药明康德 WuXi AppTec

WuXi Biology

Metabolic Disease Platform

- Clinically relevant models that mirror clinical profiles for effective drug screening and assessment.
- Comprehensive system for metabolic disease treatment evaluation.
- Extensive metabolic research experience and robust drug evaluation system.

Well-Established Metabolic Technologies

Obesity

- Body composition analysis
- Metabolic cage
- Energy expenditure
- Respiratory exchange ratio
- Heat monitoring
- Food intake
- Treadmill
- Muscle function

Diabetes

- Fasting blood glucose
- OGTT/IPGTT/IVGTT
- Insulin tolerance test
- HbA1C test
- Wound healing
- Glomerular filtration rate
- Water intake

Hyperlipidemia

- Blood lipid profile
- Liver lipid profile
- Liver function analysis

Post-Life Tests

- Histopathology: liver, pancreas, kidney……
- Gene expression: RNA-seq, RT-PCR
- Biochemical, proteins

Well-Validated Models in House

Obesity

Diet-Induced Obesity (DIO) Model | high-fat diet (HFD) induction | mouse & rat & NHP
Diet-Induced Obesity (DIO) Model | high-fat diet (HFD) induction | GLP1R/GCGR/GIPR humanized mouse
Obesity Model | ob/ob mouse

Diabetes

STZ-Induced Diabetes Model | STZ induction | mouse & rat & NHP
Spontaneous Diabetes Model | db/db mouse & ZDF rat

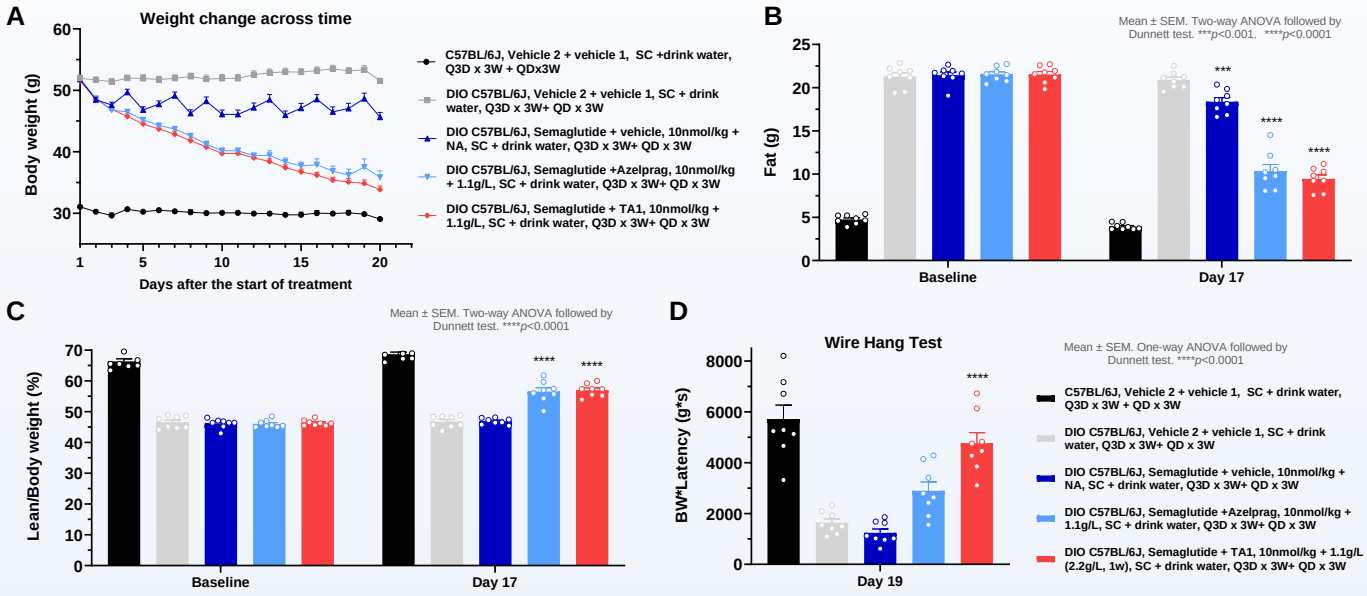
Hyperlipidemia

Hyperlipidemia Model | high-cholesterol diet (HCD), high-fat diet/Western diet (HFD/WD) induction | golden hamster
Hyperlipidemia Model | high-cholesterol diet/Western diet (HCD/WD) induction | *Apoe*$^{-/-}$, *Ldlr*$^{-/-}$ mouse
Hyperlipidemia Model | high-cholesterol diet/Western diet (HCD/WD) induction | hPCSK9 mouse

