

# The diet-induced obese rat

A standard rat model of diet-induced obesity for drug efficacy testing.

## Standard model for profiling drug therapeutic effects in obesity

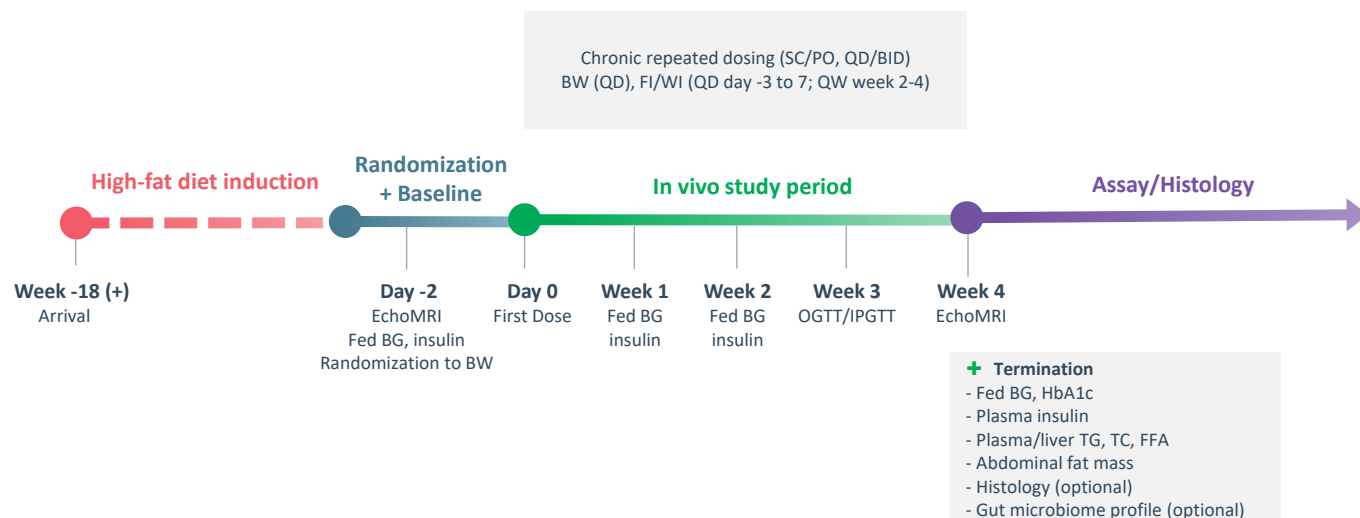
High-fat diet-induced obese (DIO) rats represent the most common rat model employed in preclinical obesity drug development.

### Key model traits

- Obesity and adiposity.
- Prediabetes characterized by insulin resistance and impaired glucose tolerance.
- Treatment efficacy across a wide range of anti-obesity and anti-diabetic drug classes.

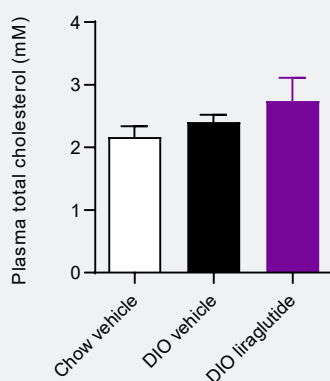
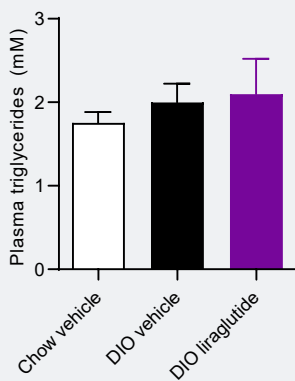
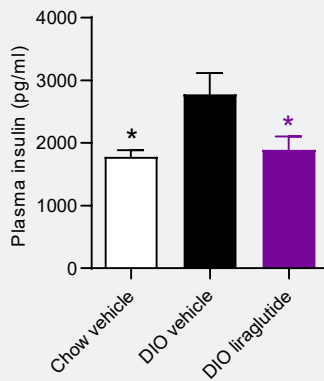
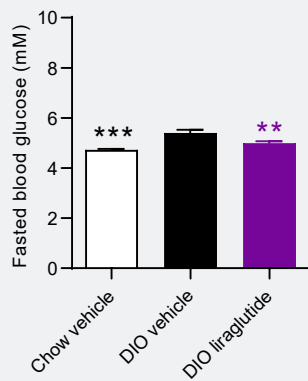
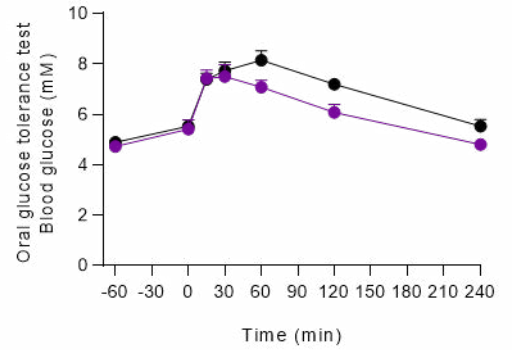
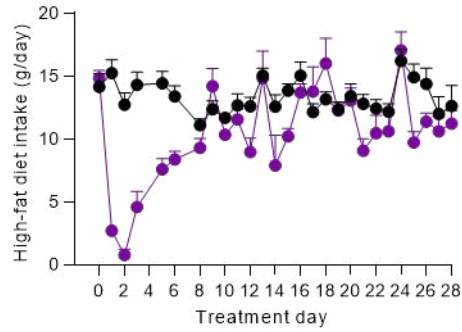
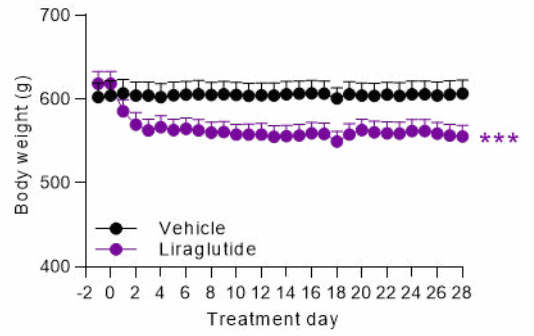
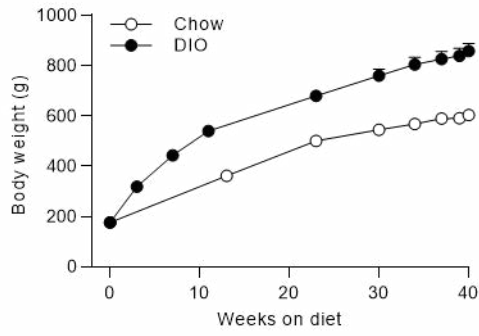
<b>Diet</b>	HFD 45% fat, Ssniff (#D12451) Chow, 10% fat (Ssniff #D12450K)	Diet-induced obesity rats are enrolled into studies after $\geq 18$ weeks of high-fat diet induction. Age-matched chow-fed animals may serve as lean controls.
<b>Strain</b>	Sprague-Dawley	

## Study outline



## Body weight, food intake and glucose tolerance

Body weight gain in rats fed high-fat diet or chow. 4 weeks of liraglutide (GLP-1 agonist) treatment promotes robust weight loss and improves mild glucose tolerance in DIO rats.



## Blood biochemistry

Liraglutide treatment for 4 weeks improves mild hyperglycemia and hyperinsulinemia in DIO rats.