



SMARTCEO'S

Biotech

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Greater Washington is home to the third-largest biotech landscape in the world. In the past 20 years, over \$700 million in infrastructure and programs has been invested into the thriving industry. SmartCEO is pleased to recognize the growth of the biotech industry with the annual Biotech Success Stories program.

AKONNI BIOSYSTEMS

CEO: Charles Daitch Ph.D.
Founded: 2003
www.akonni.com

BUSINESS DESCRIPTION

Akonni Biosystems is a molecular diagnostics (MDx) company whose goal is to change the way health care providers approach the diagnosis and prevention of infectious diseases. Today, Akonni designs and intends to manufacture and market in vitro diagnostic medical devices for rapidly identifying complex diseases. Identifying the genetic signatures of pathogenic organisms that cause such diseases – e.g., multi-drug-resistant *Mycobacterium tuberculosis* (MDR-TB), methicillin-resistant *Staphylococcus aureus* (MRSA), and respiratory viruses (influenza A (H1N1), RSV, etc.), is a critical first step in preventing their spread.

SUCCESS STORIES

Akonni's TruDiagnosis system is a "game-changing" testing platform that will have real advantages in the marketplace. Not only will the system accurately and rapidly provide a health care practitioner with more valuable information about a disease than available by current approaches, it will do so at a significantly lower overall cost per test. For example, current approaches often fail to accurately distinguish between drug-sensitive and drug-resistant strains of *Staphylococcus aureus* in some populations. *Staphylococcus aureus* is the most common form of staph infection and is a frequent cause of hospital-acquired infections; some 500,000 American patients contract infections during hospital admissions each year. Today, researchers using Akonni's system are able to more accurately and quickly determine whether an infection is caused by *Staphylococcus aureus*, and whether it is caused by the more deadly drug-resistant MRSA.

FUTURE OF THE INDUSTRY

Health care practitioners are demanding faster and more accurate tests to identify the pathogens affecting their patients and circulating in the community. Historically, care providers have initially prescribed therapeutics, including antibiotics, based on a patient's symptoms, and without complete confidence in the appropriateness of the treatment. This approach has contributed to an explosion in drug-resistant forms of some infectious diseases, which are harder and more costly to treat, and often more deadly than their drug-sensitive counterparts. With a platform like Akonni's TruDiagnosis system, health care practitioners will be able to rapidly test for antibiotic resistance before deciding on a treatment plan for the patient. This will facilitate selection and accurate dosing of the optimal antibiotic for the disease. Not only will this result in fewer medication errors and a reduction in drug-resistant strains, but patients will recover more rapidly and the risk of spreading the disease to others in the community will be diminished.

