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Patient Care + Research + Clinical Trials

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Alnylam RNAi in overweight Type 2 diabetes

Investigators Drs. Tom Elliott, Dale Clayton & David Lee
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Summary: The Alnylam study is phase 2 randomised, double-blind, placebo-controlled study of duration 12 months, assessing safety, tolerability, pharmacokinetics and pharmacodynamics of ALN-4324 given in two SC doses 3 months apart in overweight & obese Type 2 diabetes subjects.
Study location BCDiabetes: 400 - 210 West Broadway, Vancouver V5Y 3W2

Hypothesis

ALN-4324 contains a novel RNA interference (RNAi) therapeutic to reduce the hepatic synthesis of GRB14, a negative modulator of insulin, by specifically binding to its mRNA. By reducing GRB14, insulin receptor signaling in the liver is enhanced. This enhanced insulin sensitivity is expected to improve type 2 diabetes control without the weight gain often associated with traditional insulin sensitizers.
We anticipate that the effect on insulin sensitivity will be particularly notable in individuals with excess adiposity. This reduction in insulin resistance is predicted to minimize beta cell failure and slow the progression of type 2 diabetes, that way reducing the rate and severity of diabetic complications.
Preclinical and Phase 1 studies have indicated that GRB14 reduction via ALN-4324 is generally safe and well-tolerated.

Eligible Participants are:

Patients with history of T2D for at least 6 months	
-Male or female 18-75yo -Euthyroid status (including stable dose of exogenous thyroid meds for the last 4 months) -HbA1c ≥7.0% to <10.5%, eGFR >45 -12-lead ECG with no clinically significant abnormalities. QtcF should be <450ms in males and <470ms in females at screening -C-Peptide ≥ lower limit of normal at screening.	-BMI ≥25Kg/m2 to <40Kg/m2 (if both parents asian: MI ≥23Kg/m2 to <40Kg/m2) -Must be on Metformin alone OR Metformin + SGLT2i -SGLT2i limited to: Empagliflozin, Dapagliflozin or Canagliflozin -prior use of other diabetic meds allowed but must be stopped 3+ months prior to screening

Travel grants & hororaria

Travel grants are available from anywhere in Western Canada. An honorarium of $4800 will be paid to participants who do twice-daily finger-poke testing 3 days per week for the entire 12 months

Treatment course and duration:

After the participants' general health status and eligibility is confirmed at the Screening visit, there will be a treatment and assessment period for 6 Months (with study drug SC injections, on Day1 and Month3 for a total of 2 doses), followed with another 6 months follow-up as indicated here:

Treatment period visits							Follow up visits	
* Day1	Day 15	Month 1	Month 2	* Month 3	Month 4	Month 6	Month9	Month 12

Study drug administration visits are marked with *

Odds of receiving placebo : 1:1 (ALN4324 to placebo)
Conflict of interest statement
Short URL = https://bit.ly/RNAiT2D