

MID-IOWA NEWS

09/23/2008

Michael Roof: entrepreneurial scientist

By: Mary Halstrum

Michael Roof was a graduate student in the College of Veterinary Medicine at Iowa State University back in 1991 studying salmonella and its interaction with the immune system when he, Ted Kramer and Jim Roth developed a salmonella vaccine for pigs.

ISU patented the vaccine and licensed it to NOBL Laboratories, a small company located in Sioux Center with about 50 employees. After Roof earned his doctoral degree, NOBL came calling.

"They wanted me to join them as a scientist to continue working on the salmonella vaccine," he said. "My wife had a good career in Ames, so moving to Sioux Center wasn't a great option. After some discussions with NOBL management, they decided to open an office here in Ames."

It turned out to be a "win-win decision," Roof said. It allowed him to stay in Ames, and it gave NOBL a presence in Ames with the major animal health institutions, including ISU, the National Animal Disease Center, National Veterinary Services Laboratory and the Center for Veterinary Biologics. It also gave NOBL a platform to develop technology that started at ISU and the NADC, and was also key in attracting the top technical talent the company desperately needed, he said.

Roof, essentially, was on the ground floor of what would later become a subsidiary of a worldwide corporation, Boehringer Ingelheim Corporation, a German pharmaceutical company that acquired NOBL in 1997.

"I was the first employee, and we had a small 1,000-square-foot office and lab," Roof said. "Over the past 15 years, we have grown to a team of 30 that includes research and development functions, diagnostic lab functions, and sales and marketing."

Roof is the executive director of biological research and development and the site manager for the Ames location at the ISU Research Park in Ames. Boehringer Ingelheim Vetmedica Inc. is a supplier of a broad line of products and system solutions for cattle, swine, equine and companion animals.

"All my jobs and roles have been technical and always focused on vaccine development for animals," he said. "My role has changed from scientist to a project leader, and to a more strategic and administrative role in biological research and development. However, the vaccine area and science related to it is what makes my heart beat faster and where my passion lies."

Roof said the ISU Research Park was a major reason NOBL came to Ames. At the time, NOBL was a small, private Iowa company trying to grow within the boundaries of its sales and profits. The capital necessary to build a research facility didn't exist as the company wanted to invest its capital into the expansion of its production facility.



By Ronnie Miller/The Tribune
Michael Roof is the executive director of biological research and development and the site manager for the Ames location of Boehringer Ingelheim Vetmedica Inc.

The ISU Research Park gave NOBL the opportunity to lease space that met its needs, allowed it to lease only what was needed and offered the opportunity to grow and expand in the future. It also was part of the ISU campus, which gave NOBL regional exposure and the ability to attract local talent. That was a big part of NOBL's success. About 80 percent of Boehringer Ingelheim Vetmedica Inc.'s employees are ISU grads.

"We started within our means, and the research park was huge in our initial success," Roof said. "We were able to come in and start working without coming up with a bunch of capital. We have a great synergistic relationship with Steve Carter, director of the ISU Research Park Corporation."

Boehringer Ingelheim Vetmedica Inc. is one of approximately 10 major companies responsible for the development of vaccines. The company is headquartered in St. Joseph, Mo. Boehringer Ingelheim Vetmedica Inc., in partnership with ISU and the NADC, develops vaccines on a pilot scale. The vaccines are then shipped to St. Joseph where they are developed on a moderate scale and then sold commercially to farmers and livestock producers.

"We are No. 1 among sellers of vaccines for swine, and we have a significant share of the cattle vaccine market," Roof said.

The company's biggest selling vaccine is Porcine Reproductive and Respiratory Syndrome, or PRRS, for swine.

Vetmedica's priorities, according to Roof, are the health and welfare of animals, food safety for humans and economics. Scientists at the lab receive approximately 30,000 samples each month from veterinarians, farmers and livestock producers with sick animals. The company then looks for diseases it can treat from the samples submitted. The company's veterinarians, identified as specialists in the field, also monitor vaccinated herds and unvaccinated herds to garner diagnostic data for interpretation.

While Roof said he doesn't consider himself a typical entrepreneur because he never had to seek venture capital, he does believe Boehringer Ingelheim Vetmedica Inc. has served to create opportunities for him and other local entrepreneurs by acting as the "research venture capital" to allow people with good ideas to explore them, create a baseline of data or information and then use this to get to the next level of either academic funding or seed cap. The company does that by providing funds, technology, animal models and, in some cases, facilities not available at ISU, at low or no cost.

"Over the past 15 years, we have built a lot of really good relationships and so when new ideas come up, we hope we are the first call that gets made if they need any help," Roof said. "What drives me and makes an entrepreneur successful? Many people think it's about facilities and equipment. They invest in world-class technology, equipment and buildings ... and then it stalls. The key is people, people and people. You have to be excited about what you do; you have to be passionate about the project; you have to be committed to the end and accept that risk and failure is possible. When you fail, you have to dust yourself back off and get back in the lab.

"We try to find people with a 'spark' and who truly love animal health, reward them for taking risks and create an environment where people challenge each other and ideas build and become bigger and better. An entrepreneur isn't someone who works from 8 to 5 and then shuts down ... these are people that wake up in the middle of the night and have an idea that keeps them awake due to the sheer excitement of its potential. It's a culture and a spirit that is special and of very high value."