

**PRESS RELEASE**

March 9<sup>th</sup>, 2020

## **More than a gut feeling: Adisseo and Novozymes achieve visualization of *in vivo* germination**

***For the first time ever, scientists have been able to visualize the germinated active cells of a commercial Bacillus-based probiotic inside the gut of birds.***

Adisseo, an expert in animal sciences, and Novozymes, a leader in biological solutions, revealed at a press conference in Paris on March 5<sup>th</sup> that as a first for the industry they have been able to demonstrate and visualize in detail the germination of their Alterion<sup>®</sup> technology. During the gathering, the partnership presented novel data and innovative techniques to scientifically prove that their probiotic is an effective and consistent solution for poultry.

*“For the first time ever, scientists have been able to visualize the germinated active cells of a commercial Bacillus-based probiotic inside the gut of birds. The process, known as germination, is crucial to demonstrate the desired benefits of probiotics for animal production,”* explained Damien Prévéraud, Global Technical and Scientific Manager Health by Nutrition at Adisseo. *“These include improved health, growth, resilience and feed utilization; which in turn offer a natural alternative to antibiotic growth promoters.”*

Adisseo and Novozymes’ joint *Bacillus* probiotic, Alterion, is a unique, proprietary strain – carefully selected through rigorous screening and developed specifically for improvements of poultry performance across the world.

### **Probiotics for livestock on the rise, but questions remain**

The use of probiotics, such as *Bacilli*, has increased considerably in livestock production over the last 25 years. However, until now, their degree of germination within animals has been virtually unknown – prompting questions regarding the metabolic activity of probiotics in the intestine. Due to the complexity of the process within the intestinal environment, *in vivo* confirmation of germination has been a very challenging task.

*“Based on our strong Bacillus knowledge and our extensive biological tools, we have developed an innovative fluorescent system that tracks the germination process within the bird’s gut,”* said Karoline Sidemann Brinch, Science Manager at Novozymes Applied Research, Animal Health & Nutrition. *“Thanks to this technology, we have now been able to visualize the active form of Alterion – proving that our probiotic germinates and grows inside poultry.”*

### **Alterion: A natural alternative to antibiotic growth promoters**

For decades, antibiotics have been widely used in animal production to help livestock grow. Probiotics, or direct fed microbials, are naturally occurring live bacteria added to feed to improve the gut health of pigs, poultry, and other livestock. Rising global consumption of meat, in combination with legislative and consumer pressure to reduce the use of antibiotics, has created a need for sustainable solutions in animal production.

The partnership combines Adisseo's strong market presence and regional know-how with Novozymes' strong *Bacillus* technology and application knowledge. Together, the two companies are solving customers' challenges and enabling improvements in poultry performance globally.

*"With the recent data package on germination we reinforce the partnership's dedication to understanding the mode of action of Alterion – explaining scientifically its benefits on gut health and animal performance,"* said Camilla Marie Bünner Kruse, Global Marketing and Partnership Manager at Novozymes.

Paolo Doncecchi, Global Category Director Health by Nutrition at Adisseo, concluded *"as a partnership we are focused on delivering science-based solutions to our customers, as well as supporting analytical requests; addressing their issues and meeting their expectations."*

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### **About Adisseo**

Adisseo is one of the world's leading experts in feed additives.

The group relies on its 10 research centers and its production sites based in Europe, USA and China to design, produce and market nutritional solutions for sustainable animal feed. With more than 2,200 employees, it serves around 3,900 customers in over 110 different countries through its global distribution network.

Adisseo is one of the main subsidiaries of China National BlueStar, leader in the Chinese chemical industry with nearly 21,500 employees and a turnover of 9,3 billion USD.

Adisseo is listed on the Shanghai Stock Exchange.

Corporate website: [www.adisseo.com](http://www.adisseo.com)

### **About Novozymes**

Novozymes is the world leader in biological solutions. Together with customers, partners and the global community, we improve industrial performance while preserving the planet's resources and helping build better lives. As the world's largest provider of enzyme and microbial technologies, our bioinnovation enables higher agricultural yields, low-temperature washing, energy-efficient production, renewable fuel and many other benefits that we rely on today and in the future. We call it Rethink Tomorrow. [www.novozymes.com](http://www.novozymes.com)  
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