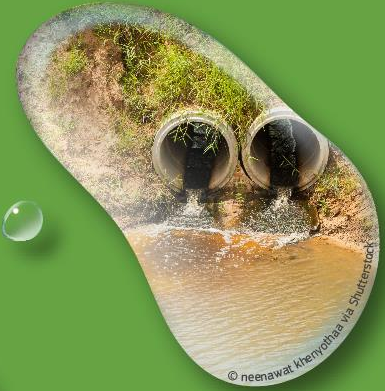


EU Green Week
PARTNER EVENT

La giornata green del dottorato | Acqua, resilienza ed oltre

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30 Maggio 2024

#WaterWiseEU



The Washing Phase for Fresh-Produce Decontamination: Addressing Challenges and Sustainable Solution

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Research topic of Food Science and Biotechnology

onfoods



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PHD PROGRAMME
AGRICULTURAL, ENVIRONMENTAL AND FOOD SCIENCE AND
TECHNOLOGY



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Background and Objectives



The global population is projected to exceed 9 billion by 2050



1.3 billion tons of food go to waste annually




Consumers prefer sustainable and natural products



Chemical sanitizers and disinfectant usage is on the rise

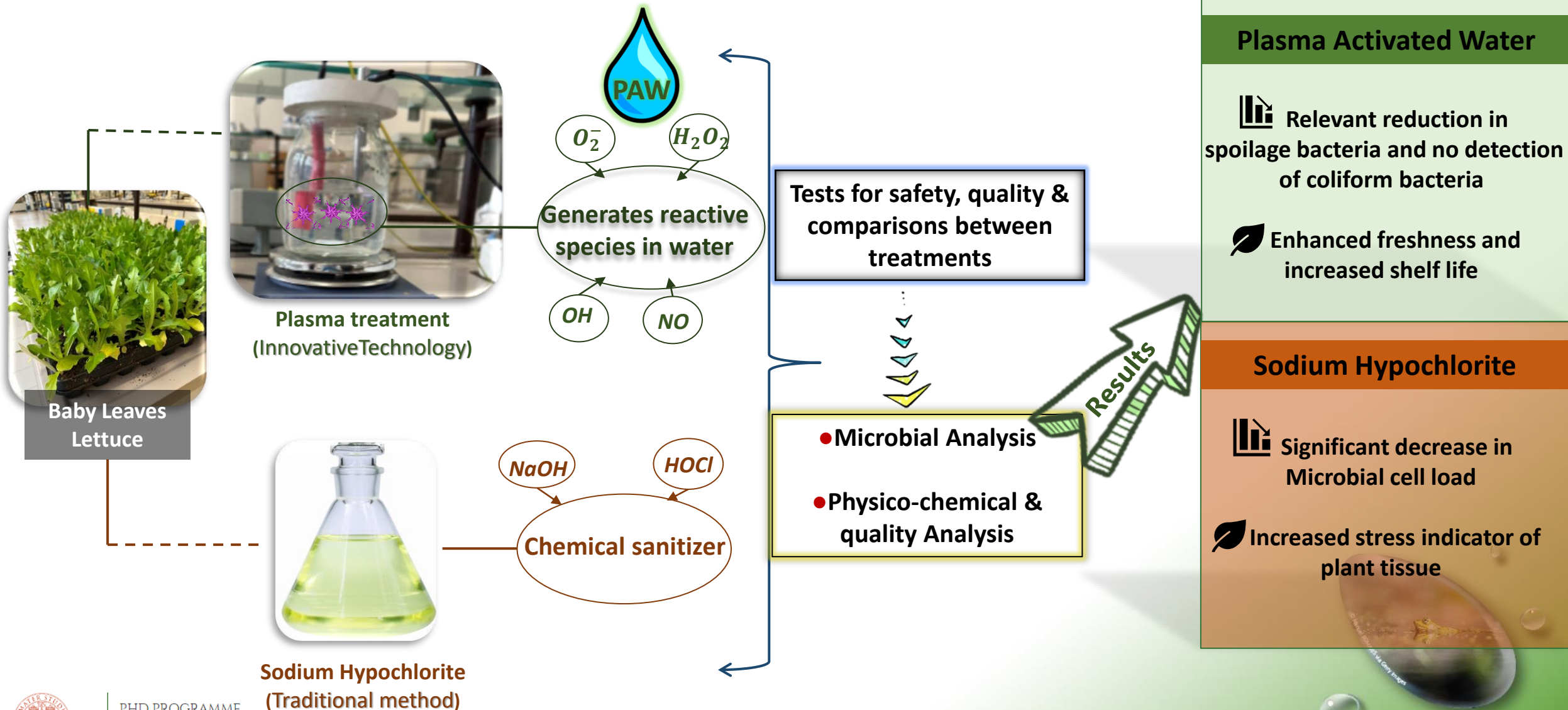


Objective

-  **Innovative Green Technology: Plasma Activated Water (PAW)**
- ▶ **Free from chemical sanitizer**
- ▶ **Reduced fresh-produce washing phase**
- ▶ **Enhanced safety and product shelf-life**



Experimental approach and main results



Expected outcomes (what for?)



Using gaseous plasma directly on food to reduce washing water!

- Approaching the aim of safety and high-quality products without using chemicals
- Decreasing the washing phase time
 - Eco-friendly Technology
- Possibility to reuse the water during the washing phase

Next step?

Thank you for your **attention!**

Reduction in spoilage bacteria of lettuce after PAW treatment

Keep higher quality, freshness, and nutraceutical value of PAW-washed lettuce

