

## Isolated heart / Langendorff model

Gold standard model for both drug safety and efficacy studies

Predictive models to evaluate cardio-protection and direct effects of compounds on cardiac function

### MODEL FEATURES

- Langendorff heart in rat and mouse
- Constant pressure or constant flow perfusion
- Ischemia reperfusion injury, myocardial infarction or stunning
- Global, regional or low flow ischemia / Pacing

Reference compound:  $\text{Na}^+/\text{H}^+$  exchanger inhibitor

### KEY PARAMETERS

- Left ventricle pressure and contractility
- Heart rate / ECG
- Infarct size
- Coronary flow
- Protein / gene expression, Biomarkers assays

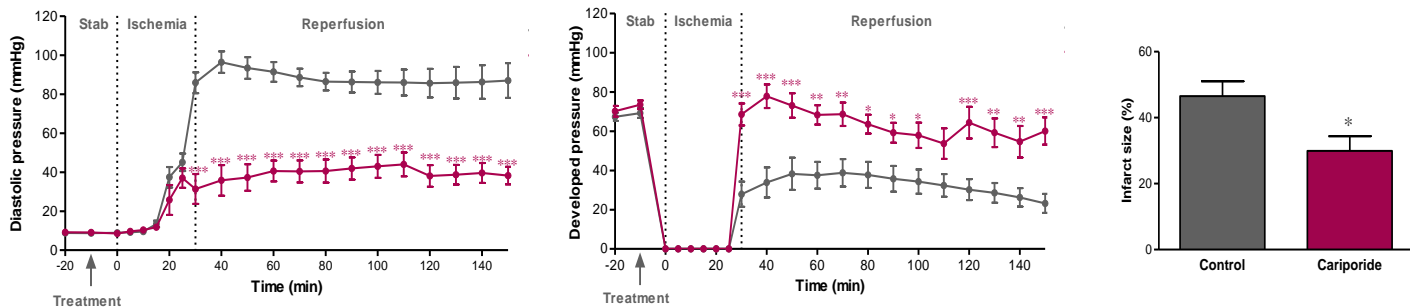
Please contact us for customized protocol

## PHARMACOLOGICAL VALIDATION WITH CARIPORIDE, A $\text{Na}^+/\text{H}^+$ EXCHANGER INHIBITOR

Cariporide treatment 10 min before global ischemia (30 min) followed by 2h-reperfusion in wistar rats

(Full data package upon request)

➤ Cariporide improves left ventricle function during reperfusion and reduces infarct size



## METABOLIC EFFECTS OF KETONE BODIES ON MILD ISCHEMIC INJURY IN DIABETIC MICE

$\beta$ -hydroxybutyrate and acetoacetate treatment 10 min before low flow ischemia (35min) in db/db mice heart

➤ Acetoacetate mediates superior cardioprotective effects than  $\beta$ -hydroxybutyrate

