

# Manufacturer Spotlight

## Addison Biological Laboratory, Inc. – Rural Roots in Large Animal Biologics



Addison Biological Laboratory is a privately held company located in the small town of Fayette, Mo. Its longtime employees are hard-working and loyal. Founder and president, J. Bruce Addison (center, first row), has been a recognized leader in veterinary diagnostics and herd-specific bacterin production for more than 30 years.

### Who is Addison Biological?

The foundation for Addison Biological Laboratory, Inc., began in 1972 when company founder J. Bruce Addison was working as a microbiologist with the University of Missouri Veterinary Medical Diagnostic Laboratory in Columbia, Mo. The company began with an emphasis on swine diagnostics and developed into a novel vaccine development operation.

Formally incorporated in 1983 under its current name, Addison operated in six states under the intrastate rules of operation and specialized in fine-tuning antigen mixes to match the predominant strains of pathogens in those geographic areas. Products were sold under the reputable MAXI/GUARD brand name and the company restricted its sales to licensed veterinarians. During that time, Addison also provided diagnostic services for veterinarians which included both in-house laboratory services and farm consultations with the veterinarian and his/her clients and continues to do so today.

When biologics licensing laws were changed in 1990, Addison lost its entire line of 19 large animal biologics and was forced to start over. The company was issued an establishment license and granted an autogenous vaccine license and expanded into the fields of veterinary dentistry

and dermatology with unique, zinc-based formulations. Later, USDA licenses were granted for a modified live *Bordetella bronchiseptica* vaccine for swine (MAXI/GUARD Nasal Vac) and a bovine *Moraxella bovis* bacterin (MAXI/GUARD Pinkeye Bacterin). Earlier this year, Addison received a license for the world's first *Moraxella bovoculi* bacterin for the prevention of pinkeye in cattle.

The company has grown significantly from its humble beginnings to a well-respected business with global capabilities to more than 25 countries. Recognized as one of Missouri's fastest growing companies, Addison is committed to improving the animal health care industry for decades to come.

### What is unique about your company?

Addison Biological Laboratory is unique in that it is a privately held company and located in the small town of Fayette, Mo., population 2,800. The employees are incredibly hard working and loyal; over half of the employees have been with





Addison Biological recently doubled its production lab area due to a rapid growth in sales and in anticipation of its new *Moraxella Bovoculi* Bacterin.

the company for longer than 10 and many over 20 years. Quarterly, Addison awards the Addison Labs Achievement Award, which is presented through a company-wide vote to an employee who goes above and beyond while exhibiting a positive attitude and pride in work and company. Addison is one of the eastern most animal health companies still considered part of the Kansas City Animal Health Corridor.

### What is your product mix?

Addison Biological Laboratory has a very diverse product line. As our name would suggest, our beginning and “backbone” is in large animal biologics. The company started by providing diagnostics and autogenous bacterins and, from there, we obtained commercial licenses for our largest current product, MAXI/GUARD Pinkeye Bacterin, launched in 1994, and our new conditionally licensed *Moraxella Bovoculi* Bacterin, introduced in early 2017.

We also manufacture a line of popular companion animal products in the areas of oral care (MAXI/GUARD Oral Cleansing Gel and MAXI/GUARD OraZn, and the new MAXI/GUARD Oral Cleansing Wipes), skin and wound care (MAXI/GUARD Zn7 Derm and Zn7 Derm Spray) and ear care (MAXI/GUARD Zn 4.5 Otic). Other products include our cost-effective remote injection device, Maxi-Ject Blowpipe Systems.

### Why did you start manufacturing pinkeye vaccines?

Years ago, bovine pinkeye vaccines did not have the best

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reputation and many livestock veterinarians and producers questioned their effectiveness. MAXI/GUARD Pinkeye was developed because there was a substantial need for a broad-spectrum *Moraxella bovis* bacterin that safely provided a high level of efficacy for pinkeye prevention. This product was created from our years of diagnostic and autogenous work across the United States, and consistently provides over 90 percent protection against pinkeye when *Moraxella bovis* is the cause.

