



Akonni Corporate Overview

Akonni Biosystems Corporate Overview. Akonni Biosystems, based in Frederick, Maryland, is a molecular diagnostics company that develops, manufactures, and markets integrated molecular diagnostic systems in the clinical market. Akonni's TruDiagnosis® system enables rapid and highly affordable testing for infectious and other human diseases on a gel-drop array platform by incorporating standardized operating procedures and automating multiple manual laboratory processes. The end-to-end system integrates a number of complicated and time-intensive steps, including sample preparation, nucleic acid amplification, detection and reporting, enabling the multiplexed analyses of complex biological samples within a single assay and delivering results in as little as two hours.

About Our Technology. In 2002, Akonni Biosystems acquired an exclusive license to Argonne National Laboratory's gel-drop array technology for medical applications. Since then, through a series of government grants and contracts, Akonni has significantly advanced the technology by improving the overall system's capabilities from sample-preparation to final result. Currently, with over 100 scientific publications and more than 30 patents exclusively licensed to Akonni, the TruDiagnosis® system is well positioned to be the industry leader in providing accurate, rapid, easy-to-use, and affordable molecular diagnostic testing.

Akonni's Biosystems Products. Leveraging its strong engineering and molecular biology capabilities, Akonni is focusing on applications where rapid molecular testing is particularly important, such as the diagnosis of infectious diseases. Products in its near-term pipeline include multiplex assays for detecting Multidrug-resistant Tuberculosis (MDR-TB), upper respiratory infections (i.e., Influenza A, RSV, etc.), and hospital acquired infections (i.e., MRSA). The company's first products, delivered as an integrated system, called TruDiagnosis®, include;

- A bench-top instrument for cost effectively detecting results using optical detection methods.
- Software for analyzing results and generating reports.
- Gel-drop arrays (called TruArray®) for identifying the presence of pathogens, including complete sets of both positive and negative controls.
- Sample preparation methodology for extracting DNA or RNA from clinical volume samples in less than 5 minutes and without centrifuging.
- Amplification technology for increasing DNA or RNA concentration to easily detectable levels.

By providing standardized operating procedures and automating otherwise complicated manual laboratory procedures, Akonni's customers benefit as they are able to accurately test for multiple disease states from a single patient sample and receive results in two hours or less. Further, unlike existing multiplex technologies that face significant challenges with regard to verification and validation testing, Akonni's gel-drop array based format is highly conducive to adding complete sets of positive and negative controls and reference materials for each assay. This results in more predictive and verifiable results.

Akonni's Vision. In the future we see Akonni Biosystems' product line expanding to include a full range of instruments and assays serving the needs of reference and peripheral laboratories and point-of-care settings, such as health clinics and physician offices. We also see the TruDiagnosis® system reaching into other market areas, including the pharmacogenetics and oncology testing markets. The TruArray® gel-drop array platform is also fully capable of performing immuno-based assays across these similar application areas. Akonni anticipates gaining FDA approval for its first commercialized assays as early as 2011.