

Metabolic & Cardiovascular Services

ChemPartner
—Dedicated to LifeScience

Overview of Capabilities

- Extensive experience in drug discovery research for disease of diabetes, renal failure and cardiovascular disorders.
- >2000 compounds have been screened with the *in vitro* assays.
- >100 *in vivo* projects have been performed for a dozen of global pharmaceutical and biotechnology companies.
- Experience of pharmacodynamic evaluation provided for IND Filing packages.
- Capabilities continues to expand.

Frequently Used Readouts

- IC50 or ED50 compound potency and selectivity.
- *In vitro* or *ex vivo* enzyme activity.
- Blood or urine biochemistry, clotting time (APTT, PT, FIB)
- Leptin, Insulin, HbA1c, Albuminuria, Cytokines
- Lipid profile (TC, TG, HDL, LDL), Liver Function (ALT AST ALP).
- Fasting Blood Glucose(FBG) and Body Weight(BW).
- Blood Pressure (BP), Electrocardiograph (ECG).
- 24 hours food intake ,urine or feces collecting.
- OGTT or ITT, Euglycemic Clamp (GIR).
- Tissues collecting and pathological measurement .
- HE or PAS staining and score estimation .

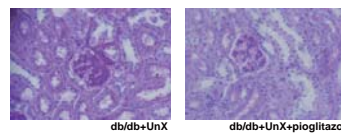
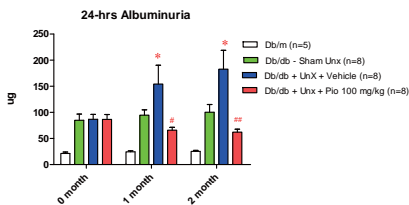
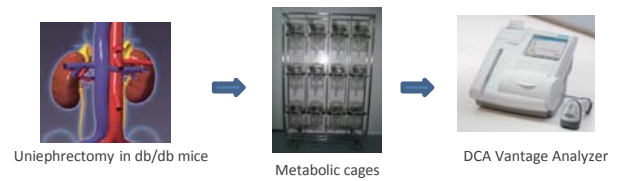
Contact

998 Halei Road #5 Zhangjiang Hi-Tech Park Pudong
Shanghai, China 201203
China: +86 21 5132 0000 USA: +1 781 996 5291
Europe: +45 4586 9000 Japan: +81 3 62027441
contact@chempartner.com
www.chempartner.com

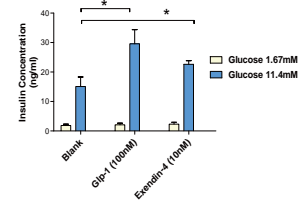
Lan Zhu
lzhu0@chempartner.cn
21-86-51371879
Dr. Yajun Xu
yjxu@chempartner.cn
1-718- 995-5291 (Business Development, US)

Ex vivo MOA studies

- Rodent, dog, monkey, human derived enzyme assay
- (DPPIV, Factor Xa)
- Rat hepatocyte isolate and insulin response assay
- Rat renal mesangial cell, podocyte, glomeruli isolation
- Insulin secretion test in primary pancreas islet (GISI)
- Glucose dependent insulin secretion in β -cells (GDIS)



Pioglitazone treatment alleviated the uni-nephrectomy accelerated glomerular sclerosis and Albuminuria increase



Compared to blank, GLP-1 and GLP-1 agonist Exendin-4 can significantly increase the insulin secretion in rat islet after glucose stimulation.

Animal models

Diabetes Mellitus

- HFD+STZ induced diabetes model
- NOD/ShiLtJ or BB rat type 1 diabetic model
- Db/db mice (BKS.Cg-Dock7m +/+ Leprdb/J)
- Ob/ob mice (B6.Cg-Lepob/J)
- Zucker Diabetic Fatty (ZDF) Rat



Renal Disease

- kidney fibrosis (UUO) model
- Uninephrectomy (Unx) Diabetic
- Nephropathy (DN) Model
- Puromycin Aminonucleoside (PAN) induce nephrosis model
- Natriuresis/diuresis rat model
- Angiotensin II osmotic pump and Uninephrectomy induce acute renal injury

Hypertension

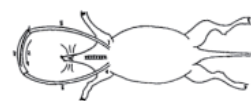
- Spontaneously Hypertensive Rat (SHR)
- Wistar-Kyoto (WKY) Rat
- Hypertensive Rat (SHR) With Telemetry
- High Salt Diet or ANG II Induced
- Hypertension

Pump 33 Dual Syringe Pump



Continuous infusion

AV-shunt



Extracorporeal circulation from carotid to jugular vein to form the thrombus.



STAGO Coagulometer

Hyperlipidemia

- ApoE (-/-) Mice
- LDL (-/-) Mice

Obesity

- High fat diet induce obese (DIO) rat
- High fat diet induce obese (DIO) mice

Thrombosis

- Rat Arteriovenous (AV)-shunt model
- Rabbit Arteriovenous (AV)-shunt model
- FeCl₂ induce venous thrombus model
- Renal cortex bleeding time test

In vitro screen for metabolic targets

- Multi-platforms assay for compound screening
- metabolic biomarker assay development and validation
- (Leptin, Adiponectin, Resistin)
- GLP1 total & active, Glucagon, Ghrelin, PYY
- C-peptide, GIP)
- Calcium flux assay (FLIPR, fluo4)
- cAMP assay (HTRF, LANCE, Luciferase)
- PPAR- α/γ and nuclear receptor assays
- Radioactive glucose transporter uptake assay
- 11-bHSD, DPPIV, and Factor Xa enzyme assays

