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FOR IMMEDIATE RELEASE:

Akonni Biosystems to Present Results of Development on a TruTip Automated Solution for Extracting Cell-free DNA from Maternal Plasma at American Society of Human Genetics (ASHG) conference

Industry-first approach will combine large volume concentration step with selective enrichment on Hamilton Microlab® STARplus line of liquid handling workstations

FREDERICK, MD – October 11, 2012 – Akonni Biosystems, a life science tools/molecular diagnostics company, will present results of its work to develop an automated extraction method to isolate cell-free fetal DNA from maternal plasma, using its TruTip® extraction products, at the ASHG conference in San Francisco on November 8. TruTip kits were recently released for extracting genomic DNA from smaller volumes of whole blood on the Hamilton Microlab STAR liquid handling workstation. The new application, transitioning from a manual approach, will combine larger 5mL TruTips with 1mL TruTips on the Hamilton Microlab STARplus system. The approach will combine, in a fully automated workflow, the ability to concentrate large-volume plasma samples, used for non-invasive prenatal diagnostics (NIPD), with selective enrichment for small DNA fragments.

The discovery of cell-free fetal DNA in the blood of pregnant women has facilitated the development of NIPD, which is sometimes referred to as NIPT. While still a relatively new sector in the diagnostics industry, NIPD has lucrative growth potential given the significant incidence of fetal health-related abnormalities and the urgent need for safe, accurate, and early diagnosis. According to a 2012 RNCOS report, the US NIPD market is one of the world's largest and is expected to experience annual double-digit growth through 2016. The NIPD market is currently represented by only a few companies, including Sequenom (NASDAQ: SQNM), Verinata, Ariosa Diagnostics, and new entrant Natera, and will likely include up to 40,000 samples tested in 2012.

Developing, automating, and commercializing NIPD tests can be challenging due to the low concentration of fetal DNA and high background of maternal DNA circulating in plasma during early gestation. These conditions require the processing and concentration of large sample volumes to obtain adequate amounts of fetal DNA for analysis. The high ratio of maternal to fetal DNA can also confound downstream analysis by next-generation sequencing and digital PCR.

“Our TruTip extraction platform uses a solid nucleic acid binding matrix made of porous material inserted into a pipette tip,” says Kevin Banks, Ph.D., Akonni Vice President Strategic Development. “This technology has many potential advantages over other extraction methods for NIPD applications, including the ability to process and concentrate large volumes of sample (for example from 5mL to 40 μ L) and to enrich for small fragments of DNA. This approach to isolating cell-free DNA could be beneficial to certain cancer applications as well. Further, because of all the extraction chemistry occurs in a TruTip pipette tip, the format is highly amenable to automation for high-throughput applications, as already demonstrated on the Hamilton Microlab[®] STAR workstations.”

For more information about Akonni’s TruTip approach for extracting samples for NPID, visit poster #3011T, to be presented at the ASHG conference on Thursday, November 8 from 2:15 to 3:15 PM at the Moscone Center in San Francisco, California. Further details regarding Akonni Biosystems and its “smart tip” sample preparation technology and mid-multiplex genetic testing approaches can be found at www.akonni.com.

About Akonni Biosystems

Akonni Biosystems develops highly innovative products and technologies to increase productivity in the life science tools (sample prep) market and to lower the costs in the molecular diagnostics (MDx) market. Founded in 2003 and supported by a series of government grants and contracts from NIH, CDC, DOE, DOD, NIJ, and NSF, Akonni has over 48 patents issued or pending. Commercial and near-term products 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 healthcare-associated infections (MRSA).