Investigation and characterization of phytoplasma infecting *Ligustrum ovalifolium* plants in Turkey

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Relevance of the Thesis

Phytoplasma is one of the plant pathogens that cause major losses to several agricultural and horticultural crops around the world. Unlike other plant pathogens, there are no direct methods available yet to control phytoplasma and consequently the current measures rely on indirect tactics to manage phytoplasma disease. Hence, methods for detection and identification of phytoplasma both in plants and vectors play a critical role in phytoplasma disease management, crop improvement and agricultural sustainability.

Aster yellows   Witche’s broom   Flavescence dorée   Bois noir
Main Results – Sequence and Blast analysis

BLAST analysis of the 16S rDNA and 23S rDNA showed that the phytoplasma found in *L. ovalifolium* from Turkey, denoted as Turkish Ligustrum witches’ broom phytoplasma (TuLiWB), most closely resembled members of group 16SrII (peanut witches’ broom group) and shared up to 92% sequence identity.
Impact and Prospect

Availability of detection methods (molecular and serological)

- ELISA
- Droplet digital PCR
- Real-time PCR
- LAMP

provides greater flexibility and increased specificity and sensitivity for rapid diagnosis of phytoplasma disease, in disease surveys, epidemiological studies, plant quarantine, seed certification and breeding programs.
Thank You

Get in Touch
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