Rare Metabolic Diseases

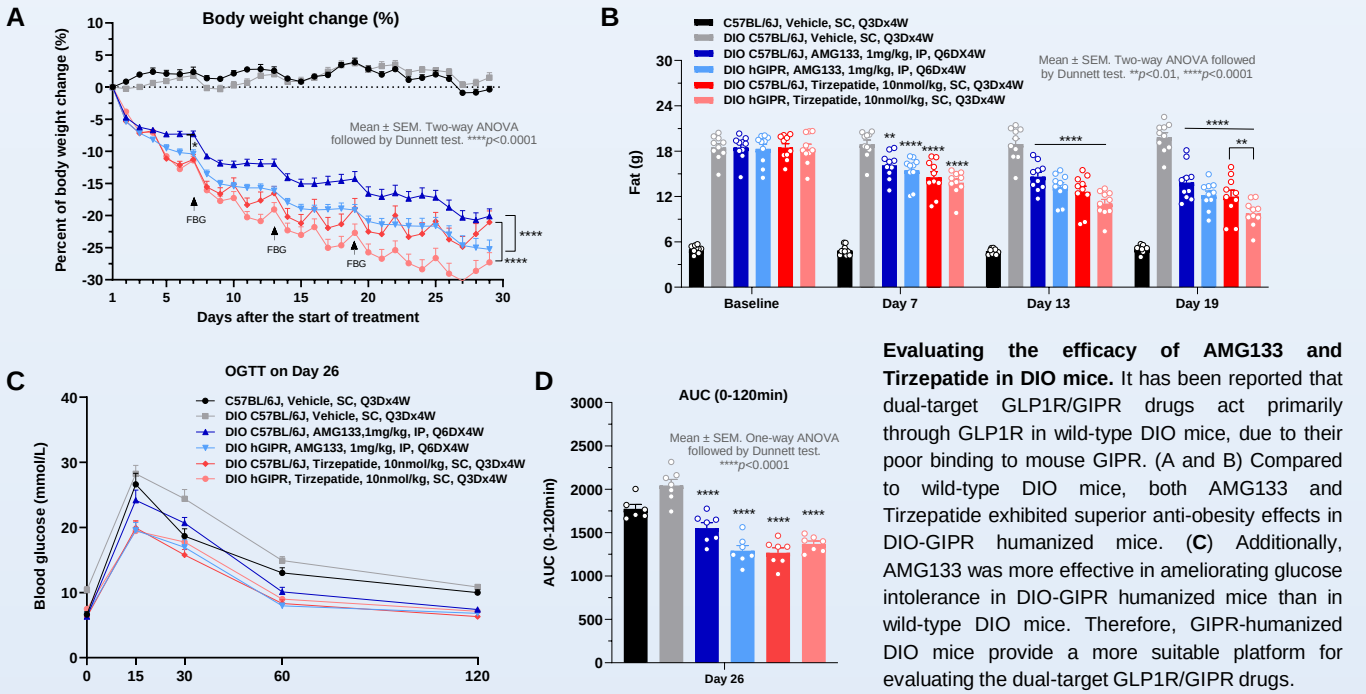
Gaucher Disease | Pompe Disease | Fabry Disease | MPS I & II Disease | Methylmalonic Acidemia Disease | Phenylketonuria Disease | Propionic Acidemia Disease | Tyrosinemia Disease Hyperuricemia Disease | Wilson Disease | Glutaric Aciduria Type I

Evaluating the Efficacy of Apelin Agonists in DIO Mice



Evaluating the efficacy of Apelin agonist in DIO mice. (A and B) The combination of Apelin agonist (Azelprag or Test Article 1) and Semaglutide showed superior weight-loss and fat-loss effects compared to Semaglutide alone in DIO mice. (**C**) Semaglutide treatment significantly reduced lean body mass in DIO mice, whereas the combination of Apelin agonist and Semaglutide preserved lean mass. (**D**) In the Wire Hang Test, DIO mice treated with both Semaglutide and Apelin agonist exhibited better muscle function compared to those treated with Semaglutide alone.

Evaluating the Efficacy of AMG133 and Tirzepatide in DIO Mice



Evaluating the efficacy of AMG133 and Tirzepatide in DIO mice. It has been reported that dual-target GLP1R/GIPR drugs act primarily through GLP1R in wild-type DIO mice, due to their poor binding to mouse GIPR. (A and B) Compared to wild-type DIO mice, both AMG133 and Tirzepatide exhibited superior anti-obesity effects in DIO-GIPR humanized mice. (**C**) Additionally, AMG133 was more effective in ameliorating glucose intolerance in DIO-GIPR humanized mice than in wild-type DIO mice. Therefore, GIPR-humanized DIO mice provide a more suitable platform for evaluating the dual-target GLP1R/GIPR drugs.

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