

NEWS

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For immediate release

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New Research Shows MicroPhage Test Accurately and Rapidly Detects Serious Bacterial Infections

LONGMONT, Colo., Nov. 18, 2008 – A simple and inexpensive developmental diagnostic assay produced by MicroPhage, Inc., www.microphage.com, was shown to be highly accurate for rapid detection of serious staph bacteria infections and for simultaneous assessment of antibiotic susceptibility. The research was reported in three scientific presentations at the recent Interscience Conference on Anti-microbial Agents and Chemotherapy (ICAAC).

In the first presentation, MicroPhage scientists reported that their novel platform to simultaneously identify *Staphylococcus aureus* bloodstream infections and determine antibiotic resistance or susceptibility can provide highly accurate results in just 5 hours. The current standard of care is 48-72 hours for the same determinations.

Infections caused by *Staphylococcus aureus* account for 400,000 deaths a year and the methicillin-resistant strains, known as MRSA, now account for nearly half of all *S. aureus* infections. Current test methods are too slow to allow doctors to make prompt treatment decisions. As a result, many antibiotics are over or under prescribed. This leads to proliferation of drug-resistant strains and suboptimal treatment of infected patients.

“The simplicity, accuracy and speed of the MicroPhage procedure gives clinicians a valuable tool to obtain diagnostic information they need to make the right therapeutic decisions to treat serious bacterial infections,” said Drew Smith, PhD, director of research and development for MicroPhage.

In a laboratory model of 240 strains of bacteria, the MicroPhage test had an excellent detection rate for *S. aureus* of 93 percent, while also determining methicillin resistance or susceptibility (MRSA or MSSA) at greater than 98 percent reliability, which is superior to several commercially available tests.

Nasal screening for MRSA and antibiotic susceptibility testing

For research reported in the second presentation, nasal swabs were collected at a community hospital and a tertiary care center in Colorado to screen patients for MRSA. The MicroPhage assay showed excellent specificity and sensitivity and laboratory personnel required only a short training session.

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“The study showed the test procedure is easy to learn and execute and requires no specialized, dedicated equipment,” said Smith. “Further, it is a flexible procedure that can be used in a variety of testing and reporting scenarios.”

In their third presentation, MicroPhage researchers demonstrated the breadth of the technology platform, showing that several antibiotics could be tested accurately to provide an easy-to-use method to guide antibiotic therapy. In this study, it was demonstrated that eight different antibiotics could be tested using bacteriophage amplification technology with an accuracy of 95 percent or greater on 184 total strains tested.

By contrast, physicians do not have antibiotic testing information when they prescribe these drugs for suspected infections. MicroPhage is the first company to present research showing that an easy-to-use diagnostic, similar to that of a pregnancy test, could help guide appropriate antibiotic prescribing in hospitals and other clinical settings.

Easy-to-use, natural detection technology

The MicroPhage system has two incubation tubes for incubating blood culture specimens. After five hours, the incubated samples are added to two dipstick-like detectors. One detector shows if the sample is infected with staph bacteria and the other indicates the antibiotic susceptibility of the bacterial strain.

MicroPhage has adapted bacteriophage amplification technology, a natural biologic process, for detecting staph infections. “Phages” are viruses that multiply aggressively when exposed to the target bacteria. In the detection process, reaction of the bacteriophage proteins on the test strip indicates the sample is positive for staph bacteria. For susceptibility analysis, the organism in the sample is challenged with an antibiotic. Because phages depend on host bacteria for growth, any compound that kills or inhibits the microbe will stop phage growth. Only resistant strains allow multiplication of phages and yield a positive signal on the detector strip. Further information about the technology is available at www.microphage.com/technology.

About MicroPhage

Based in Longmont, Colo. 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 bacteriophage-based amplification platform, the company has developed a patented process that is a product platform or engine for rapid, easy-to-use, inexpensive diagnostic tests. Its first products, expected in late 2009, will set a new standard for clinicians in MRSA identification and antibiotic susceptibility testing, and are designed to fit the demands of hospitals and laboratories of all sizes. For further information, go to www.microphage.com.

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