

**FOR IMMEDIATE RELEASE**

## **Novel SRP® Vaccine Reduces *Klebsiella* Mastitis in Iowa State Dairy Trial**

ST. JOSEPH, MO, **April 18, 2017** A new vaccine based on Siderophore Receptor and Porin (SRP®) technology is showing considerable promise in reducing *Klebsiella* mastitis in dairy cows, based on data from an Iowa State University trial shared at the recent Academy of Veterinary Consultants spring conference in Dallas.

Dr. Patrick Gorden, clinical professor of Vet Diagnostic and Production Animal Medicine at Iowa State, said the *Klebsiella pneumoniae* bacterial extract vaccine (Kleb-SRP) reduced the prevalence of *Klebsiella* mastitis by 71 percent in the vaccinated half of the herd. The Iowa State dairy herd was chosen for the trial due to an ongoing *Klebsiella* mastitis problem, which had persisted despite using multiple doses of *E. coli* core antigen vaccine annually.

In addition to prevalence reduction, the Kleb-SRP vaccine also reduced mastitis incidence, which accounts for recurring infections in a single dairy cow, by 76 percent. Milk production also increased in Kleb-SRP vaccinated cows by two pounds per cow per day, and somatic cell count was reduced by 42 percent, compared to the half of the herd not receiving Kleb-SRP vaccine.

"Production losses from *Klebsiella* mastitis, as well as deaths or culling that result from severe mastitis infections, are a significant challenge for the dairy industry," Gorden said. "A different approach to controlling *Klebsiella* mastitis is sorely needed."

The Kleb-SRP vaccine is currently offered as an autogenous product by AgriLabs® in partnership with Etopix. AgriLabs is working to license the vaccine with USDA, and the Iowa State study is part of the efficacy trial work associated with the licensing process.

Sean O'Hare, executive vice president of AgriLabs, said the Iowa State results align with field results with the autogenous product. "*Klebsiella* mastitis is a frustrating production challenge for dairy producers, and we're seeing considerable potential for the Kleb-SRP vaccine to reduce production losses, deaths and culls."

### **Starving Bacteria of Needed Iron**

The *Klebsiella* vaccine technology is fundamentally different from other options because it utilizes SRP technology. Disease-causing bacteria such as *Klebsiella* require iron for growth and survival. When vaccinated with SRP, the cow's immune system is stimulated to make antibodies against the targeted siderophore receptors and porins, located in the outer wall of the bacteria. SRP vaccine-induced antibodies bind and block transfer of iron and nutrients through bacterial cell wall pores, starving bacteria of needed nutrients, specifically iron.

"We're looking forward to bringing SRP technology to the dairy industry as a licensed product for mastitis control," O'Hare. "It's part of AgriLabs' effort to deliver biological innovation and the next generation of vaccine solutions for farm animals."

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#### AgriLabs

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