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By Vandana Sinha, Staff Reporter — November 9-15, 2007

Rockville biotech quickly developing staph detector

Seeing the looming threat of an epidemic, a Rockville diagnostics company began working on a detection test for a new drug-resistant staph infection. That was nine months ago.

In the last month, Methicillin-resistant Staphylococcus aureus (MRSA) has afflicted more than 50 people and killed a 17-year-old high school senior in the area. Innovative Biosensors Inc. has been honing a device that can spot the presence of the bacteria within minutes.

The company began its work well before the superbug created a buzz. Not immune to the newsworthiness of its latest product, however, the company said it hopes to test its MRSA detector in up to 1,000 patients in clinical trials early next year. It plans to launch a new product in the European market by the end of 2008 and onto American hospital shelves by early 2009.

"We've known that MRSA is really an epidemic in the making," said Joe Hernandez, president and chief executive of Innovative Biosensors, which also plans to release by year-end its first BioFlash product to detect up to 45 pathogens within 90 seconds.

The company hopes to break into a market that analysts said could pierce the billion-dollar threshold. But it has competition from major players, including Fortune 500 company Becton, Dickinson and Co. of Franklin Lakes, N.J., which is eyeing the same projections. BD and California-based Cepheid have developed MRSA detection tests that take the diagnosis timeline from as many as 72 hours to two hours.

Innovative Biosensors hopes to boost sales with sensors that cut the process down to minutes. While hospital leaders foresee on-going demand for MRSA detectors, they said the cost will determine how much they buy into Innovative Biosensors' technology.

"Does the test in minutes do more or provide more benefit than the test you could get back in a couple of hours?" asked Marcia Patrick, committee chairwoman of the Association for Professionals in Infection Control and Epidemiology (APIC) and director of infection prevention at the MultiCare Health System, which rolled out a new two-hour detector test this week at its Takoma, Wash., hospitals. "If it costs substantially more than the current technology, then the facility is going to have to decide if it's worth the added cost.

Either way, Innovative Biosensors, which hopes to raise up to $10 million in its next financing round by early next year, likely will still face a strong market in 2009. Unlike the other news-making afflictions such as SARS and mad cow disease, MRSA provides a more persistent medical challenge because it becomes more virulent with age. APIC found earlier this year that MRSA infected 46 out of every 1,000 patients, up to 11 times more people than previously estimated. Meanwhile, the Centers for Disease Control and Prevention reported last month that more people died from MRSA than AIDS in 2005.

Today, physicians must get a nasal swab of patients and send that sample to labs for testing that takes 24 to 72 hours before the learn whether MRSA is the culprit. In the meantime, they must isolate the patients for fear of contagion, requiring staffers to don expensive and inconvenient isolation gowns, gloves and masks with each visit, said Dr. Richard Sall, an infection disease specialist at Reston Hospital Center.

DISEASE DETECTOR: While local biotech companies develop staph infection drugs, Joe Hernandez, CEO of Innovative Biosensors, focuses on staph detection devices.

A quicker test by Innovative Biosensors, which has isolated the protein discharged when a staph infection strain turns into the more serious drug-circumventing MRSA, could help physicians better battle the disease.

"It's not just for more rapid diagnosis," Sall said. "You could start antibiotics earlier."