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Contact:

Janet Geyer, Senior Marketing Manager

301-698-0101 x228

jgeyer@akonni.com

**Akonni Awarded \$3M NIH Challenge Grant to Develop Rapid  
Molecular Test for Genotyping MDR/XDR-TB**

**Identifying full spectrum of drug-resistant strains now within  
reach on low-cost microarray**

FREDERICK, MD. – September 28, 2010 – Akonni Biosystems, a molecular diagnostics company that develops, manufactures, and plans to market sophisticated genetic testing devices for complex infectious and human diseases, today announced receipt of a nearly \$3 million Challenge Grant from the National Institutes of Health (NIH), a new program made possible under the American Recovery and Reinvestment Act (ARRA). Selected from well over 20,000 applications, these funds will enable Akonni to advance the development of its multi-drug resistant/extensively drug-resistant (MDR/XDR) genotyping test through pre-clinical testing at several international field sites, including sites such as the Medical Research Council of South Africa (MRC).

Akonni's gel-drop microarray is advantageous in that it accurately interrogates tens-to-hundreds of genetic markers on a platform that costs ten-fold less to manufacture than traditional microarray approaches. For complex diseases like cancer and for infectious diseases such as MDR/XDR-tuberculosis (TB), Methicillin-resistant *Staphylococcus aureus* (MRSA) and drug-resistant strains of influenza, the capability to rapidly obtain more information at a much lower cost per test will give physicians, clinicians, and other health care providers greater ability to properly identify disease and save lives.

"The development of highly-extensible, low cost diagnostics for use in near point-of-care settings is critical for mitigating the spread of complex, increasing drug-resistant diseases like tuberculosis," explains Darrell Chandler, Ph.D., CSO of Akonni Biosystems. "Combining PCR-amplification with our gel-drop microarray platform in a self-contained micro-fluidic chamber will further enhance our ability to develop and deploy comprehensive panels to affordably and rapidly detect multiple pathogens and their variant forms from a single patient sample."

Partnering on this program will be Wadsworth Center Laboratory of Clinical Mycobacteriology, who will be cultivating MDR- and XDR-TB isolates and providing preclinical verification on amended

sputum samples. The plan is to then deploy the technology for pre-clinical studies into several international reference centers in regions of the world where TB is most prevalent.

“We’re excited to be co-investigators with Akonni on this project. While there is little doubt that advances in delivering more affordable diagnostics for MDR and XDR-TB is needed, the clinical implications of a more sensitive and rapid platform are far reaching,” said Dr. Vincent Escuyer Director, of the Mycobacteriology Laboratory at the Wadsworth Center, New York State Department of Health. Dr. Escuyer adds, “Working with industry on the next generation PCR array platforms will enable us to provide practical clinical guidance and ensure that the commercial product meets customer needs in a laboratory setting.”

For more information please visit [www.akonni.com](http://www.akonni.com).

### **About Akonni Biosystems**

Akonni Biosystems was founded in 2003 and has over 20 patents issued with 13 others pending. The company’s core technology is based on work developed at Argonne National Laboratory and the Engelhardt Institute of Molecular Biology and utilizes gel-drop array technologies optimized for medical applications. Supported by a series of government grants and contracts from NIH, CDC, DOE, DOD, NIJ, and NSF, the company has significantly advanced the original technology by improving the system’s capabilities from sample preparation to final result. Commercial products and products in its near-term pipeline include rapid sample preparation methodologies for nucleic acid extraction and multiplex panel assays for detecting multidrug-resistant tuberculosis (MDR-TB), upper respiratory infections, viral encephalitis, and hospital-acquired infections (MRSA).

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