Press release

Orexo's AmorphOX technology may pave the way for intranasal GLP-1 medication

- A preclinical pharmacokinetic in-vivo study has been conducted in which the AmorphOX® technology was used to develop three powder-based intranasal formulations with semaglutide, which were compared with an oral and an injectable formulation.
- AmorphOX formulations demonstrated significantly higher plasma concentrations and higher bioavailability than the oral tablet.
- The data further demonstrate the ability of the AmorphOX powder-based intranasal formulation technology to develop formulations for large molecules that are well absorbed through mucosal membranes.

Uppsala, Sweden, September 5, 2025 - Orexo AB (publ.), (STO:ORX) (OTCQX:ORXOY), today announced positive pharmacokinetic in-vivo data for a powder-based intranasal semaglutide formulation developed with the AmorphOX technology.

In the in-vivo study, three different formulations of powder semaglutide were administered intranasally. For comparison, Rybelsus®, a semaglutide tablet, was administered orally, and Wegovy®, injectable semaglutide, was administered subcutaneously.

At the median values, two of the AmorphOX powder formulations had a sevenfold increase in plasma values when compared to the oral tablet, although as expected they had lower values than the injectable. In addition to higher exposure than the oral route, the AmorphOX formulations exhibited lower variability in plasma concentration.

The data generated further supports the ability of the AmorphOX technology to formulate large molecules into powders that could be delivered intranasally. An AmorphOX-formulated intranasal semaglutide may provide needle-free delivery with improved convenience, potentially better adherence, and would not require refrigeration. Dosing schedules, depending on intranasal dosage strength and therapeutic levels achieved, may also be extended to require less frequent dosing than the oral route.

Robert Rönn, SVP and Head of R&D, comments: *"It's promising that our AmorphOX powder technology successfully has managed to formulate and stabilize large peptides like semaglutide. This could pave the way for effective intranasal delivery of semaglutide and other GLP-1 receptor agonists. The study results underpin our updated AmorphOX strategy to prioritize larger molecules like peptides, proteins, and vaccines. The results will support Orexo in establishing strategic partnerships that expand and accelerate the use of this novel delivery method for more efficient treatments options."*

For further information contact:
Nikolaj Sørensen, President and CEO
Lena Wange, IR & Communications Director
Robert Rönn, SVP and Head of R&D
Tel: +46 (0)18 780 88 00
E-mail: **ir@orexo.com**

About Orexo
Orexo is a Swedish pharmaceutical company with 30 years of experience developing improved pharmaceuticals based on proprietary formulation technologies that meet large medical needs. On the US market, Orexo provides innovative treatment solutions for patients suffering from opioid use disorder. Products targeting other therapeutic areas are developed and commercialized worldwide with leading partners. Total net sales in 2024 amounted to SEK 590 million, and the number of employees to 110. Orexo is listed on Nasdaq Stockholm's main list and is available as ADRs on OTCQX market (ORXOY) in the US.

For more information on Orexo, visit www.orexo.com. Follow Orexo on X, LinkedIn, and YouTube.

About AmorphOX®
Orexo's proprietary drug delivery platform, AmorphOX, is a powder made up of particles that are built using a unique combination of a drug, carrier materials and, optionally, other ingredients. The particles are presented as an amorphous composite of the various ingredients providing for excellent chemical and physical stability, as well as rapid dissolution. The technology works for a broad scope of active ingredients and has been validated in several human clinical studies showing rapid and extensive drug exposure.

About semaglutide
Semaglutide belongs to the class of glucagon-like peptide-1 (GLP-1) receptor agonists which are available today in both oral and subcutaneous injection forms. They are primarily used for the treatment of type 2 diabetes and obesity or weight management.

Currently available GLP-1 and GLP-1/GIP (gastric inhibitory polypeptide) receptor agonists that are FDA-approved include injectable medications that require weekly needle sticks and refrigeration. In development are oral formulations that do not require refrigeration, offer improved convenience, and potentially better adherence compared to injectable medications.

Oral bioavailability of semaglutide in humans is highly variable. Oral formulations endure enzymatic degradation in the gastrointestinal tract, impacting their bioavailability and effectiveness. Furthermore, instructions on taking oral tablets on an empty stomach with water and at least 30 minutes before a meal are restrictive.

The information was submitted for publication at 8.00 am CEST on September 5, 2025.