OAK RIDGE NATIONAL LABORATORY
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Method and Apparatus for Rapid, Reagentless Detection of Viral Infection

Disclosure Number

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Technology Summary

Rapid and accurate diagnosis of viral infection is often required for both management of patient outcomes and management of viral spread. Existing diagnostic methods include direct examination of viral particles (electron or light microscopy, antigen immunofluorescence, and molecular techniques), indirect examination of viral effect (cell culture, haemmagglutination, animal studies, and serology. These methods typically require considerable time and significant laboratory infrastructure. This invention provides a rapid, reagentless assay of specific viral infections of intact tissue by probing specifically for RNA-dependent RNA polymerase which is present within cells infected by specific RNA viruses. The platform can outperform existing viral diagnostics both temporally, and with respect to ease of use.

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