CRO services for **Diabetes Mellitus**

Diabetes mellitus is a chronic progressive disease associated with dysfunction and loss of β cells. Glycemic control alone is not sufficient to stop the disease progression, and novel approaches beyond glycemic control are also required for the treatment of diabetes and its complications.

KK-Ay, neonatal STZ, ob/ob and db/db mice are the most common models to assess the *in vivo* activity of new anti-diabetic agents. These models are recommended by the U.S. FDA and/or the Japan MHLW to use for developing new anti-diabetic agents.

SMC, a Tokyo-based biotech company known as the leading nonclinical CRO for nonalcoholic steatohepatitis-hepatocellular carcinoma, now provides pharmacology study service using established diabetes mouse models. Our expertise achieved in diabetes-based steatohepatitis research can also be applied to diabetes R&D.

FDA: Food and Drug Administration, MHLW: Ministry of Health, Labour and Welfare

Stelic's services in Diabetes Mellitus Model

Model line-up:
❒ KK-Ay mouse
❒ ob/ob mouse
❒ db/db mouse
❒ Neonatal STZ induced diabetes model (nSTZ)
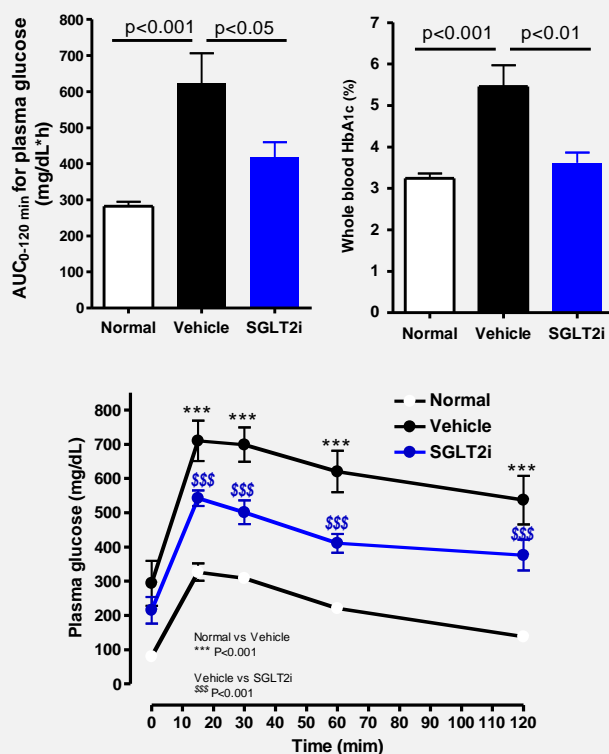❒ Adult STZ induced diabetes model

Treatment:
❒ Administration option:
- • Routes: PO, IV, IP, SC, IT and IM
- • Frequency: QD, BID, TID
- • Duration: Adjustable for your needs

Efficacy endpoints:
❒ Blood glucose
❒ Whole blood HbA_{1c}
❒ Plasma/ serum glycoalbumin
❒ Plasma/ serum insulin
❒ Plasma/ serum adiponectin
❒ Plasma/ serum leptin
❒ Serum advanced glycation end-product
❒ Oral glucose tolerance test
❒ Insulin tolerance test
❒ β cell volume
❒ β cell proliferation
❒ β cell apoptosis
❒ Islet inflammation

Effectt of SGLT2i on carbohydrate-metabolism in nSTZ-induced diabetes.

The impaired glucose tolerance in nSTZ- induced diabetic mouse was ameliorated by the treatment with SGLT2 inhibitor (SGLT2i). The nSTZ model mice were orally administered SGLT2i from 4 weeks of age for 6 weeks