



Preclinical Research Services

Vascular Intervention & Medical Device Pre-Clinical In-Vivo Support

Vascular intervention has seen a dramatic transformation in the last ten years. These efforts can be directly measured in terms of the thousands of lives saved annually and the significant improvement in the quality of those lives. Vascular intervention has tremendous advantages over conventional surgical approaches. It is a minimally invasive and cost effective procedure that can be performed as an outpatient procedure.

Traditionally, in the preclinical evaluation of vascular intervention techniques and devices, the miniature swine has been the species of choice because of their close resemblance to humans. For instance, the swine cardiovascular system is very similar to humans with regards to the anatomy, physiology, metabolism, and histological features. Several other organs or systems such as digestive, dermal, and renal are analogous to human systems. Thus, the absorption, distribution, metabolism, and elimination of compounds in swine are generally very predictive of human metabolism and pharmacokinetics.

Sinclair Research Center has produced miniature swine since 1964 and has been a privately owned research and production corporation since 1994. Sinclair has contributed to the efficacy and safety evaluation of hundred of diets, compounds, and devices. Furthermore, Sinclair is the only private institution that has contributed to the development of spontaneous and induced large animal models and has made those models available to others.

Sinclair can immediately support the following areas in medical device research:

- ☛ Balloon dilation, both coronary and peripheral
- ☛ Stent placement, both coronary and peripheral
- ☛ Implantation of drug delivery and other devices
- ☛ Local delivery of drug, gene vector, growth factors or cells.
- ☛ Cell therapy
- ☛ Miniature swine models of Type I diabetes, Type II diabetes with dyslipidemia, and arteriosclerosis

Sinclair is proud to have assembled an exceptional combination of resources for pre-clinical in-vivo evaluation of vascular intervention techniques, compounds, cell therapy, and medical devices. Five lineages of miniature swine are produced on site and are selected specifically to meet the research project requirements. Modern vascular intervention and surgical suites were built on-site and are available for procedures. Our support staff is very experienced with large animal species, particularly miniature swine.

Supporting personnel and technologies include:

- ☛ Surgical and vascular intervention suites with supporting pre- and post-op facilities
- ☛ A well trained staff of veterinary technicians to support surgical and interventional procedures
- ☛ Consulting interventionalist
- ☛ Consulting soft tissue surgeon
- ☛ OEC 9600 C-Arm Fluoroscope 12" imaging unit and cardiovascular software package
- ☛ Siemens SONOLINE G60 color Doppler ultrasound with cardiac and vascular imaging
- ☛ Full necropsy suite and consulting pathologist
- ☛ Large capacity for chronic housing of large animals in a GLP compliant environment

Sinclair can conduct the entire project or a portion of projects and can provide support to companies interested in conducting the critical phases of a research project in our facility. Sinclair is AAALAC accredited and is GLP and GCP compliant.