As time progressed, it was apparent that something other than *Moraxella bovis* was starting to cause pinkeye in cattle. Through our extensive diagnostic work, we identified a dramatic increase in a new cause of pinkeye, *Moraxella bovoculi*. This has led to the most recent and exciting development at Addison Biological: the launch of *Moraxella bovoculi* bovine pinkeye preventative. **[See Pinkeye Q&A on page 25.]**

The journey to the release of this product started over 15 years ago with the discovery of a coccoid (round-shaped) organism that was found to cause pinkeye in cattle. This was an unusual discovery since the normal cause of pinkeye, *Moraxella bovis*, is rod shaped. Also unusual was this bacterium was found to cause pinkeye year-round, even in the cold weather months, where traditionally cattle

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As seen here, Bruce Addison takes an eye swab sample on a calf in order for his diagnostic lab to properly determine the cause of pinkeye. Addison Biological got its start by providing diagnostics and autogenous bacterins, which it still does today. It has posted a demonstration video to show the proper technique in taking eye swab samples on its website, <https://addisonlabs.com/diagnostics/>.

would break in the summer. This earned this organism the nickname “Winter Pinkeye.” Finally, in 2007, it was named *Moraxella bovoculi* and the only way to prevent it was through autogenous services.

Addison Labs continued to see an increase in *M. bovoculi*'s presence in cattle herds and demand for autogenous bacterins accelerated. However, autogenous bacterins require samples taken from breaking cattle (and refreshed every year), a delay in receiving the bacterin and they are usually more expensive than commercial bacterins.

Bruce Addison realized the need, overcame many, many challenges (including many people who said it could not be done) and was awarded the first ever USDA conditional license for a commercial *Moraxella Bovoculi* Bacterin in early 2017. With this achievement, Addison Labs strengthens its position as the leader in pinkeye prevention, and veterinarians and producers have a convenient and cost-effective solution as well.

### The next project currently in the works?

A combination pinkeye vaccine that will include *Moraxella bovis* and *Moraxella bovoculi*. This will, of course, take a large amount of additional research and time, but hopefully this product will be available sometime in the future.

### What are some of the ways in which your company gives back?

Being from a small community, we strongly support local agricultural and pet organizations such as FFA, 4-H and various animal shelters. (Each year, Bruce Addison's Christmas gift from the employees is a donation to the local animal shelter.) We are closely involved with the University of Missouri School of Veterinary Medicine and are a major sponsor of its Gentle Doctor Benefit, which awards scholarship money to veterinary students to reduce their debt load. We provide internships every year for students from Central Methodist University, also located in Fayette, and some of them have turned into full-time employees upon graduation.

## Addison Biological Snapshot:

- **Manufacturing location:** Fayette, Missouri
- **Number of people involved in manufacturing:** 15
- **Number of people involved in R&D:** 5
- **Number of people involved in U.S. sales:** 3
- **Company mission statement:** “To be the premier provider of exclusive and innovative technologies to assist the global betterment of animal care by solving problems for veterinary professionals, animal producers and pet owners.”
- **Online at:** [www.addisonlabs.com](http://www.addisonlabs.com) and [www.facebook.com/AddisonLabs](https://www.facebook.com/AddisonLabs)



# A New Tool in Pinkeye Prevention

## Moraxella Bovoculi Bacterin

Earlier this year, Addison Biological Laboratory, Inc. received a conditional license for the world's first *Moraxella bovoculi* bacterin for the prevention of pinkeye in cattle. It is the first and only commercially available *M. bovoculi* vaccine and is available from MWI Animal Health.

### Addison Biological offers these Q&A's for consideration:

**What is *Moraxella bovoculi*?** *M. bovoculi* is a coccoid (spherical shaped) bacterium that causes pinkeye (IBK) in cattle. It was misidentified (and occasionally still is) as *Moraxella ovis* or *Branhamella ovis* until it was properly named in 2007. Addison Biological Laboratory has isolated this organism for a long time and the incidence has increased dramatically over the last few years. Due to its ability to cause pinkeye year-round, *M. bovoculi* has been nicknamed "Winter Pinkeye." It is also less sensitive to traditional treatment options for pinkeye, which makes preventing the disease even more important.



The tiny pink circular dots in the above photomicrograph are the spherical-shaped *Moraxella bovoculi*. (Photo: Addison Biological)

**How does *Moraxella bovoculi* differ from *Moraxella bovis*?** *M. bovis* is a rod-shaped bacterium that historically has been the most common cause of pinkeye in cattle. It is frequently found to cause pinkeye in the spring and summer months. If cattle are challenged with the *M. bovis* organism only, the disease can usually be prevented with a high quality commercial *M. bovis* vaccine.



