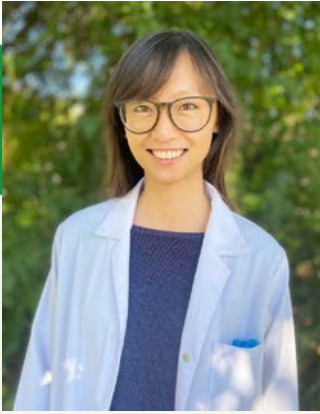


# Leilei Zhang



KEY-WORDS:  
 PLANT BIOSTIMULANTS ·  
 METABOLOMICS · CROP PRODUCTION

## PROFILE

I am a first-year Ph.D. student in Plant Science specialized in Plant Metabolomics and Food Quality. Several years of experience in an industrial biotechnology company let me be flexible and have multidisciplinary knowledge to spend in the field of sustainable agriculture.

## AFFILIATION

Department for sustainable food process – DiSTAS  
 Università Cattolica del Sacro Cuore

## LANGUAGES



Mother language



Mother language



Level B2

## HOW TO REACH ME

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## PROJECT TITLE

**Unravelling the biostimulant potential of combined microbial and non-microbial treatments towards a more sustainable agriculture**

### Steps of the research

- Study the effect of microbial biostimulants, protein hydrolysates, and their synergistic potential on tomato crops.
- Metabolomics analysis - mechanisms and pathways analysis involved during biostimulant actions.
- Evaluation of Nutrient Use Efficiency (NUE).
- Evaluation of the quality of products.

### Main Results

Method setup and assay development studies are currently underway. Preliminary experiments on tomato plants are in progress to select the best microbial biostimulants that capable to reduce the translocation of heavy metals from field to fruit.

### Research Contribution

The purpose of my research could lead to the recovery of all those land contaminated by heavy metals, e.g., cadmium, zinc, copper, lead, etc., and make them arable and to produce income. Furthermore, with the combined use of microbial and non-microbial biostimulants, it is possible to increase agricultural production in a sustainable way (without the use of chemical fertilizers). The expected effects are an increase in food security through the recovery of contaminated lands in the world, and a decrease of chemical fertilizers application to improve the sustainability of agricultural production.

### Why should you care?

The increase in world population and the awareness of the population about the importance of food quality and related the environmental impact are such important topics nowadays. We are facing a great challenge for farmers that need new effective products, with zero environmental impact, able to meet the food demands. My aspiration is to make this possible!