



M I C R O P H A G E

News Release

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MicroPhage launches world's first diagnostics for antibiotic testing *and* bacterial identification in just five hours or less compared to up to three days for other tests

Establishes new standard for fighting *hospital-acquired infections (HAI)* and appropriate antibiotic use

SAN DIEGO, May 24, 2010—[MicroPhage](#) announced today the launch of its new diagnostic platform at the 110th Annual General Meeting of the American Society for Microbiology (ASM) in San Diego. The Company's initial commercial product is designed to rapidly identify *Staphylococcus aureus* ("staph") bacteria as well as determine methicillin resistance (MRSA) or susceptibility (MSSA) in suspected cases of bloodstream infections in as little as five hours. Today's standard of care for determining these types of infections takes up to three days for test-results, which can lead to ineffectual treatment and death. The product is CE-Marked for sale outside the United States and U.S. Food and Drug Administration (FDA) review is pending.

The *MicroPhage MRSA/MSSA Blood Culture Test* requires no instrumentation and is comprised of two small reaction tubes for incubating blood culture specimens. After only five hours, the incubated samples are added to a dual dipstick-like detector, which looks much like a home pregnancy test. One part of the test will identify if the blood sample is infected with *S. aureus* bacteria and the other shows whether it is susceptible or resistant to methicillin-type antibiotics. **Delivering this diagnostic information quickly for a condition that has a mortality rate of >20 percent will enable physicians to determine more effective and precise antibiotics that could shorten hospital stays, lower rising health care costs and, ultimately, save lives.**

"Our first commercial product establishes a new standard for clinicians in *S. aureus* identification and antibiotic susceptibility testing, and it is designed to complement the demands of hospitals and laboratories *of all sizes*," said MicroPhage CEO, **Alene Campbell**.

"Our initial product, as well as the *family* of tests we intend to offer based on our **Bacteriophage Amplification platform**, represents a new paradigm for the effective, cost-effective testing of hospital patients," added Campbell. "Hospital acquired Infections (HAIs) are a colossal problem, killing more than 15 million persons worldwide each year, two million in the U.S., and approximately 100,000 due to staph alone. We believe that our initial test will be extremely well-received worldwide and are encouraged by the number of laboratories interested in the Test."

About MicroPhage's *Bacteriophage Amplification Platform*

MicroPhage has adapted Bacteriophage Amplification, a natural biologic process, for identifying bacterial infections. *Bacteriophage* are harmless bacteria-specific viruses that multiply aggressively when exposed to target bacteria. In the detection process, reaction of the bacteriophage proteins on the MicroPhage test strip indicates that the sample is positive for the

bacteria. For susceptibility analysis, the organism in the sample is simultaneously challenged with an antibiotic. Because bacteriophage depend on host bacteria for amplification, any compound that kills or inhibits the microbe's growth will stop phage amplification. Only strains resistant to the antibiotic allow this amplification and yield a positive signal on the second detector strip on the test, indicating an MRSA infection. The platform allows for rapid, high performing tests without the need for expensive equipment or dedicated time of laboratory staff.

About Staph Infections

Staphylococci are frequently implicated in bloodstream infections (BSI) with high morbidity and mortality. In a multinational study*, 36 percent of bloodstream isolates were staphylococci, 61 percent of which were *Staphylococcus aureus*. In a prospective cohort of patients with hospital-acquired BSIs in the United States, *S. aureus* was a primary cause, accounting for 20 percent of cases. The incidence of *S. aureus* bacteremia has increased significantly over the past decade, largely due to the increasing use of intravascular catheters and invasive devices. There has also been a significant rise in rates of *methicillin-resistant S. aureus* (MRSA). Almost 60 percent of *S. aureus* bacteremia in the U.S. is now caused by these resistant strains. Despite advances in medical therapy and diagnostic procedures, *S. aureus* bacteremia is often associated with serious complications with a mortality rate that exceeds 20 percent, especially if appropriate therapy is not administered rapidly. A rapid and reliable test for this diagnosis would allow clinicians to optimize diagnostic and therapeutic decisions. Antibiotic therapy could be adjusted early, leading to better health outcomes for patients along with lower pharmacy and hospitalization costs.

About MicroPhage, Inc.

Based in Longmont, Colorado, and privately held MicroPhage, Inc. is working to be a global leader in developing rapid diagnostics products for bacterial identification and antibiotic susceptibility/resistance testing. Using its proprietary Bacteriophage Amplification platform, the Company has developed a patented process that is a product platform for rapid, easy-to-use, inexpensive diagnostic and screening tests. The technology platform resembles a pregnancy test with twin rapid detectors. The platform does not require any instrumentation and is easy to operate, enabling microbiology testing outside of traditional laboratory settings.

* Diekema DJ, Schmitz FJ, Pfaller MA, Bell J, Smayevsky J, Beach M, Jones RN, and the SENTRY Participants Group. Survey of infections due to *Staphylococcus* species: frequency of occurrence and antimicrobial susceptibility of isolates collected in the United States, Canada, Latin America, Europe, and the Western Pacific region for the SENTRY antimicrobial surveillance program, 1997–1999. *Clin Infect Dis* 2001;32:S114–S132

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