

Update and validation of DNA Barcoding protocols by end-users (DNA Barcoding)



Funding

Non-competitive funding mechanism. Each funder only pays for the participation of their own national researchers. Total funding € 135,000

Goals

The goal of the EUPHRESKO II DNA barcoding project is to update and validate generic PCR-sequencing protocols (including data analysis) for the identification of selected EU quarantine arthropods, bacteria, fungi, nematodes and phytoplasmas and invasive plants.

Research consortium

FERA-UK, AGES-AT, ILVO-BE, ANSES-FR, JKI-DE, INIA-ES, PPS-NL, NIB-SI

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Objectives

In the EU QBOL project, tests have been developed for the barcoding of selected EU regulated plant pests and pathogens. A test performance study (TPS) was performed to validate these protocols, but several difficulties were identified. The update and validation of PM7/xx is performed in this project and organised in 3 work packages:

- Work Package 1: Identification of revision needs
- Work Package 2: Redrafting of the draft EPPO standard (new data-analysis appendix, new organism tables – what was successfully tested and how?, Improved format for diagnostic decision schemes, adding new tests for bacteria, fungi, invasive plants and phytoplasmas, adding generic M13 tails for increased user-friendliness, use of harmonised proofreading polymerases)
- Work Package 3: TPS of the updated protocols

Key outputs and results

A validated EPPO standard on generic PCR-sequencing protocols (including data analysis) for the identification of selected EU quarantine arthropods, bacteria, fungi, nematodes and phytoplasmas and invasive plants. This EPPO standard will be used by NPPO diagnosticians to increase the reliability of the identification of regulated plant pests, pathogens and invasive plants.