

MOUNTAIN VIEW, California, March 15, 2017 -- **Specific Technologies announces the combined faster detection and ID of yeast infection in blood culture**

Specific Technologies, which has developed SpecID™, an innovative paradigm for detection and identification of pathogenic microorganisms based on their volatile metabolic signatures, announces today the publication of a study in PLOS ONE detailing the demonstration of the SpecID™ system to detect and identify pathogenic yeasts in simulated blood culture.

In the study, Cleveland Clinic researchers identified 7 species of pathogenic yeasts in blood culture with 95% accuracy, faster than current methodologies that can only detect the presence of infection. These key findings further demonstrate the SpecID™ system's unique capabilities to provide a faster identification of the cause of sepsis. Sepsis is the most expensive condition and leading cause of deaths in U.S. hospitals, costing more than \$20 billion annually. Sepsis occurs in about 10% of U.S. hospital patients, but contributes to up to 50% of all hospital deaths. Early diagnosis of sepsis is critical to improving patient survival rate, which decreases every hour without effective antibiotic treatment.

The authors of the study compared Specific's colorimetric sensory array (CSA) technology to the industry standard, bioMérieux's BacT/ALERT® system, and reported that SpecID™ accurately detected the presence of yeasts 6.8 hours (17%) faster than BacT/ALERT® on average. Further, the metabolomic "fingerprint" obtained by the sensor enabled discrimination of distinct species with 95% accuracy. The SpecID™ system thus combines earlier detection with the identification of species into a single, fully automated step. This contrasts with conventional culture systems that require a separate Gram stain, growth of colonies and then identification (ID). SpecID™ thus saves time, labor, reduces handling-related contamination and above all, speeds the availability of actionable information about deadly yeast-based blood infections to the hospital staff.

"This announcement continues to establish SpecID™ as the only technology to combine detection with ID during primary blood culture. By extending this paradigm, which we have reported for bacterial and mycobacterial infection, now to the clinically important case of yeast infection, we demonstrate a general and novel paradigm for microbiology diagnostics that promises to streamline the lab, by combining the detection, Gram status and ID of pathogens as they grow in blood culture," said Paul A. Rhodes, Ph.D., CEO of Specific.

"Improving microbiology diagnostics to better detect and characterize the causes of fungemia is important to guide antifungal therapy," said Gary W. Procop, M.D., Medical Director of Enterprise Laboratory Stewardship Committee, and Molecular Microbiology, Virology, Mycology & Parasitology Laboratories at the Cleveland Clinic Foundation. "We look forward to evaluating new systems for not only blood culture but rapid antibiotic susceptibility testing as well in the coming months."

To view the manuscript, "The Combined Rapid Detection and Species-Level Identification of Yeasts in Simulated Blood Culture Using a Colorimetric Sensor Array," published in PLOS ONE,

please visit the following link: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0173130>.

About the SpecID™ System

During culture, microorganisms produce volatile metabolites unique to each species and in some cases to their strain. Utilizing an inexpensive printed chemical sensor array to obtain a fingerprint that combines detection and identification into a simple, automated single step, the novel SpecID™ system identifies microorganisms from a phenotypic metabolomic signature obtained during growth.

About Specific Technologies

Specific Technologies' industry-leading team is developing clinically proven, regulated *in vitro* diagnostic systems based on a low cost and labor-saving sensor technology that enables rapid detection, Gram status and species identification (ID) of microorganisms directly in the blood culture bottle. The Company's patented chemical fingerprinting technology combines detection and ID steps into a single, hands-free step, enabling faster time to result, laboratory costs savings and labor saving that speed time from sample-to-answer. Leveraging the same innovative technology, Specific is also developing an antibiotic susceptibility testing (AST) paradigm that would represent a new level of speed, ease of use and affordability in the all-important phenotypic determination of antibiotic susceptibility. These two systems will work in concert to offer a modernized next-generation workflow for the microbiology laboratory. Specific Technologies is located in Mountain View, CA.

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