### NAFLD / NASH rat model

**Key benefits**
A proprietary and tailor-made nutritional animal model that enables the study of the **non-alcoholic fatty liver disease** (NAFLD) progression to better predict the therapeutic potency of drugs.

The NASH rat model’s key features:
- test drugs along the NAFLD ranging from fatty liver, lobular inflammation, fibrosis and cirrhosis
- test drugs in an insulin resistance context known as a major risk factor for NASH
- a model reflecting the pathophysiology of NASH in humans using a high-fat diet approach

**ANIMAL MODEL**
- Background strain: Sprague-Dawley rat
- Gender/Weight: male 250-275g
- High Fat Medium Fructose Diet (HF-MFD): High fat (65%) + cholesterol + cholic acid + 15% fructose
- Time on diet: from 2 weeks for studying fatty liver to 3 months for having necrosis and cirrhosis
- Reference compounds: contact us

**PATHOPHYSIOLOGICAL FEATURES**
- Inflammation and fibrosis biomarkers (qPCR):
  - MCP-1 (relative values)
  - TGF-β (relative values)
  - TIMP1 (relative values)
- Liver oxidative stress biomarkers (qPCR): TRX, TxNip
- Histological evidence of steatohepatitis:
- Microscopical examination: Histological analysis (hemalum-eosin, periodic acid schiff and Masson trichrome)

**END-POINTS**
- Histolomorphology, anatomopathology, immunohistology
- Plasma and liver biomarkers: lipids, inflammation
- Liver enzymes
- Gene expression quantification (qPCR): other biomarkers available on request