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Regulatory press release

New independent studies show that ColdZyme addresses the root cause of respiratory infections, reducing sick days and symptoms

Today, results from two independent studies on the medical device ColdZyme were published in the peer-reviewed scientific journal *The Journal of Physiology*. The findings reveal that ColdZyme targets the underlying cause of upper respiratory infections by inhibiting viruses' ability to infect cells and limiting their spread. Study participants who used the active product experienced significantly lower symptom rating scores and sick days due to colds.

The publication is a collaboration between researchers at the universities of Kent and Vienna. They examined ColdZyme's effects using complementary approaches: a randomized, double-blind, placebo-controlled study involving active athletes and a new *in vitro* model of the human upper respiratory tract.

The research team at Kent enrolled 164 active athletes who were randomized to use either ColdZyme or a placebo spray in their throat at the first signs of upper respiratory infection symptoms. Participants also submitted throat swabs for researchers to analyze the presence of viruses during symptom periods. The final results are based on 154 participants, as 10 of the 164 enrolled athletes were lost in follow-up. The results showed that athletes using the active product had significantly lower symptom score ratings and fewer lost training days due to colds compared to the placebo group (see figure below). Additionally, the findings demonstrated a significant reduction in viral load (94%) for rhinovirus—the most common cause of colds—when treated with ColdZyme, along with lower symptom scores.

- This shows that ColdZyme addresses the underlying cause of upper respiratory infections by inhibiting viruses' ability to infect cells and limiting their spread. This results in less tissue damage in the airways and milder symptoms. The findings are very promising, and the reduced illness duration can be of practical benefit to both athletes and the general population, says Glen Davison, professor of Sport and Exercise Sciences in the School of Natural Sciences at the University of Kent, UK.

The *in vitro* study, conducted by the research team in Vienna, illustrated that ColdZyme effectively blocked cold viruses from adhering to the cell types present in the upper respiratory tract. Using human epithelial cells in models simulating different parts of the upper respiratory tract, such as the nose and throat, these models were infected with rhinovirus—the most common cause of colds. The researchers compared the effects of spraying the epithelial cells with either ColdZyme or a control (standard saline solution). When the cells were treated with ColdZyme, a significant reduction in viral load was observed.

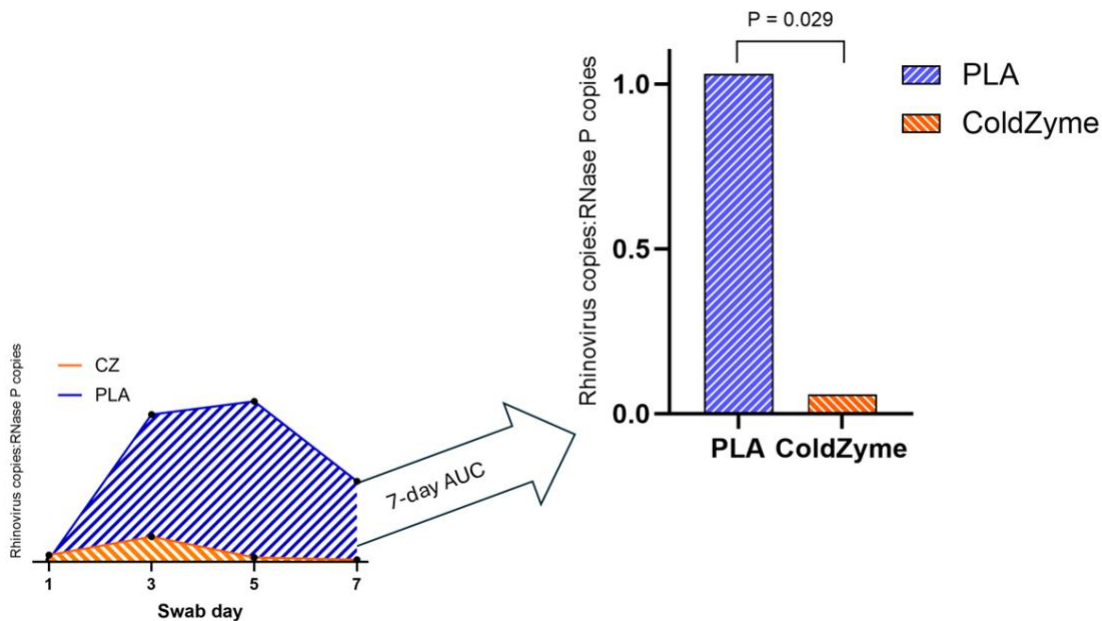
- These results are remarkable because ColdZyme not only significantly reduced the viral load for SARS-CoV-2 variants and Influenza A and B as previously demonstrated, but also for rhinoviruses in our upper respiratory tract model. After treatment with ColdZyme, previously infected tissue cultures appeared almost uninfected, with intact cell nuclei, undamaged cilia, and only a few remaining virus particles compared to infected cultures mock-treated with saline solution before infection says Doris Wilflingseder, professor of infectious diseases at the Ignaz Semmelweis Institute and the Vetmeduni Vienna.
- Most people see colds as something you just have to endure. Therefore, we are very positive about the results from two independent, researcher-initiated studies, which in different ways

