

Press Release

Ghent University invests in next-stage development of first-in-class inactivated probiotic for mastitis prevention in dairy cattle New IOF investment advances commercially attractive, non-antibiotic technology towards proof of efficacy

Ghent, Belgium – 3 July 2026 – Ghent University has awarded a new Industrial Research Fund (IOF) grant of 248kEURO to accelerate the development of a novel intramammary probiotic technology designed to improve udder health in dairy cows while reducing the need for preventive antibiotic use. The newly funded project, **CLEVERNAS_3**, represents the next milestone in the development of a first-in-class, non-antibiotic solution for dry cow therapy and further strengthens its commercial potential.

Mastitis remains one of the most costly diseases in dairy production worldwide, impacting animal welfare, milk quality, farm profitability, and sustainability. Despite growing pressure to reduce antimicrobial use in livestock, preventive treatment during the dry period continues to rely heavily on antibiotics. The global dairy industry is therefore seeking effective, practical alternatives that can support the transition towards more sustainable udder health management.

Building on two previously funded IOF projects, researchers at Ghent University's Faculty of Veterinary Medicine have demonstrated that carefully selected non-*aureus* staphylococci (NAS) administered at dry-off can significantly reduce the incidence and severity of mastitis during the subsequent lactation while improving milk production. Importantly, these studies revealed that long-term colonization of the udder by live bacteria is not required to achieve these beneficial effects.

This insight has opened the way to a fundamentally new product concept. The objective of **CLEVERNAS_3** is to demonstrate that an **inactivated (heat-killed) NAS probiotic** can retain sufficient biological efficacy while offering substantial advantages for product development, manufacturing and commercialization.

"Moving from a live bacterial product to an inactivated formulation has the potential to significantly increase the commercial attractiveness of the technology," says Professor Sarne De Vliegher, head of M-teamUGent at Ghent University's Faculty of Veterinary Medicine. "If we can demonstrate efficacy with an inactivated NAS product, we combine the biological benefits observed in previous studies with a product profile that is considerably easier to manufacture, distribute and implement on dairy farms."

"The focus of this project is clear: to demonstrate that the inactivated NAS formulation delivers sufficient efficacy in preventing mastitis while creating a product that is significantly more practical from both a manufacturing and regulatory perspective," says Sven Arnouts, Business Development Manager at provaxs, Ghent University's business

development centre for innovation in animal health. "That combination would represent a major step towards successful industrial development and commercialization."

The project is being conducted in close dialogue with pharmaceutical companies to ensure that the technology aligns with industry requirements and commercial development strategies. Upon successful completion, CLEVERNAS_3 is expected to substantially strengthen the value proposition of the technology for licensing and partnership opportunities.

With this new investment, Ghent University continues to translate internationally recognised expertise in bovine mastitis into innovations with clear commercial potential, addressing one of the dairy industry's most pressing challenges while supporting the global transition towards reduced antimicrobial use.