

# New rapid detection of bacteria in pediatric blood samples

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Researchers have demonstrated that a new technology could quickly and accurately diagnose bloodstream infections. The study findings were reported at [ASM Microbe](#), the annual meeting of the American Society for Microbiology.

"There is a need to be able to rapidly and accurately diagnose bacteremia in newborn babies. They are especially susceptible to long-term morbidities and mortality the longer they go without treatment, or even with inaccurate treatment for bloodstream infections or [sepsis](#)," said presenting study author April Aralar, Ph.D., a postdoctoral scholar at the University of California, San Diego.

"Therefore, we felt that it was of the utmost importance to be able to have a diagnostic that could work with what was available for neonates: that is, a small amount of blood, a small amount of bacteria, and a small amount of time to get the diagnosis."

In the new study, researchers set out to test a [novel technology](#) called u-dHRM (Universal Digital High-Resolution Melt) using pediatric blood samples from Rady Children's Hospital in San Diego. Researchers took 17 [blood samples](#) that were already tested using blood culture, the clinical standard diagnostic test, and subsequently tested the blood with the new platform.

The researchers found 100% agreement between the novel method and the clinical gold standard of blood culture, and the new technology delivered the results much faster. "Our test only took 6 hours from start to finish, whereas blood culture takes anywhere from 15 hours to 5 days to get a result," Aralar said.

Aralar said the findings are encouraging and that the method may be a

new way of quickly and accurately diagnosing [bloodstream infections](#) in newborns. It could additionally be applied to children and adults.

"Next we hope to do a prospective clinical trial across multiple clinical centers and hospitals to test our method across more patients and different populations. Hopefully we can deploy this technology to more hospitals and have point of care diagnostics for babies and children more widely," Aralar said.

Provided by American Society for Microbiology

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