



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

## Curriculum Vitae

Family Name: Maretto  
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### Education:

- PhD in Animal and Food Science, Università di Padova (2020-)
- Research Fellowship: Use of metagenomics to evaluate the microbial biodiversity of soils cultivated with organic and conventional sugar beet (2019-2020)
- M.Sc. Land and environment science and technologies (2014-2016)
- B.Sc. Environmental sciences and technologies (2010-2014)

### Research areas:

- Soil Microbiome
- Genetics
- Biotechnologies
- Molecular Biology
- Next Generation Sequencing

## **PhD project:**

Evaluation of microbial biodiversity of soils cultivated with sugar beet

Whole soil DNA extraction followed by Next-Generation Sequencing (NGS) is the best available technology for the analysis of the soil microbiome. Nevertheless, the characterization of the soil complex microbial assemblages requires careful experimental design and a priori selection of the most suitable DNA extraction and purification method. The DNA extraction from the soil is challenging due to its reaction with the soil inorganic and organic solid phases after cell lysis, whereas the amplification step is potentially hampered by the low quality of template DNA and presence of PCR inhibitors. These peculiar features often limit the potentials of the microbiome analysis either by PCR-metagenetic or metagenomic studies. The objective of my Ph.D. is to optimize soil DNA extraction methods for downstream molecular analyses, in particular of 16S and Internal Transcribed Spacers (ITS) amplicons Next Generation Sequencing for evaluating soil bacterial and fungal communities, respectively.

## **Supervisor:**

Piergiorgio Stevanato

## **Publications:**

<https://scholar.google.com/citations?user=zskdd-0AAAAJ>