

Company announcement – No. 23/2018

Zealand Pharma achieves primary and key secondary endpoints in pivotal Phase 3 trial with dasiglucagon for severe hypoglycemia

- **All primary and key secondary endpoints successfully achieved**
- **99% of patients on dasiglucagon recovered from low blood glucose within 15 minutes**
- **Median time to plasma glucose recovery of 10 minutes with dasiglucagon**
- **Conference call today, September 18 at 5 PM CET/11 AM ET**

Copenhagen, September 18, 2018 – Zealand Pharma A/S (“Zealand”) (Nasdaq: ZEAL), a Copenhagen-based biotechnology company focused on the discovery and development of innovative peptide-based medicines, announces the successful results in the pivotal Phase 3 trial with dasiglucagon for severe hypoglycemia in diabetes.

Dasiglucagon is a potential first-in-class soluble glucagon analog invented and developed by Zealand. It is in development in the ready-to-use HypoPal® rescue pen for easy, fast and effective treatment of severe hypoglycemia.

The pivotal Phase 3 trial demonstrates that a single dose of dasiglucagon rapidly increases blood glucose levels in patients with type 1 diabetes following insulin-induced hypoglycemia. The trial compares the glycemic response observed after administration of dasiglucagon with that of placebo and that of currently marketed glucagon, in powder form for reconstitution prior to injection. The primary endpoint was time to plasma glucose recovery, which was defined as first increase in plasma glucose of ≥ 20 mg/dL (1.1 mmol/L) from baseline without administration of rescue intravenous glucose. 168 subjects were included in the trial: 82 to the dasiglucagon arm, 43 to the placebo arm, and 43 to the GlucaGen® arm. Additional details about the trial are found at <https://clinicaltrials.gov/ct2/show/NCT03378635>.

- The primary result demonstrates that the median time to blood glucose recovery was 10 min for dasiglucagon, which was superior to placebo (median: 40 min; $p < 0.001$). The median time to recovery for GlucaGen® was 12 min.
- 99% of subjects were recovered from the insulin-induced hypoglycemia within 15 min following dosing with dasiglucagon, versus 2% with placebo and 95% with GlucaGen®.

Overall, no safety concerns were raised for dasiglucagon within the trial. Nausea and vomiting were reported with similar numbers for dasiglucagon and GlucaGen® (nausea: 55% and 53%, vomiting: 23% and 19%, respectively).

Adam Steensberg, Executive Vice President and Chief Medical and Development Officer at Zealand Pharma, commented: “I believe that the Phase 3 results are outstanding, and show that dasiglucagon HypoPal® rescue pen could become the fastest rescue treatment for severe hypoglycemia. I am grateful to the patients and clinical investigators who participated in the trial.”



Professor, Dr. Thomas R. Pieber, Medical University of Graz, Department of Internal Medicine, Division of Endocrinology and Diabetology, said: “The results of this Phase 3 trial are impressive in that all patients had clinical relevant increases in blood glucose level within 15 minutes, with a median time to recovery of only 10 minutes. The rapid onset of action suggests that dasiglucagon could become a very attractive treatment option for diabetes patients having a severe hypoglycemic event.”

This is the second Phase 3 trial with positive results for dasiglucagon. The previous Phase 3 trial confirmed dasiglucagon’s safety profile. Zealand will soon initiate a Phase 3 trial in pediatric diabetes patients, which is expected to complete in mid-2019.

Britt Meelby, President and Chief Executive Officer at Zealand Pharma, commented: “The compelling Phase 3 results bring the dasiglucagon HypoPal® rescue pen a significant step closer to a better treatment for people living with diabetes, addressing one of their biggest fears. I am thrilled about this achievement, which represents an important milestone for Zealand in executing our strategy of bringing fully-owned products through registration.”

Conference call today, September 18 at 5 PM CET/11 AM ET

Zealand’s management will host a conference call today, September 18, at 5:00 PM CET/11:00 AM ET to discuss the results of this pivotal phase 3 trial. Participating in the call will be President and Chief Executive Officer **Britt Meelby Jensen**, Executive Vice President and Chief Financial Officer **Mats Blom**, and Executive Vice President and Chief Medical & Development Officer **Adam Steensberg**. The presentation will be followed by a Q&A session.

The conference call will be conducted in English, and the dial-in numbers are:

Denmark: +45 35 15 80 49
United Kingdom: +44 (0)330 336 9128
United States: +1 929-477-0448
Passcode..... **4510337**

A live audio webcast of the call, including an accompanying slide presentation, will be available via the following link, <https://edge.media-server.com/m6/p/khb3xico>, and will be accessible on the Investor section of Zealand’s website (www.zealandpharma.com). Participants are advised to register for the webcast approximately 10 minutes before the scheduled start.

A recording of the event and a transcript will be available on the Investor section of Zealand’s website after the call.

For further information, please contact:

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Dasiglucagon (glucagon analog stable in liquid formulation) for use in other indications

Dasiglucagon is a Zealand-invented glucagon analog with a unique stability profile in a ready-to-use aqueous solution. It is also in development for two additional indications: treatment of type 1 diabetes with a next-generation artificial pancreas, and treatment for children born with a genetic mutation that causes congenital hyperinsulinism (CHI).

**About type 1 diabetes and hypoglycemia**

People with type 1 diabetes suffer from insulin deficiency and inappropriate glucagon secretion. Both hormones are essential to ensure stable and healthy blood glucose levels. Consequently, patients must monitor and adjust their blood glucose levels to remain in proper glycemic control, as both high and low blood glucose may affect their health, both in the short and long term.

Severe hypoglycemia is an acute, life-threatening condition resulting from a critical drop in blood glucose levels associated primarily with insulin therapy. Severe hypoglycemia occurs most frequently in people with type 1 diabetes due to injecting insulin multiple times daily. It is the biggest concern for insulin-dependent patients and the most feared complication of diabetes treatment. The condition is characterized by confusion, seizures, and often loss of consciousness that can result in death if left untreated.

When a patient has a hypoglycemic event, a second person must assist in treatment. Currently marketed formulations of glucagon for the treatment of severe hypoglycemia require mixing first by the person assisting to treat and then immediate administration due to poor drug stability. Dasiglucagon is being developed to offer a stable ready-to-use rescue treatment for severe hypoglycemia.

About Zealand Pharma A/S

Zealand Pharma A/S (Nasdaq Copenhagen and New York: ZEAL) ("Zealand") is a biotechnology company focused on the discovery and development of innovative peptide-based medicines. More than 10 drug candidates invented by Zealand have advanced into clinical development, of which two have reached the market. Zealand's current pipeline of internal product candidates focus on specialty gastrointestinal and metabolic diseases. Zealand's portfolio also includes two clinical license collaborations with Boehringer Ingelheim.

Zealand is based in Copenhagen (Glostrup), Denmark. For further information about the Company's business and activities, please visit www.zealandpharma.com or follow Zealand on LinkedIn or Twitter @ZealandPharma.