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## Northwest Laboratory (NWL) Offers COVID-19 Testing

**Northwest Laboratory (NWL)** is a medical testing laboratory located north of Seattle in Bellingham, WA. NWL has validated a test for SARS CoV2 (the virus that causes COVID) as a response to the COVID-19 crisis. The test is an accurate and highly sensitive RT-PCR assay. This test requires skill with molecular techniques to perform correctly, but also allows much higher throughput testing than most other available assays. NWL recruited a team of molecular biologists from Western Washington University, including graduate students, professors, and laboratory technicians, to perform the various manual elements of the testing process and to run each element of the process in parallel, maximizing efficiency and enabling 24/7 performance of the test. The testing is directed by Drs. Ryan Fortna, MD PhD and Greg Wolgamot, MD PhD, each with extensive experience in molecular pathology.

Current testing capacity is approximately 4000-5000 tests per day, with a turnaround time of <24 hours (often <12 hours). STAT samples (including hospital patients, nursing home patients, and exposed healthcare workers) are prioritized, but even non-STAT cases are generally resulted with fast turnaround.

**NWL COVID Assay:** Northwest Laboratory's SARS CoV2 (COVID-19) assay is based on the FDA-approved Thermo-Fisher TaqPath RT-PCR assay. This is a robust assay that detects three different genes in the SARS CoV2 viral genome. The amplification of three different genes ensures that the assay will detect any variants that may arise as the virus evolves. NWL has also validated a second assay, the Quidel Lyra assay, to ensure continual reagent supply during times when many labs have struggled to procure necessary instruments and other supplies. By establishing itself early as a highly capable laboratory with expertise, efficiency, and high volume capacity, NWL has been able to maintain a continual supply of necessary reagents for high-volume testing.

**Sensitivity:** Limit of detection analysis performed by Thermo-Fisher showed that the assay can detect as few as 10 copies of viral RNA present in either upper or lower respiratory tract specimens. Limiting dilution experiments performed at NWL showed that the virus can still be detected when known-positive patient samples are diluted 10,000- to 1,000,000-fold.

**Specificity:** The assay does not cross react with other known Coronaviruses or with other viruses or bacterial organisms. A positive result is diagnostic of SARS CoV2 being present in the sample.

**Specimen collection:** NWL accepts specimens that are considered appropriate by the CDC with current acceptable specimens listed on our website. Specimen collection kits (including swabs) for testing performed at NWL can be provided upon request. Transportation to NWL may be arranged via a variety of carriers.

For more information, please contact:

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