Mr. Kahled Hijazi
“Design-Optimization of Porous Ti6Al4V constructs for Intra-Osseous Mandibular Implants”

Our objective was to design intra-osseous metal devices that better match the stiffness of bone for use in mandibular and craniofacial reconstruction. Devices with lattice (porous) structures were designed using computer-aided design (CAD) software and manufactured using 3D metal printing (additive manufacturing). These devices were assessed using mechanical testing and mathematical modeling software. The mathematical models were then used to build a proposed implant design that could be used in mandibular reconstruction.

Dr. David Holdsworth (Think Tank Update)
“Orthopaedic Device-Related Infection”

Infections near orthopaedic implants remain one of the most serious problems in orthopaedic surgery today, causing significant morbidity and healthcare expense. Members of the Bone and Joint Institute (BJI) and the Centre for Advanced Materials and Biomaterials Research (CAMBR) have formed a transdisciplinary team to develop new approaches to diagnose, prevent, and treat infections associated with joint replacements and fixation components.

Dr. Matt Grol - (New Member Introduction)
“Matrix-to-Cell Signaling in Tendon and Ligament Development and Homeostasis: Lessons Learned from Rare Connective Tissue Diseases”

Tendons and ligaments – composed of an extracellular matrix rich in type I collagen – are critical for joint stability and function. In this regard, mice deficient in collagen chaperones develop hallmarks of tendinopathy, including hypercellularity, altered collagen fibril size and organization, and reduced biomechanical strength. In this context, the Grol lab examines how tendon and ligament pathologies contribute to joint failure using genetic mouse models of connective tissue disease.

This showcase is open to the University Community.
Please feel free to share this invitation with colleagues or members of your lab/department.
Those interested in suggesting new workshop areas have an opportunity to so online at:
http://boneandjoint.uwo.ca/how_to