



## MEDIA RELEASE

**CONTACT:** Joseph Burkett  
(336) 387-1006  
[joseph.burkett@novartis.com](mailto:joseph.burkett@novartis.com)

### **Clostridial Diseases: Time for Another Look**

GREENSBORO, N.C. (September 27, 2006) – There’s an endless list of clostridial diseases, from blackleg and enterotoxemia to red water and tetanus. Producers often give a seven- or eight-way vaccine and don’t give clostridials another thought.

It may be time to give your vaccination program a closer look.

Clostridial organisms are part of normal gut flora in cattle. They become problematic when dietary or management changes produce a favorable growth environment, resulting in production of potent toxins that harm cattle. There are five types of *Clostridium perfringens* (A, B, C, D and E), which are identified by the main type of toxins they produce.

Twenty years ago, the primary gut-related syndromes to be concerned about were *C. perfringens* Type C and D, according to Robert Callan, DVM, Colorado State University associate professor in the school’s College of Veterinary Medicine and Biomedical Sciences.

“It is extremely rare to find Types C and D anymore,” says Callan. “At Colorado State, we don’t find Type C and we find Type D periodically, primarily in sheep.”

Callan credits vaccination programs for helping reduce the number of Types C and D cases. “Vaccines neutralize the toxins that clostridial organisms produce,” explains Callan. He adds that it is still important to vaccinate for Types C and D to keep these diseases at bay.

So if diagnostic labs rarely culture Types C and D, what is causing gastric disorders that are commonly associated with *C. perfringens*?

“Attention has now turned to *C. perfringens* Type A,” Callan explains. “There’s much to be learned, but it’s believed to be responsible for at least some forms of abomasitis and enteritis.”

*C. perfringens* Type A produces alpha toxin associated with gastrointestinal diseases in both young and mature animals.

In calves, it is associated with abomasal ulcers and hemorrhage. Calves will show signs of quick onset of abdominal distension with pain, bloat, depression, feed refusal and sudden death.

In mature cows, hemorrhagic bowel syndrome (HBS) is believed to be associated with *C. perfringens* Type A. No single cause has been identified for HBS, but *C. perfringens* is commonly isolated from gastrointestinal tracts of afflicted animals. HBS begins with a sudden and sometimes massive hemorrhage into the small intestine, resulting in blood clots that obstruct the intestine. Affected cows are often found dead with no warning signs.

Currently, there is only one cattle vaccine that offers protection against alpha toxin. Clostridium Perfringens Type A Toxoid is available under a conditional license from Novartis Animal Health US, Inc.

Callan's advice for dealing with emerging diseases, like HBS, is to work with your herd veterinarian. "HBS can be addressed by correcting nutritional and environmental factors that might promote clostridial overgrowth or impair cow immunity," says Callan. "Vaccination for Type A is a possibility, but you need to run the economics to see if it is feasible for your dairy."

Novartis Animal Health researches, develops and commercializes leading animal treatments that meet the needs of pet owners, farmers and veterinarians. Headquartered in Basel, Switzerland and present in almost 40 countries, Novartis Animal Health employs about 2,300 people worldwide. For more information, please consult [www.livestock.novartis.com](http://www.livestock.novartis.com).

Novartis AG (NYSE: NVS) is a world leader in pharmaceuticals and consumer health. In 2005, the Group's businesses achieved net sales of USD 32.2 billion and net income of USD 6.1 billion. Approximately USD 4.8 billion was invested in R&D. Headquartered in Basel, Switzerland, Novartis Group companies employ about 91,000 people and operate in over 140 countries around the world. For further information, please consult <http://www.novartis.com>.

###