show that ColdZyme addresses the root cause – the virus – rather than just alleviating the symptoms. The product shortens the duration of the illness and relieves discomfort, which we believe is valuable for everyone," says Claus Egstrand, CEO of Enzymatica.

The results from the studies:

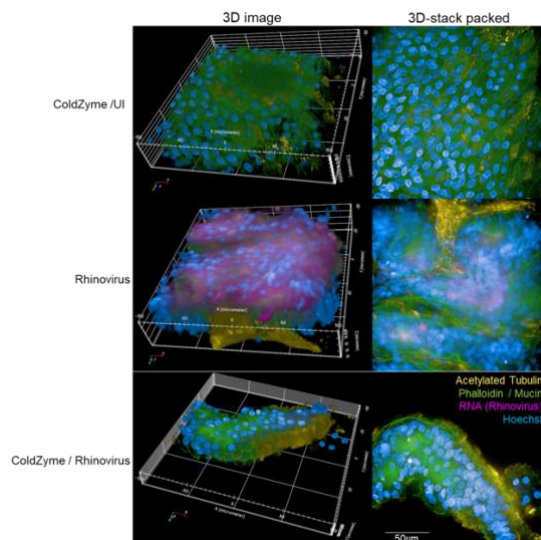
ColdZyme – Viral load was 94% lower in ColdZyme group vs placebo (clinical study)

The results show the amount of rhinovirus in participants with a cold in the study (n = 50 confirmed cases of upper respiratory tract infection, URTI). Throat swabs were taken at several points during the first week of illness (day 1, 3, 5, and 7). The viral load was measured using PCR analysis, and the total viral burden over this 7-day period (7 days) was then calculated. The chart shows median values and the variation between participants. The results showed a significant difference between ColdZyme and placebo – the viral load was 94% lower in the ColdZyme group (P = 0.029).



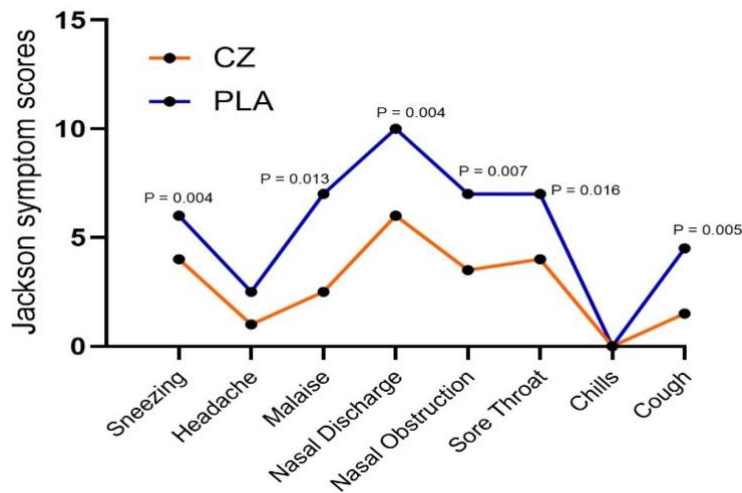
Amount of virus (in pink) lost in respiratory tissues when pre-treated with ColdZyme (in vitro study)

