

“ADVANCING  
HUMAN MEDICINE THROUGH  
STATE-OF-THE-ART RESEARCH  
FOR OVER  
20 YEARS”



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[www.cvmbs.colostate.edu/clinsci/srcol](http://www.cvmbs.colostate.edu/clinsci/srcol)**



Dr. Simon Turner, a leading authority in large animal surgery, established The Small Ruminant Comparative Orthopaedic Laboratory to provide a large animal model that could be used to study a variety of products and implants. Many of the devices studied have ultimately been cleared for use in humans. Since 1989 the SRCOL has used sheep as a successful experimental model.



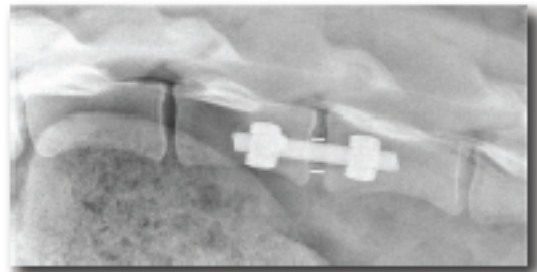
#### **MISSION STATEMENT**

To advance the field of human medicine through the ethical use of sheep as a model of disorders including all manner of orthopaedic, soft tissue, and metabolic conditions. We accomplish this by providing university, private and corporate researchers with a state-of-the-art laboratory dedicated to professional service, research efficiency and cutting edge technologies. Most of all, we pledge quality care and compassion to the sheep that help advance the field of human medicine.

## SRCOL SHEEP MODELS

### ***Spine***

- Instrumented lumbar interbody fusion
- Uninstrumented lumbar interbody fusion
- Posterolateral intervertebral fusion – PLIF
- Cervical fusion
- Vertebroplasty
- Laminectomy
- Bone void defects



### ***Soft Tissue***

- Implant testing for wound repair
- Urogenital implants



### ***Pharmacological***

- Pain Management
- Systemic and arthroscopic testing

## SRCOL SHEEP MODELS

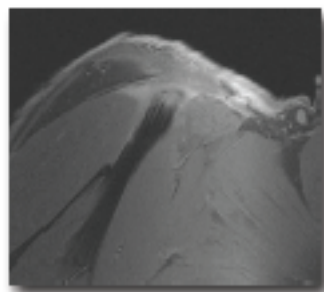
### *Orthopaedic*

- Fracture fixation models
- Bone defect models
- Internal fixation implant testing (or models)
- External fixation implant testing
- Allograft, autograft and xenograft testing



### *Sports Medicine*

- ACL/Meniscus
- Tendon and ligament testing (or models)
- Rotator cuff



### *Osteoporosis*

- Nutritional studies
- Hormonal studies

## **SRCOL TEAM MEMBERS**

### **A Simon Turner, Diplomate ACVS**

Founder and former Director of SRCOL. Dr. Turner's vision and expertise as a leading authority in large animal surgery made the establishment of SRCOL a reality over 20 years ago. His vast experience and knowledge of sheep as a research model advanced the SRCOL to a nationally known status and highly respected research facility. Recently named a Professor Emeritus at CSU, Dr. Turner continues to play a vital role in all studies performed at the SRCOL.

### **Howard B Seim III, DVM, Diplomate ACVS**

Director of SRCOL. Dr. Seim has been with the lab for over 20 years and was instrumental in establishing sheep as a model to study a variety of spinal disorders. Dr. Seim graduated with a DVM from Washington State University and is a Diplomate of the American College of Veterinary Surgeons. He helps manage the daily operations of the lab and is a PI and primary sheep spine surgeon.

### **Jeremiah Easley, DVM**

Assistant Director of the SRCOL. Dr. Easley is the newest member of the SRCOL team. A DVM graduate from VA-Maryland College of Veterinary Medicine, he completed a large animal surgery residency at the University of Florida. He manages the daily operations of the laboratory and is Co-PI on all research projects performed at the SRCOL.

### **Ross H Palmer, DVM, MS, Diplomate ACVS**

Principal Investigator, orthopaedic research. Dr. Palmer has been an active member of the lab since 2004 with expertise in ACL, meniscal, bone healing, and minimally invasive sacroiliac fusion models. Dr. Palmer graduated with a DVM from Kansas State University and is a Diplomate of the American College of Veterinary Surgeons. He is also active in clinical orthopaedics at the CSU Veterinary Teaching Hospital.

### **Eileen Hackett, DVM, MS, Diplomate ACVS, ACVECC**

Principal Investigator and active member of the lab since 2004. Dr. Hackett's expertise involves rotator cuff, Achilles tendon, stress incontinence, vaginal prolapse, fascia and other soft tissue models. She graduated with a DVM from the University of Illinois and is a Diplomate of the American College of Veterinary Surgeons and Veterinary Emergency and Critical Care. She plays an active role in large animal surgery and critical care at the CSU Veterinary Teaching Hospital.

### **Dana Ruehlman, DVM**

Laboratory manager and member of the SRCOL team for over 4 years. Dr. Ruehlman graduated with a DVM from Colorado State University. She has 28 years of experience in sheep husbandry and medical care and has worked in the biomedical research field for 17 years. She is the primary veterinarian of the flock and involved with pre- and postoperative management of all projects at the SRCOL.

### **Kimberly Lebsock, BS**

Member of the SRCOL team for over 10 years. Kim graduated from CSU with Bachelors of Science degree in microbiology. Originally a student assistant in the SRCOL, Kim became a research associate and surgical technician prior to entering her current position as the flock manager overseeing day to day sheep husbandry.

### **Sheila Pelkey, AAS, CVT**

Member of the SRCOL for over 6 years. As a certified veterinary technician, Sheila has worked with ruminants for over 12 years. Sheila specializes in ruminant anesthesia and is involved with anesthetic protocols of all studies performed at the SRCOL. She also handles the logistical operations within the surgical suite.

The SRCOL is an AAALAC approved clinical research laboratory affiliated with the Colorado State University Veterinary Teaching Hospital. The laboratory collaborates with the Departments of Radiology and Clinical Pathology as well as the Orthopaedic BioEngineering Research Laboratory.

The SRCOL specializes in *in vivo* orthopaedic and soft tissue product testing. The laboratory also provides the following services:

- Digital radiographic imaging
- CT imaging
- MR imaging
- *Ex vivo* biomechanical testing
- Micro CT
- Histopathology



Contact the SRCOL to draft a complete scope of work including a budget estimate for your study using a sheep model.

