

Custom and Routine In Vivo Services

Designing Solutions to Fit Your Needs

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Diverse Skill Set and Competencies

Facility

- 8500 sq.ft. Facility
- USDA Registered
- Multiple Rodent Species Supported
 - Rat, Mouse, Guinea Pig, Hamster
- BSL-2 Capabilities

Husbandry

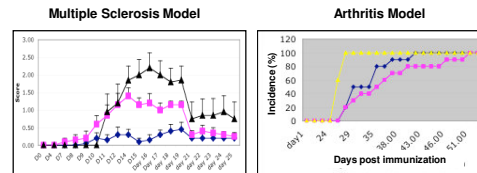
- Strain maintenance
- In house BalbC colony
 - Rapid turn around tox and PK

Services

- Standard Disease Models
 - Oncology, Diabetes, Arthritis, Cardiovascular, etc.
- Custom Animal Models
 - Artery Occlusion, skin grafting, etc.
- Pharmacokinetics (PK)
 - Intravenous, Intraperitoneal, Alzet Pump, etc.
- Toxicity Studies
- Immunohistochemistry on Organ Sections
- Ascites Generation for Monoclonal Antibodies

Immunological Disease

Lupus, Arthritis, EAE, etc.



Other In Vivo Services

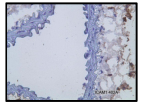
In General

Rapid Turn Around PK Studies

- Oral, Intravenous, Intraperitoneal, Alzet Pump, Cannula Infusion
- In House BalbC Colony

Custom Model Development
Microsurgery, Immunohistochemistry, Ex-vivo cellular analysis, etc.

- Infectious Disease**
- Access to BLS2 laboratory
 - Combine in vivo with in vitro analysis



Oncology Applications

Solid Tumors, Liquid Tumors, Sub-renal Capsule Implantation, Etc.

Overview

- Nu/Nu or SCID animals
- Syngeneic models
- Subcutaneous xenografts
- Orthotopic xenografts
- Metastasis models
- Sub-renal capsule growth

Sub-renal Capsule Implantation

- Subrenal capsule is exposed.
- Cells imbedded in a collagen plug are implanted into the capsule.
- Animal is closed up for duration of experiment.
 - A single, endpoint tumor size measurement is taken

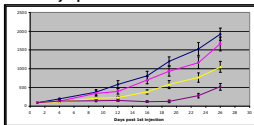
Advantages

- Highly vascularized tumors
- Robust tumor growth for hard to grow tumors

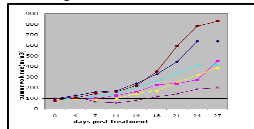
Example Models:

Cell Line: Origin of Tumor
 U87MG: Glioblastoma
 A549: Lung
 A427: Lung
 H-Meso-1: Mesothelioma
 P ANC-1: Pancreas
 MD A-MB-435: Breast
 MD A-MB-468: Breast
 MCF-7: Breast
 HCT116: Colon
 Daudi: Lymphoma
 SUDHL-1: Lymphoma
 SUDHL-4: B Cell Lymphoma

Lymphoma Tumor Model

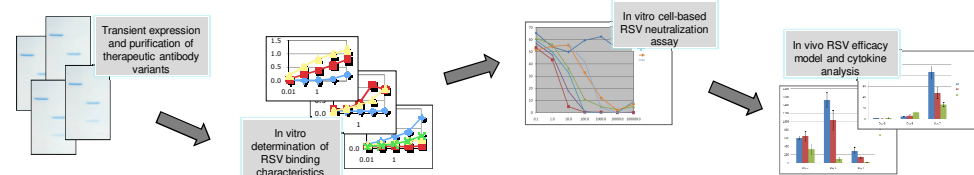


Lung Carcinoma Tumor Model



Combining Aragen Services

Infectious Disease Case Study



Aragen's Track Record

Experience + Commitment = High Quality

- Originally founded as Sierra Bioscience in 1993
- Diverse customer base with varying research needs
- High percentage of Ph.D.'s with varied skill sets
- Flexible, motivated scientist and management
- Commitment to individual customer needs

- Diverse Skill Set
- Custom Solutions
- Rapid Turn Around
- Attention to Detail