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RESEARCH MODELS

Zucker Diabetic Sprague Dawley (ZDSD) Rat

A Translatable Rat Model for Obesity, Metabolic Syndrome, Diabetes, and Diabetic Complications

The ZDSD polygenic rat model does not rely on monogenetic leptin or leptin receptor mutations for development of obesity and Type 2 diabetes, more closely mimicking human conditions.

Evaluate your therapeutic agents in a translatable rat model, which more closely mirrors human disease development and progression.

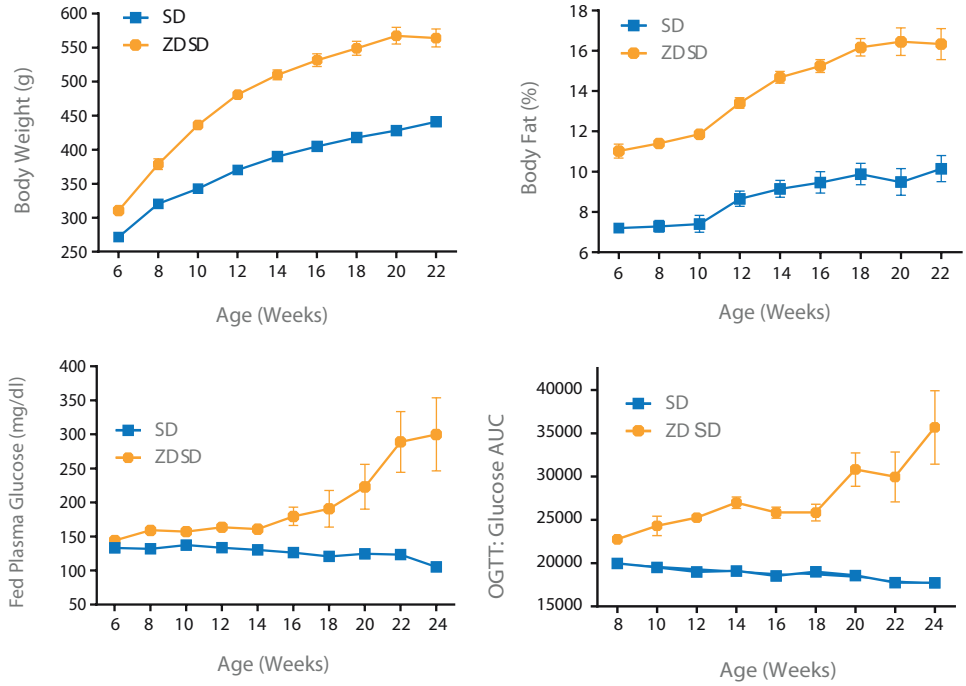
- ZDSD rat features:
  - Polygenic obesity model, without leptin or leptin receptor mutations.
  - Developed by crossing ZDF rat (Lean +/+) with CD(SD) rat and selectively bred to select for obesity and diabetes traits.
  - Inbred for 35+ generations.
- Type 2 diabetes progresses similarly to the human disease – pre-diabetes (8-16 weeks), through overt diabetes (>16 weeks), to diabetic complications (24+ weeks).
- Diabetic complications include nephropathy, neuropathy, fatty liver, etc.
- Metabolic syndrome characteristics including insulin resistance, dyslipidemia, and hypertension.
- Move your agents for obesity, metabolic syndrome, diabetes, and diabetic complications into the clinic with confidence.

ZDSD Rat Model vs. Conventional Models

	Human	ZDSD Rat	ZDF	Zucker	DIO Rat
Polygenic Disease	•	•			•
Intact Leptin Pathway	•	•			•
Pre-Diabetic State	•	•			•
Glucose Intolerance on Normal Diet	•	•	•	•	
Weight Gain on Normal Diet	•	•	•	•	
Hyperglycemia	•	•	•		
Comorbidities	•	•	•		
Cardiac Dysfunction	•	•	•		
Nephropathy	•	•	•		
Hypertension	•	•		•	•

EVERY STEP OF THE WAY

Spontaneous Development of Obesity and Hyperglycemia, and Impaired Glucose Disposal



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