

# Protecting Aussie grapevines from new virus

April 8 2013

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(Phys.org) —University of Adelaide researchers are working to prevent the introduction into Australia of a potentially devastating new grapevine virus.

Waite Diagnostics, at the University's Waite Campus, has developed a diagnostic test kit for the detection of [Grapevine](#) red blotch-associated virus (GRBaV) using DNA analysis.

GRBaV was discovered and first reported in the United States in October last year, and is regarded as potentially far more damaging than the Grapevine leafroll-associated viruses which are established in Australia.

"Viruses in grapevines are insidious and often cause serious diseases which affect production and quality, and can even result in vine death," says Professor John Randles, Director of Waite Diagnostics.

"We don't have any way of immunising [plants](#) like we can with animals and so we need to employ different methods of control which require detailed knowledge of the virus' biological properties."

University of Adelaide grapevine virologist Dr Nuredin Habili said the Grapevine Red Blotch disease was the most recently recognised grapevine disease to date, and is apparently widespread in the US. It significantly reduces the levels of grape sugar by up to five brix (a measure of sugar content), reducing suitability for wine-making.

The symptoms of the Red Blotch disease resemble those of leafroll disease with unexplained reddening of the leaves and, on white varieties, leaf curling and chlorosis, but the depressing effect on [sugar content](#) is greater.

"The question is, do we already have this virus in Australia?" says Dr Habili. "If not, we need to import cuttings under tight biosecurity conditions. All cuttings imported from the United States or Canada should be tested before being released from quarantine."

Waite Diagnostics has tested 10 grapevine varieties from Australian vineyards which have all tested negative.

The diagnostic test developed uses a specific 'primer' or piece of [genetic material](#) which recognises the matching DNA sequence of the virus, if present, allowing screening of cuttings.

"Viruses are very difficult to identify, the symptoms of [virus](#) infection in grapevine all look like each other," says Professor Randles. "With this

latest technology using [DNA analysis](#), we now have 12 different tests for grapevine [viruses](#) and phytoplasmas. Our diagnostic kits already go all over the world."

Provided by University of Adelaide

Citation: Protecting Aussie grapevines from new virus (2013, April 8) retrieved 25 April 2024 from <https://phys.org/news/2013-04-aussie-grapevines-virus.html>

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