

## Italy: Elisa test to diagnose bacterial canker in kiwis

The phytotoxic exopolysaccharides produced by *Pseudomonas syringae* pv. *actinidia* (Psa), which causes bacterial canker in kiwis, have been isolated and partially identified. Their phytotoxic activity was evaluated on both host and non-host plants and their role in the complex mechanisms of host-pathogen interaction was also discussed in a study published in late December in *Phytochemistry Letters*.

The study was conducted by researchers from the University of Naples Federico II and CRA - Unità di ricerca per la Frutticoltura di Caserta. Phytotoxic exopolysaccharides were used to produce specific antibodies obtained by the immunisation of rats.



**Actinidia deliciosa cv. Hayward leaves infected with 1 (A), 4 (B) and 6 (C) mg/mL of exopolysaccharides.**

The antibodies were used to develop a rapid and specific Elisa method to detect Psa exopolysaccharides isolated from the bacterial culture and infected kiwi leaves. The antibodies recognised the exopolysaccharides produced by other two strains of Psa but did not react to those isolated by *Pseudomonas syringae* pv. *syringae* and *Pseudomonas syringae* *viridiflava*. In addition, those same antibodies recognised the exopolysaccharides extracted by infected kiwi leaves.

"These antibodies enabled us to use the Elisa method as an effective tool to detect bacterial canker in kiwis," report the researchers.

Source: Alessio Cimmino, Marco Iannaccone, Milena Petriccione, Marco Masi, Marco Evidente, Rosanna Capparelli, Marco Scortichini, Antonio Evidente, 'An ELISA method to

identify the phytotoxic *Pseudomonas syringae* pv. *actinidiae* exopolysaccharides: A tool for rapid immunochemical detection of kiwifruit bacterial canker', 2017, *Phytochemistry Letters*, Vol. 19, pag. 136–140.

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