

Verovaccines Achieves Full Protection of Target Animals Against Viral Challenge in its 4th Animal Vaccine Program

- Validation of novel, cost-effective, multi-valent animal vaccines with high safety and efficacy
- Results extend usability of the Company's platform in the poultry sector
- Progeny fully protected against viral infection

Halle (Saale), Germany, March 4, 2021 -- Verovaccines GmbH, a company specializing on the development of next-generation, multi-valent yeast vaccines for animals, has achieved proof-of-concept in its fourth vaccine program. The trial, which targeted an undisclosed chicken pathogen, was conducted in cooperation with the *University of Veterinary Medicine Hannover, Foundation*, Germany. The vaccine belongs to a novel type of yeast-based subunit vaccines, which are designed for excellent efficacy and allow for the co-expression of different antigens in a single yeast strain. The Company's vaccines can be used against a variety of pathogens in different animal species.



Laboratory work with yeast-based vaccine candidates (image by Marco Warmuth).

Verovaccines' new vaccine candidate showed for the first time that chicken progeny could be protected via generation of maternal antibodies after immunization of hens. Hens were immunized by subcutaneous injection with Verovaccines' yeast-based vaccine. All progeny chicks were fully protected against subsequent infection by the corresponding pathogen. This remarkable result was achieved with the first prototype version of a novel, inactivated, yeast-based subunit vaccine and underlines the high potency of this novel vaccine class. In addition, it extends the usability of such vaccines to the poultry layer market.

Verovaccines develops novel animal vaccines using a proprietary technology platform based on the milk yeast *Kluyveromyces lactis*. In several previous vaccine tests, proof-of-concept in terms of immunogenicity / protection from infection was achieved in pig, cattle and chicken. Verovaccines' vaccines are highly efficacious and easy to combine and use. Manufacturing is very cost-effective and safe. The dried whole yeast material is thermostable and can be stored without the need of a cold chain. These properties represent important unique selling points on the international vaccine market. The application of the technology platform offers urgently needed solutions for a large number of infectious diseases in animals.

"These novel results are not only a further validation of our platform, but also extend its usability in the poultry sector." said Dr. Hanjo Hennemann, Managing Director of Verovaccines.

Prof. Dr. Sven-Erik Behrens, Managing Director of Verovaccines, added: "This new vaccine will be used as a component of a novel combination vaccine to reduce the use of antibiotics in poultry farming."

"We were positively surprised that even the first prototype of this new vaccine provided full protection to the chicks via maternal antibodies by immunizing the laying hens," added Prof. Dr. Silke Rautenschlein, Director of the Clinic for Poultry at the University of Veterinary Medicine, Hannover.

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About Verovaccines GmbH

Verovaccines GmbH is a spin-off of Prof. Dr. Sven-Erik Behrens, Dr. Hanjo Hennemann and Dr. Martina Behrens from the Martin Luther University Halle-Wittenberg, Germany. In addition to the experienced founders, the company has a staff of scientists with expertise in the fields of virology, molecular biology, veterinary medicine and process engineering. Several of the company's own vaccine development programs are funded by the "Gründungsoffensive Biotechnologie", or GO-Bio for short, of the German Federal Ministry of Education and Research (BMBF).

About Verovaccine's proprietary yeast-based vaccines platform

The vaccines of Verovaccines GmbH are based on a proprietary and patent-protected technology platform using the milk yeast *Kluyveromyces lactis*. Several different immunity-triggering proteins (antigens) can be produced in one yeast cell to generate cost-effective combination vaccines. The vaccines contain complete, killed yeast cells that are made heat-stable by freeze-drying and can therefore be stored at room temperature. The technology is safely validated and has so far demonstrated proof-of-concept in four vaccine programs in the respective target animals. Verovaccines is using its technology to develop a product pipeline of five vaccines against pathogens in pigs, cattle, and poultry.

About the biotechnology start-up offensive (GO-Bio):

The biotechnology start-up offensive (GO-Bio; <https://go-bio.de/>) is a funding programme of the German Federal Ministry of Education and Research (BMBF). Researchers from the life sciences who are willing to found their own company receive financial support over a period of up to seven years in order to transfer their innovative ideas from research into an exploitable product and thus into patient applications. Such research approaches from the life sciences with high technological or clinical innovation potential and economic benefit are funded. The BMBF is providing between 20 and 30 million euros for each funding round.



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