

## Message from the President



As you read this newsletter, we are approximately 3 months into our COVID-19 remote work situation, and we remain uncertain when a “new normal” will begin. Perhaps we are living in the “new normal” now.

NovaVive has remained open for business throughout this time as an essential service that provides therapies for both large and small animals. Our

immunotherapeutics are especially important at times like this because they act as natural immune system stimulators, boosting the animal’s ability to fight disease.

We know that the global pandemic has been extremely difficult for everyone, including our customers, suppliers and partners, and we extend our best wishes for good health to all.

In addition to conducting our usual business, we have continued to conduct research into new applications where our technology might prove effective. We are particularly interested in diseases that are primarily treated with antibiotics, as our technology offers a potential alternative.

We have conducted some preliminary research with Amplimune to assess its

efficacy as a preventative therapy for mastitis and metritis in lactating dairy cattle. These diseases represent some of the largest uses of antibiotics in the dairy industry.

Metritis—inflammation of the uterus that can impact fertility and milk production—is often caused by a bacterial infection and, as a result, is commonly treated with antibiotics. Getting dairy cows pregnant is essential to ensuring steady milk supply and the supply of replacement heifers for the dairy operation. Mastitis—intramammary infection—in dairy cows is another disease that is commonly treated with antibiotics. The infected cow’s milk must be discarded during the treatment period. There are further expenses associated with mastitis, making it one of the most costly diseases of the dairy operation.

## Two NovaVive Products Registered in the Middle East

NovaVive’s marketing and development partner in the Middle East, G.A.H. Veterinary Medicine, has successfully registered Amplimune® and Settle® for sale in that territory. G.A.H. stands for “Global Animal Health”.

G.A.H. Veterinary Medicine partnered with NovaVive in 2017 as our exclusive partner to market NovaVive products in Egypt, Saudi Arabia and the United Arab Emirates (UAE).

One of the tasks for G.A.H. has been to register each product through the appropriate regulatory authority in these territories. This is required before products made in foreign jurisdictions can be sold there.

To date, Amplimune and Settle have been approved for sale in the UAE.

G.A.H. Veterinary Medicine continues to provide dossiers to regulators for approvals of additional NovaVive products in the Middle East.



G.A.H. Veterinary Medicine was founded in 2009 by two veterinarians and a pharmacist with a combined 15 years of experience in the pharmaceutical and biological industries in the Middle East and Africa.

There are more than 4.5M cattle in the three territories covered by G.A.H., in addition to 750,000 camels, approximately 45,000 high value horses and about 250,000 dogs.



## Another Happy Settle® Customer

*“We had read about Settle in a couple of articles in some breeding magazines quite a while back. We also received some product material through our vet supply companies and felt it was worth trying.*

*We have seen great results since we started using it, initially on our older mares that we were having trouble with. The past couple of years, we have used Settle on our young problem girls, along with lavaging them, instead of antibiotics. It has proved successful in these mares.*

*We just recently started on a few of our post-foaling mares. It's a little early to tell you a ton of results, but we feel it will definitely help.*

*We have used Settle on our best producers and we are consistently getting foals out of them. Many are embryo transfer mares that we were even having trouble with and as soon as we used Settle we got embryos.*



Four BSB broodmares that have benefited from Settle.

*We have several of the older girls (20-26 years old) that many would have given up on. With the help of Settle, we are still getting babies out of them.*

*We definitely feel Settle is an important tool for us to use.”*

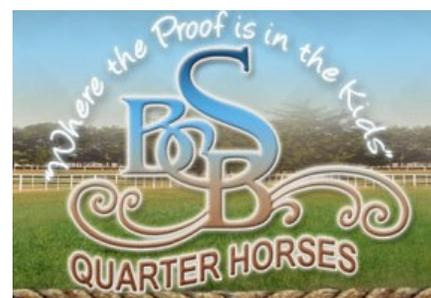
*Shelley Donovan  
BSB Quarter Horses*

### About BSB

*BSB Quarter Horses is located in Sturgis, MI.*

*They offer year-round mare care, embryo transfer (shipped on-site).*

*The property is 50 acres in size with 70 stalls and an on-site laboratory. They have several AQHA & APHA stallions available for siring.*



## Settle® and Immunocidin® Equine Both Featured in JEVS

Within a one-week period in April, NovaVive saw two of its equine products appear on-line in the Journal of Equine Veterinary Science (JEVS), an international publication designed for the practicing equine veterinarian, equine researcher, and other equine health care specialist that is published monthly. Both articles have been published in the July issue of the journal.

### Settle Article

“The effect of mycobacterium cell wall fraction on histological, immunological, and clinical parameters of postpartum involution in the mare” was authored by C.E. Fedorka, H. Murase, S.C. Loux, A.T. Loynachan, O.F. Walker, E.L. Squires, B.A. Ball and M.H.T. Troedsson. All the authors are from the Department of Veterinary Sciences, University of Kentucky, Lexington, KY, USA.

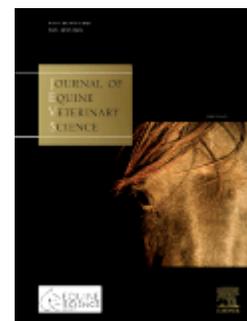
The data summarized in the JEVS article were generated from a study assessing the effect of Settle on histological involution, cell-mediated immunity of the uterus, and clinical endpoints associated with involution.

For maximum reproductive efficiency and economic success, a broodmare must produce a foal every year. To retain this schedule, the mare must be bred at the earliest opportunity postpartum. If uterine involution occurs efficiently, early breeding is more likely to be successful.

The authors concluded that Settle be administered in a two-dose series for maximum effect - one day and 8 days postpartum – to assist with the elimination of bacteria that may impede future fertility on the foal heat estrus cycle.

### Immunocidin Equine Article

“Evaluation of locally injected Mycobacterium cell wall fraction in horses with sarcoids” was authored by Stephanie S. Caston and Brett A. Sponseller from the Iowa State University (ISU) College of Veterinary Medicine, Kararzyna A. Dembek, North Carolina State College of Veterinary Medicine (formerly at ISU), and Jesse M. Hostetter,



University of Georgia College of Veterinary Medicine (formerly at ISU).

In the ISU study, 17 horses with diagnosed sarcoids were enrolled. Their tumors were injected with Immunocidin Equine at the initial visit and then at 2-week intervals thereafter for an average of four injections per case.

Based on their findings, the authors concluded that Immunocidin Equine was effective in 52.9% of the cases enrolled (that had a known outcome) after 2-5 injections. The treatment was deemed safe and, although the side effect of swelling occurred in every case, the swelling was transient and resolved with no treatment or with NSAIDs.

