

## **HG12: a new potyvirus infecting potatoes**

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A virus causing unusual yellow blotches on leaves of potato plants, found during inspection of breeding lines, was investigated using molecular studies, serology and indicator plants. Samples tested negative for 18 different potato viruses using ELISA but gave virus-like symptoms when inoculated to *Nicotiana benthamiana* and *N. occidentalis* - P1. Filamentous virus particles were observed under the electron microscope. Use of genus-specific primers indicated that the virus (code number HG12) was a potyvirus. Sequencing showed that the virus was closely related to PVA but with less than 72% identity at the nucleotide (nt) level. The virus was detected using PVA polyclonal antibodies but not with a PVA monoclonal antibody commonly used at SASA. Comparing HG12 with PVA, four out of 18 indicator plant species reacted differently: HG12 did not infect *Datura metel* or *N. glutinosa*; it was not systemic in *Solanum lycopersicon* cv. Moneymaker; and it did not produce a hypersensitive reaction in *Solanum demissum* A (but did infect it). Work is ongoing to fully characterise HG12 and establish the susceptibility of potato cultivars to it. Since the potyvirus species demarcation limit is 76% for nt sequence identity, it is proposed that HG12 is a new virus species.

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