



Comparative Orthopaedic Lab

"Finding a joint solution"

<http://www.columc.com/>

Current Projects

- Sensory Function of the ACL
- BioCartilage versus Marrow Stimulation
- Subchondroplasty for PTOA
- Validation of ECHON Osteochondral Implants
- Return-to-Sport after ACL Reconstruction
- Bioreactor for Disc Disease Modeling
- BMC for Enhancing OCAs
- Meniscal Tissue Engineering
- Early Diagnosis of Hip Dysplasia
- Multi-Ligament Knee Reconstruction
- Early Treatment for ACL Injuries
- Biomarkers for Osteoarthritis

Last quarter's "top 5"

1. Mizzou BioJoint Center officially opens – www.muhealth.org/services/orthopaedics/mizzou-biojoint-center/
2. \$1.1M Department of Defense funded project on biologic joint replacement initiated
3. Dr. Jimi Cook was featured on KC Live and FOX2 morning shows discussing Joint Health
4. COL Team submits 25 abstracts for 2016 ORS Annual Conference
5. Annual COL Awards presented to Nikki Werner, Andrew Polk, and Swithin Razu

COL's Dr. Bill Carson Recognized as a Pioneer in Treatment of Spinal Deformity

Dr. Bill Carson is a pioneer in engineering - actually helping to create what is now termed "biomedical engineering" by partnering with surgeons in human and veterinary orthopaedics to find solutions to the "mechanical" problems of bones and joints by applying the art and science of engineering.

Dr. Carson has led efforts resulting in numerous innovations in orthopaedics, including treatment of spinal deformities for which he was recognized by the 50th Annual Meeting of the Scoliosis Research Society's walking timeline of landmark work in this area. Dr. Carson and his wife Toni have also been instrumental in the development and progress of the COL and our Biomechanics and Bioengineering Laboratory is named in their honor.

50th Anniversary Museum: An Exploration of the History of Our Society & Spinal Deformity

This exhibition is dedicated to the SRS Founders and early pioneers of spine deformity care. Their struggles and dedication led to the evolution of this field. The following timeline maps out this evolution from the "dark age" of spine deformity care to modern day knowledge and practice. Without the tremendous efforts of these innovative and creative thinkers, our continued journey would not be possible.

1989

Isola Spinal Instrumentation System

The Isola effort began as an attempt to develop an improved method of sacral fixation, and ultimately developed into a comprehensive system for fixation of the pelvis, lumbar and thoracic spine. The design of the first implant resembled a butterfly, hence the name Isola which is the name of a species of butterfly. That design was discarded early in the development in favor of iliac fixation, but the butterfly reference remained. The principal collaboration was between two surgeons, Dr. Marc A. Asher and Dr. Charles F. Heinig; an engineer, Dr. William Carson; and a machinist Walt Strippgen. Isola was unique in that it was designed to safely combine wire, hook and bolt fixation of the spine. Among many innovations included in the system was the use of bolt fixation of the ilium, which had not previously been described.



Recent Pubs

1. Cook JL, et al. A canine hybrid double-bundle model for study of arthroscopic ACL reconstruction. J Orthop Res 2015
2. Stannard JP, et al. Repair or reconstruction in acute posterolateral instability of the knee. J Knee Surg 2015
3. Nover AB, et al. Long term storage and preservation of tissue engineered articular cartilage. J Orthop Res 2015
4. Franklin SP, et al. Characteristics of canine PRP prepared with 5 commercially available systems. Am J Vet Res 2015
5. Brimmo OB, et al. Sonographic diagnosis of an acute lateral meniscal tear in a division 1 football player. J Knee Surg Rep 2015
6. Monibi FA, et al. Identification of synovial fluid biomarkers for knee OA and correlation with radiographic assessment. J Knee Surg 2015
7. Sherman SL, et al. In vivo toxicity of local anesthetics and corticosteroids on chondrocytes and synoviocytes. Cartilage 2015
8. Brimmo OB, et al. Development of a novel canine model for posttraumatic OA of the knee. J Knee Surg 2015
9. Bozynski CC, et al. Evaluation of partial transection versus synovial debridement of the ACL as novel canine models. J Knee Surg 2015