Press Release
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# NOSA Receives Positive Organ Data from In Vivo Study on Drug Delivery

**Researchers at Lund University have published a scientific report showing that NOSA's intranasal drug delivery platform, Drug Delivery, achieves therapeutic levels of pharmaceuticals in the brain. The results indicate that NOSA Drug Delivery is an effective alternative to other routes of administration.**

NOSA has previously published data demonstrating that drug uptake via Drug Delivery can result in up to eight times higher plasma levels than the recommended dose required for therapeutic effect. The new organ data significantly strengthens the platform's proof of concept and establishes Drug Delivery as a delivery platform for the future.

"Being able to bypass the blood–brain barrier is one of the greatest challenges in brain research. Therefore, it is very encouraging to gain access to a new tool for drug delivery to the brain,"
says Professor Tomas Deierborg, Head of the Department of Experimental Medical Science, Lund University.

The in vivo study on which the scientific report is based investigates the release of the Alzheimer's drug memantine via NOSA Drug Delivery. The study demonstrates pharmacologically relevant brain concentrations with high brain-to-plasma ratios, confirming efficient uptake in the brain. This is the first time memantine has been released in gaseous form and shown to reach clinically relevant concentrations in brain tissue.

"In the animal model, we measured clinically relevant levels of memantine in brain tissue. In addition, data from an anatomical model of the human nasal cavity suggest that the drug can be released from the nasal inserts over an extended period and spread to areas of the nasal cavity that may be relevant for further transport to the brain,"
says Emilia Eliasson, PhD student at Lund University.

The study data represent a major success and the latest in a series of successful studies showing that uptake via NOSA Drug Delivery can enable more efficient drug absorption. Memantine is one of the substances that has been tested and validated in all previous tests and studies conducted by the company.

"We are pleased and proud to present such strong research results. The technology is now proven and a robust proof of concept has been established. We now look forward to commercializing the technology through collaboration with one or more pharmaceutical companies,"
says Adrian Liljefors, CEO of Nosa Plugs AB (publ).

Background
Since 2023, NOSA has been working to develop the delivery platform of the future for more efficient drug administration: NOSA Drug Delivery. The product is based on the company's patented technology for releasing drugs via nasal inserts that are worn while breathing. The technology enables controlled release of drugs in gaseous form, both rapidly and over an extended period. In studies, Drug Delivery has demonstrated efficient uptake in the brain, lungs, and blood plasma. A proof of concept is in place, and the technology is ready to be incorporated into pharmaceutical dossiers.

Advantages of the Technology
In contrast to other methods of drug administration—such as injections, tablets, and sprays—NOSA Drug Delivery enables more efficient drug administration, for example:
Direct effect on the central nervous system by bypassing the blood–brain barrier

- Rapid onset of action
- Long-lasting effect
- Non-invasive
- Ability to discontinue ongoing treatment
- Potentially fewer side effects

Study data indicate that equivalent therapeutic effects may be achieved with a lower dose for certain drugs. This could provide additional benefits such as fewer side effects, a lower environmental footprint, and more cost-effective treatments.
NOSA Drug Delivery is also intended as an alternative method for administering existing drugs where the treatment itself is problematic. This applies to individuals who, for example, are needle-phobic, have difficulty swallowing tablets, or do not wish to use suppositories.

Read the full report in the attached file:
"First In Vivo Demonstration of Nose-to-Brain Drug Delivery of Memantine Using NosaPlugs Nasal Inserts."

**For further information:**

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Adrian Liljefors, CEO Nosa Plugs AB (publ)
E-mail: ir@nosaplugs.com

**About NOSA:**

NOSA Plugs AB (publ) is a Swedish medical technology company that has been listed on Nasdaq First North Growth Market since 16 March 2023, under the ticker “NOSA”. FNCA Sweden AB acts as the company’s Certified Adviser.

The publication is a translation of the original Swedish text. In the event of inconsistency or discrepancy between the Swedish version and this publication, the Swedish language version shall prevail.

NOSA’s press releases are available at:
https://nosaplugs.com/sv/investerare/

**Attachments**

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First In Vivo Demonstration Of Nose To Brain Drug Delivery Of Memantine Using NosaPlugs Nasal Inserts