The images show how the amount of virus (pink color) was significantly reduced in airway cells treated with ColdZyme before being exposed to the virus. For each test, three independent samples were taken from different parts of the cell culture. The image shows an example of how the cells appeared in one of these samples.



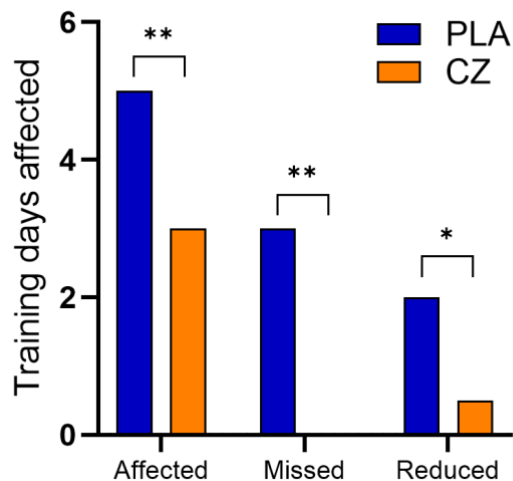
ColdZyme – lower symptom ratings during infection compared to placebo (clinical study)

The graph shows how participants in the study rated their cold symptoms day by day. Each participant assessed eight different symptoms, which were then summed to a total score (Jackson score). The chart compares the average symptom levels of those who used ColdZyme with those who received placebo. The results show that those who used ColdZyme experienced milder symptoms during the infection.



ColdZyme – Fewer sick days during infection (clinical study)

The graph shows how many sick days participants in each group had during a cold period, based on 50 laboratory-confirmed cases in the study. It also shows how many of these days affected participants' training—either by forcing them to cancel their workouts entirely or by needing to train at a lower intensity than usual. The results indicate that those who used ColdZyme had fewer sick days and fewer training days affected compared to the placebo group.



Read the published article here: <https://physoc.onlinelibrary.wiley.com/doi/10.1113/JP288136>

Press images: [LINK](#)

Press briefing 5 March 2025

In connection with the publication of the results from two research studies on ColdZyme, Enzymatica AB invites you to a digital press briefing on 5 March 2025. During the press conference, the researchers behind the studies will present their findings and be available for questions. A separate invitation with further details will be sent out shortly.

Facts About ColdZyme®

ColdZyme® is an oral spray that should be used at the first signs of cold and flu-like symptoms. When sprayed into the back of the throat, it immediately creates a barrier that captures the viruses causing the symptoms and inhibits their ability to infect other cells and replicate.

ColdZyme is a medical device certified under the EU MDR regulation (Class III) by the Notified Body Eurofins. This certification entails stricter requirements for clinical evidence, safe design, and market surveillance.

Learn more at www.ColdZyme.se

The information in this press release is such that Enzymatica is required to disclose under the EU Market Abuse Regulation. The information was submitted for publication, through the agency of the contact person below, on 28 February, 2025, at 16.00 CET.

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About Enzymatica

Enzymatica AB develops and markets products that treat and alleviate infections and symptoms in the upper airways. The best-selling product is ColdZyme®, an oral spray for colds and cold-like symptoms in the upper airways. The company's strategy is to continue growing by strengthening its position in existing markets and expanding into additional geographic markets through collaborations with established partners under their brands in the cold remedy market.

The company is headquartered in Lund and is listed on Nasdaq First North Growth Market. The Certified Adviser is Carnegie Investment Bank AB (publ).

For more information, visit www.enzymatica.se