



Metabolic Disease

The BioDuro Advantage

BioDuro's pharmacology team has extensive drug discovery and development experience in the pharmaceutical industry enabling us to support fully integrated programs, including study design and data interpretation. Special expertise in metabolic diseases is coupled with a commitment to working with clients to develop customized models for rare diseases.

Our team has successfully collaborated with 9 of the top 20 large pharmaceutical companies and numerous small companies. The success of these collaborations is highlighted by the quality data provided that have informed key project decisions and regulatory filings. Beyond providing analysis, our senior team's expertise allows for the development of a consulting relationship with client partners.

The Pharmacology Team

- Group leader-level scientists with strong backgrounds and training in autoimmune and inflammatory diseases
- A team of 20 well-trained bench scientists focused on in vitro and in vivo drug discovery services. They are skilled in different animal models/assays and excel in problem-solving and trouble-shooting
- Dedicated, collaborative project management
- Integrated discovery programs



Animal Models for Different T2DM Stages

Pre-diabetes & Diabetes

Later-phase Diabetes

Diabetes Complications



In Vivo Assay Models

Pre-diabetes & Diabetes

DIO mice & rats, ob/ob & db/db mice, KKAY mice, etc.

OGTT (and other GTTs), ITT, GCG challenge, etc.

Primary rodent pancreas islet GSIS

Plasma/tissue biochemistry

Histopathology

Later-phase Diabetes

HFD+STZ rats/mice

Hyperglycemia clamp

Hyperinsulinemia clamp

Ex vivo islet β -cell glucose stimulated insulin secretion

Pancreatic-cell counting and proliferation

Diabetes Complications

Rodent myocardial ischemi

Rat hypertension

NASH-cirrhosis in rats & mice

Kidney failure in KKAY mice

Retinopathy in KKAY mice

Dyslipidemia in ApoE KO mice

Animal Models

High fat diet induced obese (DIO) rats/mice

Streptozotocin (STZ) induced type 1 diabetic rats/mice

High fat diet (HFD) + STZ induced type 2 diabetic rats/mice

KKAY mice with NASH, retinopathy, nephropathy

ob/ob and db/db mice

GK (Goto-Kakizaki) rats

ApoE KO mice

Myocardial infarction and reperfusion injury in rats/mice

Renal ischemia and reperfusion injury in rats/mice

Ex-Vivo, Biochemistry, and Histology Assays

Primary rodent pancreas islets isolation/insulin secretion

Pancreatic β -cell and α -cell counting by HE and IHC

Tissues/organs histology HE staining and IHC

Plasma/serum lipid assays: TG, CHO, LDL/HDL profile, NEFA

Liver and kidney function assays: ALT, AST, BUN, creatinine, etc.