

PhD Student: Mattia Quattrini

Tutor: Maria Grazia Fortina

Dean: Francesco Bonomi

Research area: Food Science and Nutrition

Research topic: Development of new systems of bio-preservation for the safety and shelf-life of food

### **Project Synopsis:**

The aim of the PhD project is the creation of new microbial consortia that can be easily used in the fermented food production, in order to design innovative bio-control strategies and new food formulations.

Starting with the creation of an ecotypes collection of lactic acid bacteria identified and studied for characteristics of bio-control and for not conventional functional properties.

The second step is the development of specific microbial associations with multiple activities, whose dynamic of growth and production of useful metabolites will be followed by sensitive monitoring systems.

The final objective is the development of fermentation processes at the pilot level, for the functional evaluation of the microbial associations obtained to be applied in bakery and dairy production.

### **Project keywords:**

Lactic acid bacteria; food safety; mycotoxin; food microbiology.

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**Collaborations:**

Prof. Ivano De Noni, DeFENS, Food Science and Nutrition;

Prof. Milena Brasca, CNR;

Dr. Lisa Vallone, VESPA, Animal Food Inspection.

**Sponsor:**

Università degli Studi di Milano

**Publications:**

Quattrini Mattia, New microbial consortia for the development of new food quality's strategies. (Poster) *XXI Workshop on the Developments in the Italian PhD Research on Food Science, Technology and Biotechnology, Portici (NA), September 14<sup>th</sup>-16<sup>th</sup>, 2016.*

**Others:**