

# Zucker Diabetic Fatty (ZDF) rat

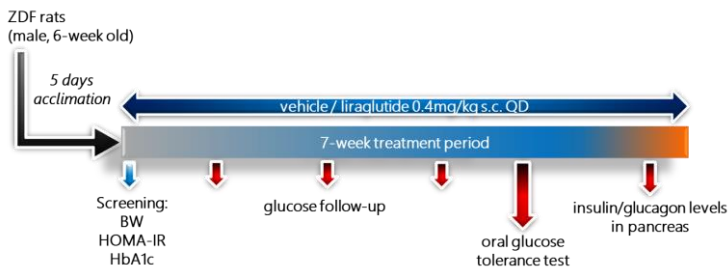
✓ A genetic rat model replicating the human type 2 diabetes context: starting from insulin resistance followed by progressive beta cell loss leading to severe hyperglycemia

## Key benefits

✓ Get a complete and rapid evaluation of the efficacy of your anti-diabetic drugs on insulin resistance, beta cell preservation and type 2 diabetes

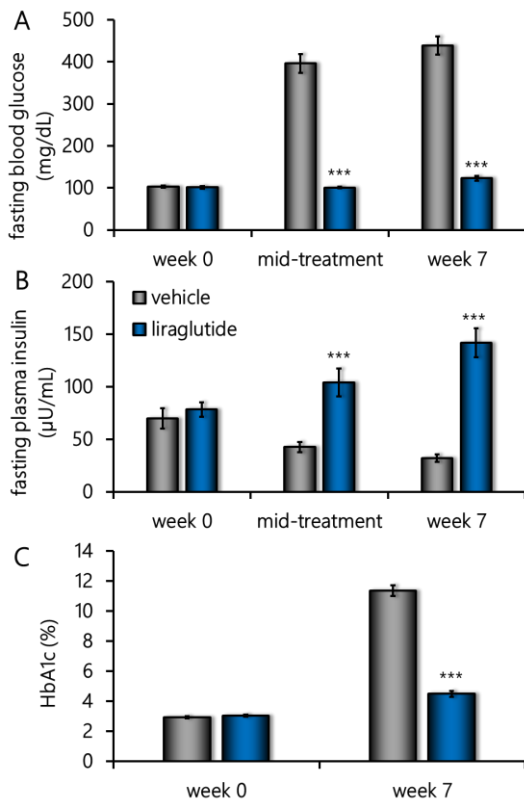
## EXPERIMENTAL DESIGN

- **Background strain:** Zucker Diabetic Fatty rat, male
- **Diet:** Purina 5008
- **In life study duration:** 7 weeks
- **Reference drug and positive control:** liraglutide; other references (pioglitazone, metformin) also available



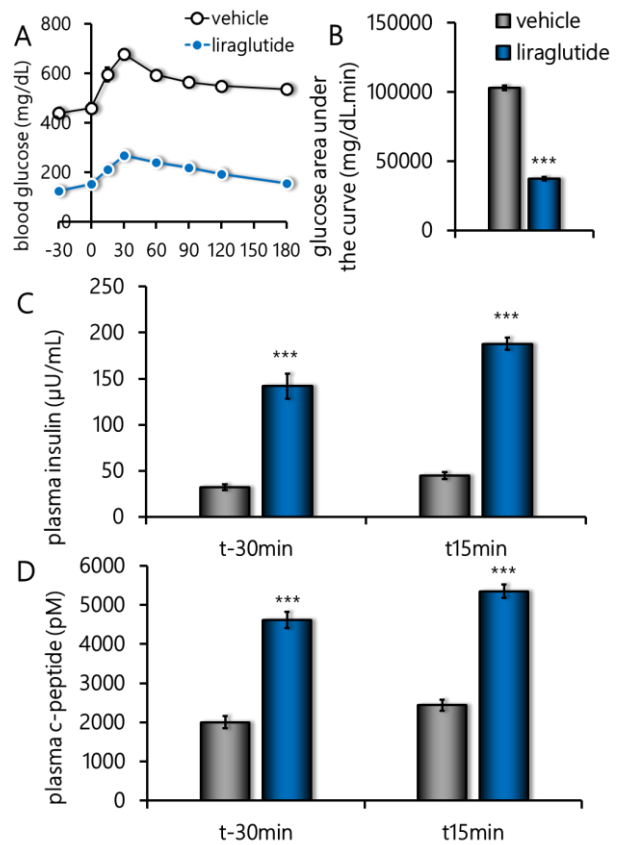
## EFFECTS OF LIRAGLUTIDE

### 7-WEEK TREATMENT WITH LIRAGLUTIDE PREVENTS THE ONSET OF TYPE 2 DIABETES



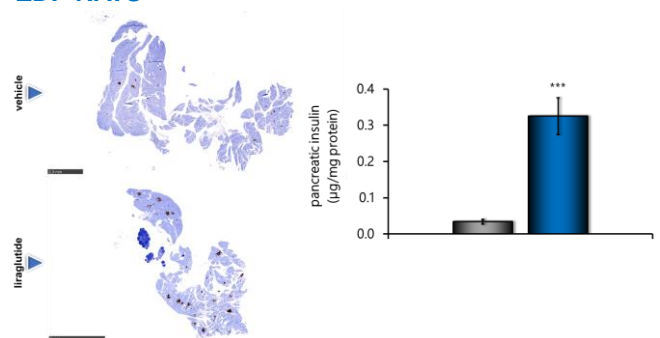
Fasting blood glucose (A), plasma insulin levels (B) and %HbA1c (C) in ZDF rats treated with vehicle or liraglutide for 7 weeks (\*\*p<0.001 vs. vehicle).

### LIRAGLUTIDE IMPROVES ORAL GLUCOSE INTOLERANCE IN ZDF RATS



Blood glucose levels (A), glucose area under the curve (B), plasma insulin (C) and plasma c-peptide (D) levels during an oral glucose tolerance test (\*\*p<0.001 vs. vehicle).

### LIRAGLUTIDE PREVENTS BETA CELLS LOSS IN ZDF RATS



Left panel: insulin immunostaining (brown label) in pancreas of ZDF rats treated with vehicle or liraglutide 7 weeks. Right panel: pancreatic insulin content in ZDF rats treated with vehicle or liraglutide 7 weeks