

# Custom and Routine In Vivo Services

## Designing Solutions to Fit Your Needs

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380 Woodview Ave., Morgan Hill, CA 95037

### 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

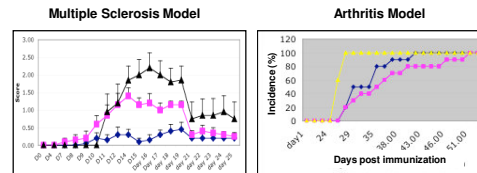
- Strain maintenance
- In house BalbC colony
  - Rapid turn around tox and PK

#### 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

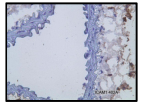
In General

#### 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

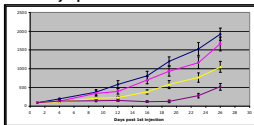
#### Advantages

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

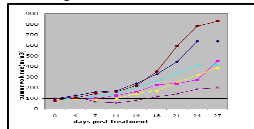
#### Example Models:

**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

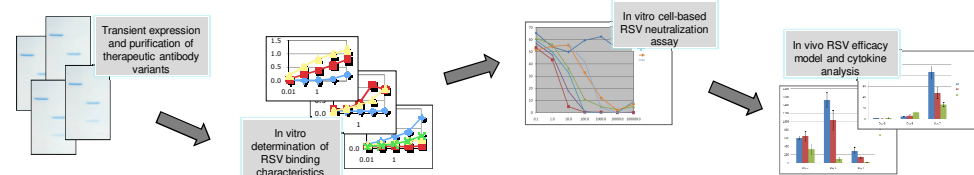


Lung Carcinoma Tumor Model



### 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