

Diet-induced obese (DIO) mouse model

✓ A widely used and accepted diet-induced model to quickly evaluate your drugs efficacy on weight loss, glucose tolerance, insulin sensitivity and glucose homeostasis

Key benefits

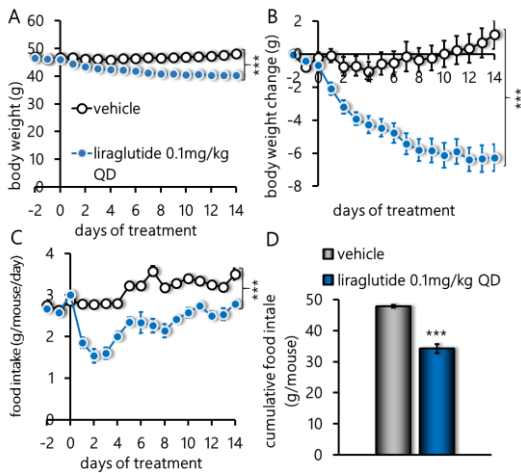
- ✓ **Get a complete and rapid evaluation of your drug efficacy** on food intake, weight loss and visceral adiposity, insulin sensitivity and glucose homeostasis in this diet-induced mouse model of obesity and insulin resistance
- ✓ **Combine** this widely used nutritional model with our hyperinsulinemic euglycemic clamp technique in conscious mice to demonstrate the mechanism by which your drug improves insulin resistance

MODEL FEATURES

- **Background strain:** C57BL/6J mouse, male
- **Diet:** 60% high fat diet, ref# D12492 from Research Diets
- **In life study duration:** depends on treatment schedule (preventive: 12 weeks diet – curative: ready-to-use, no diet period)
- **Positive drug controls:** metformin, pioglitazone, liraglutide
- **Positive nutraceutic controls:** green tea and green coffee

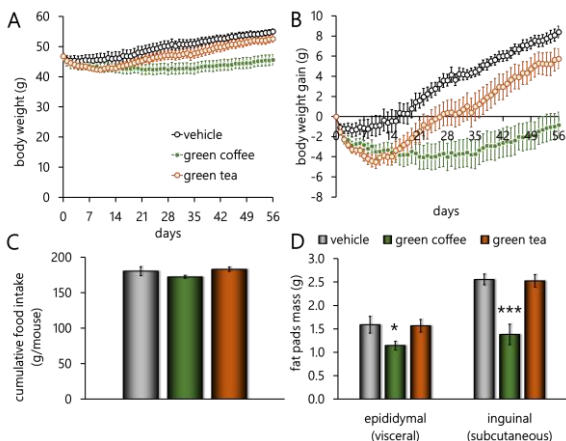
BODY WEIGHT & FOOD INTAKE

GLP-1 RECEPTOR AGONIST LIRAGLUTIDE REDUCES BOTH BODY WEIGHT AND FOOD INTAKE



(A) Body weight, (B) body weight change, (C) food intake and (D) cumulative food intake in DIO mice treated with vehicle or liraglutide
*p<0.05 and ***p<0.01 vs. vehicle

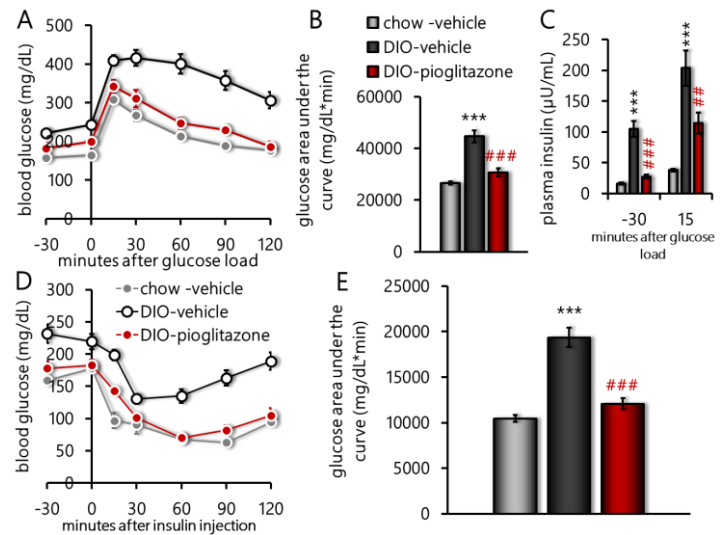
GREEN COFFEE BETTER REDUCES BODY WEIGHT AND FAT MASS THAN GREEN TEA



(A) Body weight, (B) body weight change, (C) cumulative food intake and (D) fat pad mass in DIO mice treated with vehicle, green coffee or green tea
*p<0.05 and ***p<0.01 vs. vehicle

GLUCOSE AND INSULIN TOLERANCE TESTS

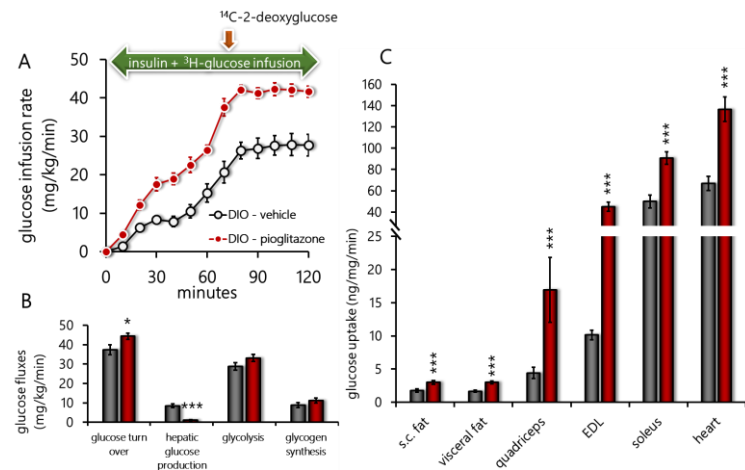
FOUR-WEEK TREATMENT WITH PIOGLITAZONE IMPROVES BOTH GLUCOSE AND INSULIN TOLERANCE



(A) Blood glucose levels, (B) area under the curve, (C) plasma insulin during an oral glucose tolerance test, (D) blood glucose levels and (E) area under the curve during an insulin tolerance test in chow fed or DIO mice treated with vehicle or pioglitazone.
***p<0.001 DIO vs. chow, ###p<0.001 DIO vehicle vs. pioglitazone

HYPERINSULINEMIC EUGLYCEMIC CLAMP

FOUR-WEEK TREATMENT WITH PIOGLITAZONE IMPROVES INSULIN SENSITIVITY AND INDIVIDUAL TISSUE GLUCOSE UPTAKE



(A) Glucose infusion rate to maintain euglycemia during i.v. insulin infusion, (B) glucose fluxes determined from ³H-glucose i.v. infusion and (C) individual tissue glucose uptake determined from ¹⁴C-2-deoxyglucose i.v. injection in DIO mice treated with vehicle or pioglitazone.
*p<0.05 and ***p<0.001 vehicle vs. pioglitazone