An Adaptive, Dose-Finding, Seamless Phase 2/3 Study of a Long-Acting Glucagon-Like Peptide-1 Analog (Dulaglutide): Trial Design and Baseline Characteristics

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Abstract

Dulaglutide (dula, LY2189265) is a once-weekly glucagon-like peptide-1 analog in development for the treatment of type 2 diabetes mellitus. An adaptive, dose-finding, inferentially seamless phase 2/3 study was designed to support the development of this novel diabetes therapeutic. The study is divided into two stages based on two randomization schemes: a Bayesian adaptive scheme (stage 1) and a fixed scheme (stage 2). Stage 1 of the trial employs an adaptive, dose-finding design to lead to a dula dose-selection decision or early study termination due to futility. If dose selection occurs, the study proceeds to stage 2 to allow continued evaluation of the selected dula doses. At completion, the entire study will serve as a confirmatory phase 3 trial. The final study design is discussed, along with specifics pertaining to the actual execution of this study and selected baseline characteristics of the participants.

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Abbreviations: (AE) adverse event, (AWARD-5) Assessment of Weekly AdministRation of LY2189265 in Diabetes-5, (BMI) body mass index, (CUI) clinical utility index, (CV) cardiovascular, (DBP) diastolic blood pressure, (DMC) Data Monitoring Committee, (DP) Decision Point, (dula) dulaglutide, (ECG) electrocardiogram, (FBG) fasting blood glucose, (FDA) Food and Drug Administration, (GI) gastrointestinal, (GLP-1) glucagon-like peptide-1, (HbA1c) hemoglobin A1c, (HR) heart rate, (IRC) Internal Review Committee, (Met) metformin, (MTD) maximum tolerated dose, (OAM) oral antihyperglycemic medication, (SAC) Statistical Analysis Center, (T2DM) type 2 diabetes mellitus

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