Molecular Diagnostics

HIGHLY COMPLEX TESTING | EASY TO READ RESULTS

Our unique multiplex PCR platform boasts > 95% specificity & sensitivity. Because our assays are lab developed tests (LDT's), we can adjust our panels as pathogens evolve and adapt to antibiotic and antiviral drugs. Our assays are validated every 6 months to assure the quality and accuracy of our technology, and can be updated as necessary.

> According to the FDA, "*LDT's are important to the continued development of personalized medicine.*"

The expression of concentration (or titer) testing, employs serial dilution to obtain approximate quantitative information from an analytical procedure that inherently only evaluates as positive or negative. The titered organisms that comprise the pathogens from each of our panels are obtained from American Type Culture Collection (ATCC).

Serial dilutions of the reference organism suspension are used for estimation of assay sensitivity (LOD) for each individual target. Because PCR results are qualitative, LOD is determined using the *Reed-Munch calculation algorithm*, which identifies a dilution that produces a positive result with a >95% frequency.

LOD (limit of detection) is set for each individual pathogen tested on our panels. A positive detection is reported only for those pathogens that exceed the LOD, and are therefore deemed potentially causative of the infection. By employing titer testing, our reports effectively eliminate the need for further interpretation.

PCR vs the Culture

Conventional microbial susceptibility testing begins with the isolation of bacterial colonies on selective agar plates, followed by subculture, bacterial identification, and downstream susceptibility testing. This approach can take up to 72 hours for results and the patient is often treated empirically with broad-spectrum antibiotics. As AST is a predictive model, in vitro results cannot be guaranteed to mimic an organism's anticipated in vivo response to a prescribed course of antibiotics.

Our panels use **genotypic characterization** of antimicrobial resistance and are designed and validated to detect clinically relevant gene variance directly from clinical samples without the need for time-consuming bacterial isolation and identification.

Additional benefits of our technology include:

- Delivers one-day results
- Identifies bacteria regardless of recent antibiotic use
- Identifies difficult to culture pathogens
- Offers simplicity of single sample collection with the ability to detect bacterial, viral, fungal, and parasitic pathogens
- Co-detection of multiple pathogens that impact the success of initiated treatment plan

Schedule a Consultation

Learn more about how our technology can add value to your practice. *Risk & Capitation based models, positive clinical & financial impact, cost avoidance strategies, revenue benefits, and programs tailored to YOUR needs. Please contact our team for more information and a no-cost analysis of your system.*

Book Online

Practice Management

Revenue enhancement opportunities also available. For a free consultation to learn how the utilization of our technology can boost revenue, improve patient outcomes, and patient satisfaction, please contact Joe Herrera.

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