Tresiba® demonstrated lower day-to-day and within-day variability in glucose-lowering effect compared with insulin glargine U300

Bagsværd, Denmark, 12 November 2016 – Results from a study comparing the pharmacodynamics of Tresiba® (insulin degludec) with insulin glargine U300 in people with type 1 diabetes were presented today at the 16th Annual Diabetes Technology Meeting in Bethesda, US. Treatment with Tresiba® (0.4 U/kg) resulted in lower day-to-day and within-day variability* in glucose-lowering effect, compared with insulin glargine U300 (0.4 U/kg).1

The study showed that the day-to-day variability was approximately four times lower with Tresiba® than with insulin glargine U300. Within-day variability was approximately 40% lower with Tresiba®, with the glucose-lowering effect being more evenly distributed across 24 hours compared to insulin glargine U300.1 In addition, insulin glargine U300 showed a 30% lower potency assessed by the total glucose-lowering effect compared to Tresiba®.1

"While large-scale head-to-head trials are needed to compare the efficacy and safety of new insulins, pharmacodynamic studies are important, as they enable us to better understand their pharmacological properties. The more stable the glucose lowering profile of insulin, the easier it is to titrate and can help reduce the risk of hypoglycaemia and hyperglycaemia in patients with diabetes,” says Dr Tim Heise, lead scientist at the Profil Institute in Germany.

*within-day variability was assessed in a post-hoc analysis and calculated as the relative fluctuation, in order to account for the difference in potency between Tresiba® and insulin glargine U300.

About the NN1250-4227 study
This was a phase 1, single-centre, double-blind, two-period, cross-over trial, where people with type 1 diabetes were randomly assigned to receive Tresiba® or insulin glargine U300 at a dose of 0.4 U/kg/day. A total of 57 people completed the study. Both treatments were administered once daily for 12 days, followed by a 7–21 day period in which the participants received no study treatment, before being crossed over to receive the other treatment for a further 12 days. In order to assess the pharmacodynamic
variability in the glucose-lowering effect of Tresiba® and insulin glargine U300, each participant underwent six 24-hour glucose clamps (three during each 12-day study period) performed at steady state (where glucose levels are stabilised in the participants).¹

**About Tresiba®**
Tresiba® is a once-daily basal insulin that provides a duration of action beyond 42 hours.²,³ It is important for people with type 1 and type 2 diabetes to establish a routine for insulin treatment. On occasions when administration at the same time of day is not possible, Tresiba® allows for flexibility in day-to-day dosing time when needed.²,⁴,⁵

Tresiba® received its first regulatory approval in September 2012 and has since been approved in more than 80 countries globally. It was most recently approved by the FDA in the United States on 26 September 2015.

Novo Nordisk is a global healthcare company with more than 90 years of innovation and leadership in diabetes care. This heritage has given us experience and capabilities that also enable us to help people defeat other serious chronic conditions: haemophilia, growth disorders and obesity. Headquartered in Denmark, Novo Nordisk employs approximately 42,600 people in 75 countries and markets its products in more than 180 countries. For more information, visit novonordisk.com, Facebook, Twitter, LinkedIn, YouTube

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References


