

Vaccine Combats Porcine Pandemic

University of Minnesota



Porcine Reproductive and Respiratory Syndrome (PRRS) is a viral disease that began attacking swine farms in North America and Europe in the late 1980s. The disease causes stillbirths, miscarriages and piglet mortality rates as high as 70 percent during outbreaks. PRRS can be devastating to swine herds, and costs United States farmers more than \$560 million annually, making the virus the most financially burdensome porcine disease in the country.

In 1991, Jim Collins, D.V.M., Ph.D., of the University of Minnesota's Veterinary Diagnostic Laboratory, was the first to isolate the strain of the virus in the United States. He then collaborated with a commercial partner, Boehringer Ingelheim Vetmedica, Inc. to develop a vaccine, based on a modified live version of the virus. Through a global exclusive license to Boehringer Ingelheim Vetmedica, Inc. of the University's Intellectual Property, Collin's vaccine became the largest selling veterinary vaccine in the world, resulting in annual global sales as high as \$30 million and annual royalties as high as \$1.3 million for the university.

“ *The vaccines and testing, when combined with other proven herdmanagement strategies, are helping to prevent the spread of PRRS, allowing for healthier swine and economical food products.*

In addition, HanSoo Joo, D.V.M., Ph.D., professor of veterinary population medicine at Minnesota, developed Selectigen™ MJPRRS™ Technology, a process that harvests and concentrates viral antigens from PRRS-infected tissue, maximizing the effective content in PRRS vaccines. The technology was licensed exclusively in 2005 to Minnesota-based company MJ Biologics.

The Veterinary Diagnostic Laboratory also became the first lab to provide same-day, high-volume testing for PRRS, enabling boar stud producers to identify and control the disease quickly and efficiently. The vaccines and testing, when combined with other proven herdmanagement strategies, are helping to prevent the spread of PRRS, allowing for healthier swine and economical food products.

This story was originally published in 2007.

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