IOWA STATE UNIVERSITY
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CIRAS

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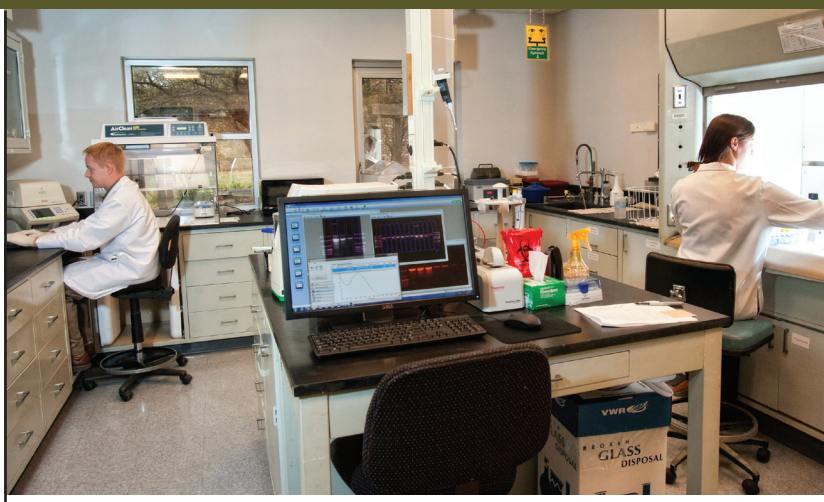
Harrisvaccines, Inc.—Getting a Revolutionary Vaccine Company Off the Ground



In 2005 Dr. Hank Harris, an Iowa State University College of Agriculture and Life Sciences professor in animal science and veterinary diagnostic and production animal medicine, founded a start-up company at the university's Research Park. The purpose: develop, market, and sell a new vaccine that would prevent Porcine Reproductive Respiratory Syndrome.

This was the first step in building the company—Harrisvaccines, Inc.—that is working to revolutionize animal health vaccines with its unique SirraVax™ technology.

"All we need is the genetic sequence of a virus isolated from an infected herd," says Joel Harris, vice president of operations. "From that sequence, we can generate a specific antigen that we place into our production platform. It only takes us four to six weeks to produce the custom vaccine."

Today the company is an established corporation with 22 full-time and 3 part-time employees.

An ongoing relationship with CIRAS became more targeted in 2012 when the company realized that its four-year effort to obtain United States Department of Agriculture (USDA) licensure was about to happen.

"We realized we needed to change our business model to better differentiate ourselves from traditional vaccine companies that are about our size and also trying to market rapid-response, farm-specific vaccine," Harris explains.

CIRAS project managers Jeff Mohr and Susan Clark guided an 11-member Harrisvaccines team through a Lean management technique called value-stream mapping (VSM).

This process focuses on the length of time it takes to produce a final product from the receipt of an order to shipment, while documenting, analyzing, and improving the flow of information and materials. The goal is to learn to carefully analyze what is currently happening in order to find ways to reduce waste and be more efficient.

"We coached them to find the big improvement ideas and then create a plan on how to implement the proposed changes," Clark adds. "That means determining who is going to do what and when so they can reach their target."

The process helped identify bottleneck areas and significantly reduce the time it takes to produce a vaccine.

"Not only is it a competitive advantage for us, but it helps us react quickly to what is happening out in the field," Harris continues. "Strains of these viruses mutate constantly so the faster we can crank out a vaccine, the faster we can respond to an outbreak of a new disease."

The camaraderie and teamwork that develop during the process is an added benefit. "People start to understand what each other's jobs are like and that they are all working toward the same goal," Mohr says.

Overall, the past year was very good for Harrisvaccines. Year-to-date sales revenue increased by 65 percent, according to Harris.

In addition to the licensure of the Swine Influenza Vaccine, RNA, Harrisvaccines won a U.S. Department of Homeland Security Science and Technology Directorate 34-month, $1.1 million contract in October. The purpose is to develop a vaccine using SirraVax technology that would potentially protect the United States from the foot-and-mouth disease virus.

"It is a great opportunity for us to prove to another government entity that we can produce a safer and effective vaccine faster than anybody else," Harris adds.

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