12th INTERNATIONAL CONGRESS OF PLANT PATHOLOGY

ICPP 2023

ONE HEALTH for all plants, crops and trees

LYON

20-25 August, France

www.icpp2023.org

The International Society for Plant Pathology & the French Phytopathological Society

Use of oligonucleotides for the control of *Botrytis cinerea* in horticultural crops

Alba López-Laguna[1,2], Alejandra Vielba-Fernández[1,2], Alejandro Pérez-García[1,2], Dolores Fernández-Ortuño[1,2]

[1]Dpto. de Microbiología, Facultad de Ciencias, Universidad de Málaga, Málaga, Spain;
[2]Dpto. de Microbiología y Protección de Cultivos, Instituto de Hortofruticultura Subtropical y Mediterránea (IHSM-UMA-CSIC) “La Mayora”, Campus de Teatinos, Málaga, Spain

dfernandez-ortuno@uma.es

Botrytis cinerea, the causal agent of the gray mold disease, is one of the main limiting factors of horticultural crops production worldwide, consuming up to 40% of fungicides in its control. However, this fungus has been categorized by FRAC (Fungicide Resistance Action Committee) as a phytopathogen with a high risk for fungicide resistance development, a fact that has been demonstrated in our country. In addition, and according to the "farm to fork" strategy of the recent European Green Deal, the diversity of fungicides available to growers will be reduced by 50% in 2030. For this reason, alternative control tools and molecules with fungicide activity are needed to *B. cinerea* control. In this study, the efficacy of emerging strategies using oligonucleotides with antifungal effect has been explored. Preliminary results, obtained in *in vivo* assays, have shown a significantly reduction of the fungal development, demonstrating the potential of these oligonucleotides to be novel candidates to include in the different strategies of integrated control programs of the gray mold disease.

This work has been funded by: AYUDAS A LA I+D+i, EN EL ÁMBITO DEL PLAN ANDALUZ DE INVESTIGACIÓN, DESARROLLO E INNOVACIÓN (PAIDI 2020). Project code: PY20_00048