Rapid point-of-care detection of antimicrobial resistance using a thermometer

Methicillin-resistant Staphylococcus aureus (MRSA) is a leading cause of bacterial infections and causes a range of serious life-threatening diseases. Rapid on-site detection of MRSA is of great importance to guide timely antimicrobial therapy to reduce mortality. Because current MRSA detection methods require procedures and equipment that are too costly and complex to implement in low-resource settings, this project aims to develop a point-of-care device integrated with high-specificity DNA nanosensors for rapid detection of MRSA using a low-cost thermometer, especially for resource-limited settings such as a physician’s office and in the field.

Keywords: Antibiotic resistance, Methicillin-resistant Staphylococcus aureus (MRSA), point-of-care detection, thermometer detection

Team Members

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