Press release
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Zealand presented new data on two novel peptide therapeutics from its preclinical diabetes pipeline at the American Diabetes Association's (ADA) 74th Scientific Sessions

- ***New data on novel glucagon analogue, ZP-GA-1 further support its broad potential in the treatment of diabetes both as a ready-to-use hypoglycemia rescue pen and as part of an artificial pancreas closed loop system***
- ***First ever data presented on the GLP-1/GLP-2 dual agonist, ZP-GG-72, as a completely novel therapeutic approach to address in addition to glucose control, the unmet medical need of metabolic endotoxemia in diabetes and obesity***

Copenhagen, 17 June 2014 – Zealand Pharma A/S ("Zealand") (NASDAQ OMX Copenhagen: ZEAL) informs of new data presented on two flagship peptide therapeutics from its preclinical diabetes pipeline at the American Diabetes Association's (ADA) 74th Scientific Sessions, taking place 13-17 June in San Francisco.

Dr. Torsten Hoffmann, **Executive Vice President and Chief Scientific Officer at Zealand** commented*: "Again this year have we been given the opportunity to present novel peptide therapeutics from our preclinical diabetes pipeline at ADA. Both presentations are valuable examples of Zealand's capabilities in the design and development of medicines which can improve life for patients.*

"I am thrilled about the prospects for our glucagon analogue with its broad therapeutic potential both as a user friendly ready-to-use pen to offer improved treatment of hypoglycemia and as an essential component of an artificial pancreatic dual hormone pump system. The GLP-1/GLP-2 program is first-in-class, representing an exciting and completely new approach in diabetes treatment with disease modifying potential."

<u>Data presented on novel glucagon analogue for liquid formulation</u>

On Monday 16 June, in an audio guided poster presentation, Zealand Scientist Pia Noerregaard, outlined new findings on Zealand's novel glucagon analogue *ZP-GA-1.* This analogue has been structurally optimized for use in a stable liquid dosage form, thus overcoming the challenges of using glucagon therapeutically because of the native peptide's poor physiochemical properties.

The solubility of ZP-GA-1 at physiological pH was shown to be >25 mg/mL and thus more than 100-fold superior to that of native glucagon (~0.2 mg/mL). Also its chemical stability was found to be significantly improved compared to native glucagon as measured over time. After 7 days at 40 ºC the degradation of ZP-GA-1 was 1.8% versus a 51% degradation of native glucagon. After 360 days at 5ºC, the degradation of ZP-GA-1 was only 3.3%.

In terms of preclinical efficacy, ZP-GA-1 was shown to restore blood glucose to baseline levels or above in a dose-dependent manner during insulin-induced hypoglycemia in rats. Further, ZP-GA-1 showed pharmacokinetic and blood glucose profiles overall similar to native glucagon in dogs.

These data suggest that ZP-GA-1 is comparable to native glucagon in releasing glucose stores into the blood stream, while being suitable for long term storage in a liquid dosage form. The findings thus provide further support for its use in the treatment and prevention of severe hypoglycemia in the form of a ready-to-use rescue pen and as an essential component of an artificial pancreas closed loop system.

Data presented on novel GLP-1/GLP-2 dual agonist

Further on Monday 16 June, in an oral presentation Zealand principal scientist, Rasmus Just, outlined the first data ever to be presented on Zealand's novel GLP-1/GLP-2 dual agonist *ZP-GG-72***.** The rationale for adding GLP-2 agonist activity to GLP-1 agonism is to address the low grade inflammation associated with obesity and diabetes and referred to as metabolic endotoxemia. This condition is thought to arise from leakage of bacterial wall components across the intestinal barrier and to contribute to the disease development by reducing insulin sensitivity.

When administered twice-daily in mice for 5 days, ZP-GG-72 demonstrated equivalent efficacy to both GLP-1 and GLP-2 mono-agonistic reference compounds in its ability to improve glycemic control and increase intestinal mass.

The data support the potential for ZP-GG-72 as a new treatment paradigm for addressing metabolic endotoxemia, which contributes to insulin insensitivity in diabetes and obesity, and which is not addressed with any existing therapy.

Copies of both the poster and the presentation will be made available on Zealand's website, www.zealandpharma.com

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For further information, please contact:

David H. Solomon, President and Chief Executive Officer
Tel: +45 2220 6300

Hanne Leth Hillman, Vice President and Head of IR & Corporate Communications
Tel: +45 5060 3689, email: hlh@zealandpharma.com

About Zealand
Zealand Pharma A/S ("Zealand") (NASDAQ OMX Copenhagen: ZEAL) is a biotechnology company based in Copenhagen, Denmark. Zealand has leading expertise in the discovery, design and development of novel peptide medicines and a mature portfolio of therapeutic products, which are all based on internal inventions. The company's focus lies in the field of cardio-metabolic diseases, diabetes and obesity in particular, and its lead product is lixisenatide, a once-daily prandial GLP-1 agonist for the treatment of Type 2 diabetes, marketed as Lyxumia® under a license agreement with Sanofi. Lyxumia® is approved in several countries globally, including Europe and Japan. In the US, submission of an NDA is expected in 2015, after completion of a cardiovascular outcome study, ELIXA. A once-daily single injection combination of Lyxumia® and Lantus® (LixiLan) is in Phase III development by Sanofi with planned first regulatory filing as early as at the end of 2015.

Zealand has a partnering strategy for the development and commercialization of its products and in addition to the license agreement with Sanofi in Type 2 diabetes, the company has partnerships with Boehringer Ingelheim in diabetes/obesity, Lilly in diabetes and obesity, Helsinn Healthcare in chemotherapy induced diarrhea and AbbVie in acute kidney injury.

For further information: **www.zealandpharma.com**

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