

**ASBMR Topical Meeting on Bone and Skeletal Muscle Interactions
Pre-Meeting Workshop**

Sunday, July 15, 2012

Registration and Orientation

Location: Westin Kansas City Crown Center

4:00 pm – 7:00 pm Registration

6:00 pm – 7:00 pm Orientation Session/Networking Reception

Monday, July 16, 2012

Workshop

Location: University of Missouri – Kansas City – School of Dentistry

**8:00 am – 10:00 am
Concurrent Modules**

Module 1: Bone and Muscle Histology

Sarah L. Dallas, Ph.D. and Vladimir M. Dusevich, Ph.D.

Techniques the Module will demonstrate

1. Tips on dissection and fixation of tissues
2. Considerations for paraffin embedding, plastic embedding or frozen sectioning
3. Sectioning and accurate tissue orientation for bone specimens
4. Standard and specialized staining procedures for bone and muscle
5. Electron microscopy

Module 2: Muscle Functional Testing

Marco Brotto BSN, Ph.D., Michael Wacker, Ph.D. and Jon Andresen, Ph.D.

Techniques the Module will demonstrate

1. Calcium Imaging techniques
2. Skeletal Muscle Contractility

Module 3: Isolation of Primary Cells

Amber Stern, Ph.D. and Matthew Stern, Ph.D.

Techniques the Module will demonstrate

1. Osteocyte isolation and primary cell culture
2. Muscle stem cell isolation and primary cell culture

Module 4: Live Imaging of Bone Cell and ECM Dynamics

Sarah L. Dallas, Ph.D.

Techniques the Module will demonstrate

1. Preparation of cells and tissues for imaging
2. Acquisition of time lapse movies
3. Data review and processing
4. Quantifying dynamic events

10:00 am – 10:15 am
Break

10:15 am – 11:45 am
Concurrent Modules

Module 5: In Vivo Bone Techniques

Mark L. Johnson, Ph.D.

Techniques the Module will demonstrate

1. Piximus Densitometry
2. Faxitron X-ray
3. MicroCT
4. Mechanical loading

Module 6: Ex vivo Characterization of Bone Biomechanical and Structural Properties

Amber Stern, Ph.D. and Yong Wang, Ph.D.

Techniques the Module will demonstrate

1. 3-point Bending
2. Raman
3. FTIR
4. Nanoindentation

Module 7: Bone – Muscle Immobilization

Mark L. Johnson, Ph.D., Richard Tsika, Ph.D. and Marybeth Brown, Ph.D.

Techniques the Module will demonstrate

1. Hindlimb unloading
2. Botox injection
3. Tendon Clip

Module 8: *In Vitro* Cell Loading

Amber Stern, Ph.D. and Nuria Lara-Castillo

Techniques the Module will demonstrate

1. Substrate Stretching (Flexcell System)
2. Fluid Flow Shear Stress (Streamer Gold System)
3. Two chamber fluid flow

11:45 am – 1:00 pm
Lunch and Group Discussion

1:00 pm – 3:00 pm
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3:00 pm – 3:15 pm
Break

3:15 pm – 4:45 pm
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4:45 pm – 5:00 pm
Closing
