MOUNTAIN VIEW, California, June 3, 2017

Specific announces unprecedented ability to determine MIC and ID within 4 hours of positive blood culture, using a low-cost disposable.

Specific Technologies, which has developed a novel paradigm combining the detection and identification (ID) of microorganisms during blood culture, announces today a revolutionary system combining phenotypic AST with ID, performed in 4 hours directly from a positive blood culture sample. This capability is revealed in a late-breaker abstract accepted by the American Society for Microbiology to be showcased at the ASM Microbe conference. The abstract will be presented on June 3rd at 12:15 – 2:15, on poster number CPHM LB1.

With the rapid evolution and spread of antimicrobial-resistant infection, means of ascertaining antibiotic efficacy in hours rather than days are urgently needed. Importantly, in order to interpret an antibiogram, organism ID is needed in concert. Specific reports results from a combined system, SpeciFAST, which obtains phenotypic AST in 3 hours along with organism ID within a further 1 hour post positive blood culture, using a low cost printed sensor array responsive to volatiles emitted during growth. The system leverages the same core technology, Specific's proprietary colorimetric sensor array, as utilized in the Company's blood culture instrument which combines detection and ID.

In a set of more than 5,000 tests, addressing antibiotic efficacy for 172 combinations of organism and antimicrobial, including 73 strains of 20 species, against 26 appropriate antimicrobials, MIC determined by SpeciFAST was in 99.4% essential agreement and 98.8% categorical agreement with the reference standard (SensiTitre, Thermo Fisher).

By using the full 73 indicator colorimetric sensor, in a set of tests encompassing 14 species, it was demonstrated that not only antibiotic efficacy but also ID could be obtained, using Specific's proprietary volatile-responsive colorimetric sensor array to call ID during culture. In this set of trials, the colorimetric sensor pattern emerging during AST allowed species ID with 94% accuracy within 4 hours. The addition of ID capability required no change to the instrument, work flow, or disposable, simply the inclusion of a full sensor array in a control well.

The simplicity and low disposable cost of this method, in which a printed sheet of volatile-responsive indicator arrays is utilized, offers the combination of AST as well as ID in a total of 4 hours directly following positive blood culture at the low cost required to plausibly enable very widespread adoption.

Specific will be presenting the late-breaker abstract, "The Combined Determination Of MIC Within 3 Hours Of Positive Blood Culture, Along With Identification In a Further 1 Hour, Using a Sheet Of Colorimetric Sensor Arrays," at ASM 2017 on June 3rd, from 12:15 PM - 2:15 PM - poster board number: CPHM LB1. The Company will be exhibiting throughout the conference at booth #2313.

About the rapID Dx™ 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 organism-dependent fingerprint of volatile emission patterns, this novel culture instrument combines detection and identification into a simple, automated single step, utilizing a phenotypic metabolomic signature obtained during growth.

About Specific

Specific 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 determination and identification (ID) of microorganisms during blood culture. 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 has developed 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 modern next-generation workflow for the microbiology laboratory. Specific is located in Mountain View, CA.

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