

The Diabetic Miniature Swine is a widely recognized, translationally relevant model for evaluation of drugs, nutritional therapies, devices and various therapeutic approaches to treatment of diabetes and its complications. Sinclair Research Center has been producing and working with Diabetic Miniature Swine since 2001. We offer a wide variety of research services using diabetic models and make Diabetic Miniature Swine available to industry and academic clients through Sinclair BioResources at [www.sinclairbioresources.com](http://www.sinclairbioresources.com).

### Miniature Swine Diabetic Model Flexibility

The Diabetic Miniature Swine is a highly flexible model with a variety of applications. It can be maintained for long periods with standard insulin-mediated blood glucose control between studies.

### Diabetic Miniature Swine Models

- ☛ Type 1 (IDDM)
- ☛ Models of Type 2 (NIDDM) complications

### Miniature Swine Lineages for Diabetes

- ☛ Yucatan
- ☛ Sinclair
- ☛ Micro-Yucatan

### Applicable Research Areas

- ☛ Type 1
- ☛ Diabetic wounds
- ☛ Obesity
- ☛ Dyslipidemia
- ☛ Atherosclerosis
- ☛ Cardiometabolic syndrome
- ☛ Ocular (cataracts, retinopathy)
- ☛ Insulin resistance
- ☛ Hypercholesterolemia
- ☛ Hypertension

### Therapy Types

- ☛ Insulins, Insulin sensitizers,  $\beta$ -cell multipliers
- ☛ Small and large molecules
- ☛ Cellular therapies
- ☛ Compounds targeting glucose and lipid activity

### Study Capabilities

- ☛ PK/PD, Efficacy, Toxicology
- ☛ OGTT, IVGTT
- ☛ Glycemic Test
- ☛ Hyperglycemic and Euglycemic Clamps
- ☛ Bergman model
- ☛ Wound Healing studies in Diabetic Miniature Swine
- ☛ DEXA imaging for body composition for obesity
- ☛ Dedicated colonies of Diabetic Miniature Swine

### Support Personnel/Equipment and Facilities and Services

- ☛ Five DVMs
- ☛ Dedicated diabetes induction scientists
- ☛ Four surgical suites
- ☛ Vascular (VAP) placement surgery and maintenance
- ☛ Post induction stabilization and long term maintenance for repeat studies
- ☛ GLP-compliant, AAALAC accredited since 1994
- ☛ 8 vet techs
- ☛ Study Directors specializing in diabetes studies
- ☛ Wound specialists

### Collaboration/Consultation

- ☛ Dr. M Michael Swindle, MUSC

### Additional Information

- ☛ Technical literature searches, peer reviewed papers
- ☛ Diabetes fact sheet