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FOR IMMEDIATE RELEASE

Akonni Awarded \$3.2M NIH Grant to Combine Gel-drop Microarray and PCR Technology for Rapid, Low-cost Influenza Detection

New PCR Array Capabilities Will Further Extend Akonni's Technology Advantage

FREDERICK, MD. – December 1, 2009 – Akonni Biosystems, a molecular diagnostics (MDx) company focused on providing rapid and highly scalable solutions for infectious disease testing, today announced receipt of a \$3.2M Phase II SBIR grant from the National Institutes of Health (NIH). The award will enable Akonni to combine PCR with its existing TruArray(R) gel-drop microarray in a single chamber, closed-amplicon system, and field test it for the detection of influenzas A and B and their antigenic subtypes, including antiviral resistant types. This grant is based on the successful completion of an earlier Phase I SBIR, and has as a goal the production of commercial products for clinical and research laboratories.

"The development of highly extensible, low-cost diagnostics for use in near-point-of-care settings is critical for mitigating the spread of disease and improving global health," explains Charles Daitch, Ph.D., CEO of Akonni Biosystems. "Combining PCR and microarray detection in a self contained microfluidic chamber represents a significant advancement to conventional multiplexed molecular diagnostic testing – the capability will further enhance our ability to rapidly develop and deploy even more comprehensive panels for detecting multiple pathogens and their variant forms in a single sample."

Partnering with Akonni Biosystems on this program are Wadsworth Center, Columbia University, Little Company of Mary Hospital, and the US Centers for Disease Control (CDC). Initially, Wadsworth Center is developing a focused panel of drug-resistance markers for the PCR array platform, providing clinical feedback to guide product development, and participating in pre-clinical verification of the technology on clinical specimens.

"We're excited to be co-investigators with Akonni on this project – while there is little doubt that advances in rapid diagnostics for influenza is needed, the clinical implications of a more sensitive and rapid platform are far reaching. Working with Akonni on their next generation PCR array platform will enable us to provide practical clinical guidelines and ensure that the commercial product meets customer needs in a laboratory setting", said Dr. Kirsten St. George, Chief, Laboratory of Viral Diseases at Wadsworth Center, New York State Dept. of Health.

With the scaling limitations of current line probe and fluorogenic PCR systems, the new PCR array technology is expected to deliver more cost-effective infectious agent panel testing by providing a level of multiplexing and genetic information only available with microarray technologies. Akonni's

first test based on the PCR array technology will be for the detection and subtyping of influenzas A and B. Starting from PCR-ready material extracted from swabs or nasopharyngeal aspirates using Akonni TruTip Extraction Kits, the test will deliver sub-typing results in less than 2 hours and with limits of detection equivalent to those of real-time PCR systems.

“The recent H1N1 influenza pandemic, and fears of future H5N1 influenza pandemics, is driving development of more rapid and comprehensive sub-typing technologies for surveillance and diagnostic applications”, explains Dr. George Rudy, Chief Medical Officer of Akonni Biosystems. Dr. Rudy adds, “Four drugs have recently been approved by the US Food and Drug Administration (FDA) for the treatment of influenza, but the success of treatment depends on their early administration and may be related to the infecting strain.”

Akonni Biosystems was founded in 2003 and has over 20 patents issued with 13 others pending. The company’s core gel-drop microarray technology is based on work originally performed at Argonne National Laboratory and the Engelhardt Institute of Molecular Biology, and its development has been supported by numerous government grants and contracts from NIH, CDC, DOE, DOD, NIJ, and NSF. The company has significantly advanced the original technology by improving system capabilities from sample preparation to final result. Products in its near-term pipeline include multiplex panel assays for detecting the pathogens associated with multidrug-resistant tuberculosis, upper respiratory tract infections, viral encephalitides, and hospital-acquired infections.

Akonni products are currently for research use only. Not for use in diagnostic procedures.

For more information please visit www.akonni.com.

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