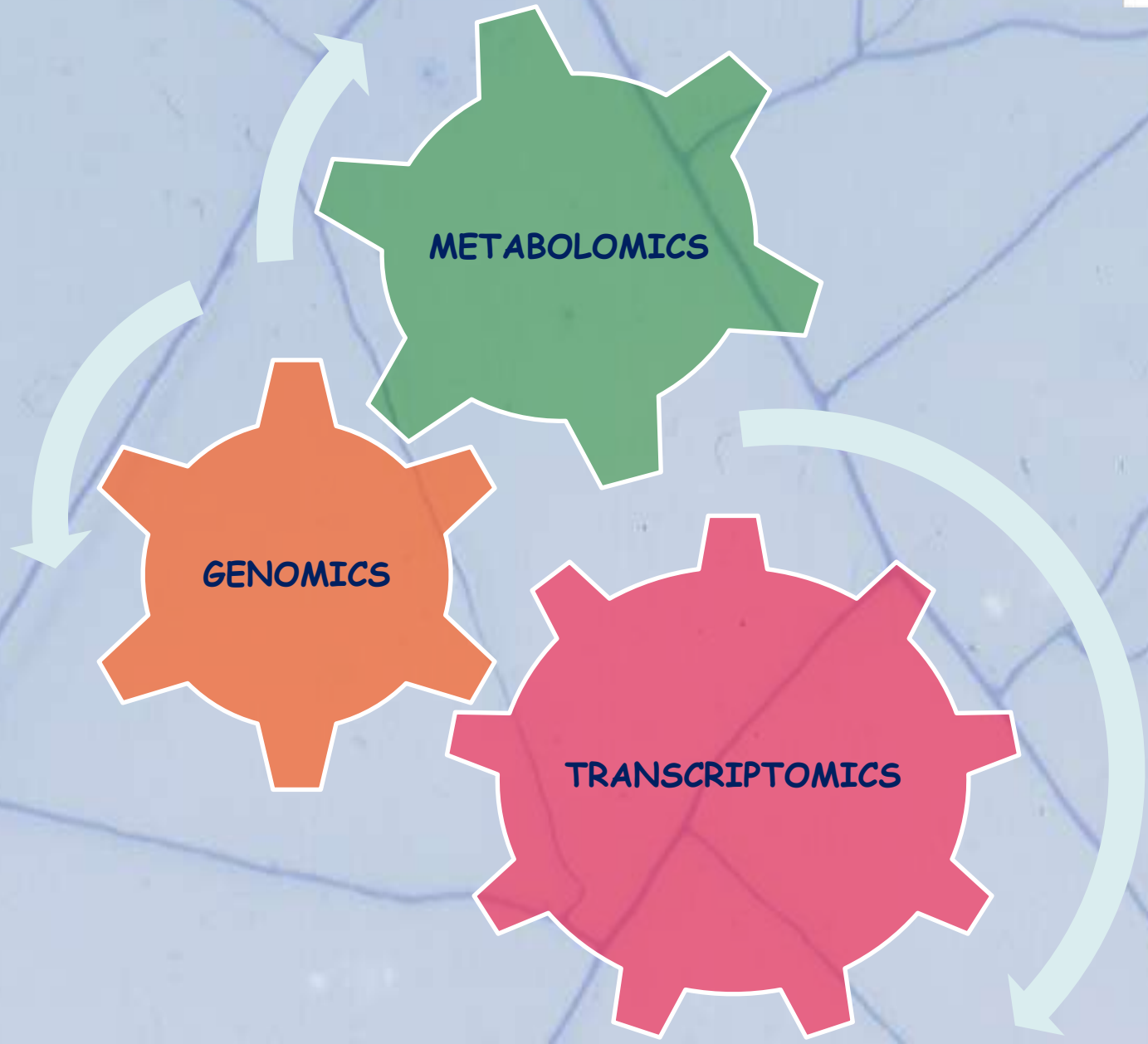
Louis Pasteur



# TOOL: TRANSDISCIPLINARY COOPERATION





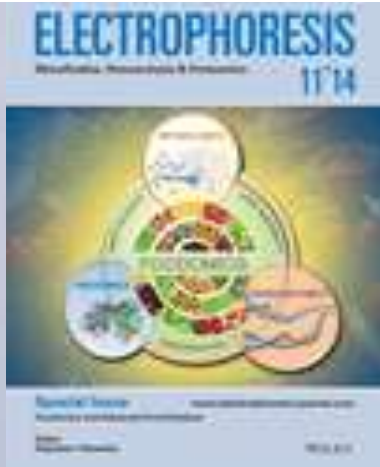


# FIRST RESEARCH PAPERS WITH NUTRAFOOD AFFILIATION

## Beneficial mycorrhizal symbionts affecting the production of health-promoting phytochemicals

*Electrophoresis* 2014, 35, 1535–1546

Cristiana Sbrana<sup>1</sup>  
Luciano Avio<sup>1</sup>  
Manuela Giovannetti<sup>2,3</sup>



*Planta Med* 2014; 80: 610–613

## Hydrogen Sulfide Releasing Capacity of Natural Isothiocyanates: Is It a Reliable Explanation for the Multiple Biological Effects of Brassicaceae?

Valentina Citi<sup>1</sup>, Alma Martelli<sup>1</sup>, Lara Testai<sup>1,2</sup>, Alice Marino<sup>1</sup>, Maria C. Breschi<sup>1</sup>, Vincenzo Calderone<sup>1,2</sup>

<sup>1</sup> Dipartimento di Farmacia, Università di Pisa, Pisa, Italy

<sup>2</sup> Centro Interdipartimentale di Ricerca Nutraceutica e Alimentazione per la Salute "Nutrafood", Università di Pisa, Pisa, Italy

## Gene promoter methylation in colorectal cancer and healthy adjacent mucosa specimens

Correlation with physiological and pathological characteristics, and with biomarkers of one-carbon metabolism

Fabio Coppedi<sup>1,2,3</sup>, Francesca Migheli<sup>1,2</sup>, Angela Lopomo<sup>1</sup>, Alessandra Falli<sup>1</sup>, Annalisa Legitimo<sup>1</sup>, Ilia Consolini<sup>1</sup>, Gabriella Fontanini<sup>1</sup>, Elisa Seno<sup>1</sup>, Adele Servadio<sup>1</sup>, Massimo Secchia<sup>1</sup>, Giuseppe Zocco<sup>1</sup>, Massimo Chiarugi<sup>1</sup>, Roberto Spisei<sup>1</sup>, and Lucia Migliore<sup>1,2,3\*</sup>

## epigenetics



**Issue Highlights:**  
Methylation differences of the "longue" gene between human and chimpanzee (p. 111)  
O<sup>6</sup>-methylguanine in mammalian cells (p. 117)  
Role of BDNF in transcriptional differentiation of embryonic stem cells (p. 100)





**THANK YOU FOR YOUR ATTENTION**

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