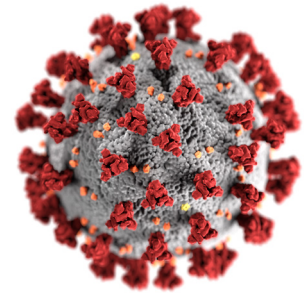


Multiple U.S. Patents and Pending Applications
SD# 12060, multiple additional
Technology Readiness Level: 5
Key Elements Demonstrated in Relevant Environment(s)

ViralFx is an integrated approach to the diagnosis and treatment of SARS-CoV-2 that is accurate, rapid, repeatable, and easily deployed.

In pandemic scenarios, the capacity to complete laboratory diagnostic tests can be overwhelmed due to the need for specialized equipment and highly trained personnel to perform the complex workflows for detection of viral RNA. To address this challenge, an integrated antiviral diagnostic solution developed by Sandia can improve our nation's ability to identify and rapidly respond to pandemic outbreaks and future emerging pathogens.



ViralFx integrates several Sandia technologies into a powerful and comprehensive solution ready for commercialization. **QUASR** (Quenching of Unincorporated Amplification Signal Reporters) is a technique to significantly enhance the favorable characteristics of **LAMP** (Loop-mediated Isothermal Amplification). **SmartLAMP** is a smartphone-based deployable diagnostic device to quickly assess potentially dangerous public health situations. When combined with Sandia's portable **SpinDx** platform, which offers rapid detection of viral and host antigens without the need for sample preparation, ViralFx can enable the positive identification of SARS-CoV-2, rules out influenza or other coronaviruses, and diagnoses COVID-19 at all stages of the disease.

ViralFx may improve healthcare outcomes, minimize the strain on medical providers, maximize provider capacity to treat patients, improve dataset fidelity related to virus spread, and ultimately reduce the potential of spreading the virus, thus saving countless lives.

TECHNICAL BENEFITS

- Low-cost, portable instrumentation that can be controlled by a smartphone
- Simplified workflow eliminates need for advanced technical training
- Rapid detection (results within 30 minutes) without need for sample preparation
- Diagnoses COVID-19 at all stages of disease
- Positively identifies SARS-CoV-2 and rules out influenza or other coronaviruses

INDUSTRIES & APPLICATIONS

- Detection of viral and host antigens
- Determination of disease treatment's effectiveness
- Prevention of future outbreaks

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