The tiny rod-shaped organisms in the above photomicrograph are typical *Moraxella bovis*. (Photo: Addison Biological)

**What is unique about this new *Moraxella Bovoculi Bacterin*?** This is the very first and only commercially available bacterin for the prevention of *Moraxella bovoculi*. It contains eight different *M. bovoculi* isolates. Previously the only way to biologically prevent *M. bovoculi* outbreaks was through a diagnostic and autogenous program. The release of this vaccine enables veterinarians and producers to simply purchase a product without the delay and hassle of taking cultures and having a qualified lab create a custom herd bacterin.

**Should I use this new vaccine with a commercially available *Moraxella bovis* vaccine?** Yes. Through our many years of experience dealing with bovine pinkeye, we have found that *M. bovis* occurs at a higher rate than *M. bovoculi* and very frequently they are both found in the same herd. Therefore, it is important to vaccinate with a high-quality *M. bovis* vaccine and our new *M. bovoculi* vaccine for complete protection. Due to the prevalence of *M. bovis* in U.S. cattle herds, we also recommend a commercial *M. bovis* bacterin with clients using an *M. bovoculi* autogenous program.

**What if I am currently having success preventing *Moraxella bovoculi* outbreaks with an autogenous program?** If cost and turnaround time are not an issue and if you can easily obtain fresh cultures every year, we encourage you to stay with what is effectively preventing the disease. Each situation should be evaluated on a case by case basis to determine the best option for the producer and their herd.

**What are the advantages of using this product over an autogenous program?** In brief, the Addison *Moraxella Bovoculi Bacterin* product provides a convenient and cost-effective broad spectrum (eight isolates) *M. bovoculi* preventative without having to submit cultures and wait for the product to be made. This product will now provide a solution for a large number of operations where herd size is simply too small for autogenous bacterins to be practical.



### What are the label instructions for using this product?

Shake well. Administer a 2ml dose subcutaneously to cattle 14 weeks of age or older. Repeat vaccination in 21 days.

### What backup service can I expect from Addison Biological Laboratory?

Our company has over 30 years of intense experience in dealing with bovine pinkeye and we are consistently referred to as the leaders in pinkeye prevention. In the rare instance that a pinkeye break occurs after proper vaccination of our products, please call us at 800.331.2530. We will ask a series of questions to assess the situation and we may send a pinkeye outbreak kit to assist you in obtaining the best possible sample. After the kit is returned, our skilled diagnosticians will soon be able to determine the true cause of the break. All diagnostic work in these cases will be performed at no charge. We will then take a team approach to determine if an autogenous bacterin or other treatment options would be the best regimen.

### Moraxella Bovoculi Bacterin is available from MWI Animal Health

ITEM#	PRODUCT	UNIT
063912	MORAXELLA BOVOCULI BACTERIN	10 Dose Vial
063913	MORAXELLA BOVOCULI BACTERIN	50 Dose Vial

## Pinkeye: Costly and Contagious

Pinkeye is considered the most important ocular disease of cattle. Economic losses from pinkeye have been estimated up to \$200 million annually in the U.S. alone. This estimate is based on lack of gain in feedlots on greatly diminished weaning weights (25 to 40 pounds per head) in calves.

Pinkeye caused by *Moraxella spp.* is a very contagious disease. The organism resides in the bovine eye and nasal passages and can be shed in high numbers in tears or nasal secretions.

Pinkeye breakouts usually occur two to three weeks after spring processing. Organism shedding and crowded and stressed animals set the right stage for the spread of pinkeye in particular. It is not known how long *Moraxella spp.* can survive in body secretions or on environmental surfaces, but it has been known to survive for up to three days on the feet of a face fly. Therefore, we should assume that all surfaces contaminated by infected animals (crowding chutes, clothing, instruments, trailers and barn walls) are potential sources for disease for at least several days.

### Predisposing factors:

- Age of cattle – younger cattle are more susceptible
- Ultraviolet irradiation – bright sunlight
- Viral infection – e.g. IBR virus
- Physical trauma – blowing dust, weed seed, face flies
- Chemical trauma – fresh nitrogen on pasture
- Stress – from shipping, processing, insects

Source:

Adapted from "Research shows new emerging pinkeye strain," by Bruce Addison for *Progressive Cattleman*, May 2, 2011, <http://bit.ly/2nKGVWL>