**PhD: Food Science**

**Title:** *Shelf life* extension of fresh or processed vegetables, based on the alternative treatment of areas in the open field and in the greenhouse

**Proposing supervisor:** prof. CARLO ALTUCCI – Dipartimento di Scienze Biomediche Avanzate

**Objectives of the research project and interdisciplinary collaborations**

The main goal is to extend the shelf life of fresh or processed vegetables, such as baby leaf and adult salads, rocket, lettuce, valerian, baby spinach and other vegetables. This aim will be pursued through alternative treatments of the areas both in the open field and in the greenhouse, reducing the use of phytosanitary substances in crops intensive horticulture through the use of heat treatments and microwaves. Quality traits will be evaluated on the selected vegetables in collaboration with researches belonging to the Department of Agricultural Sciences.

**Innovation and originality of the project in relation to the state of the art**

1. Characterization of the organoleptic features of fresh or processed vegetables, coming from soils treated with microwaves in place of pesticides.

2. Definition of the best conditions for horticultural treatment both in open fields and in greenhouses to obtain the longest possible shelf life of the product, compatible with the best organoleptic characteristics.

**Grant availability** (funds to support the research activities): GRANT MOPAS (PON/MISE) prot. Nr. 304621 (PI OP SOLE e RUGIADA) 2021-2024

**Collaborations with foreign institutions**

Several big Italian companies are involved but no foreigner institutions.