

# ASBMR Topical Meeting on Bone and Skeletal Muscle Interactions

*July 16, 2012*

---

**Welcome and Networking Reception**  
**6:00 p.m. – 7:30 p.m.**

---

*July 17, 2012*

---

**Breakfast**  
**7:00 a.m. – 7:45 a.m.**

---

**Introduction**  
**7:45 a.m. – 8:00 a.m.**

---

**7:45 a.m.**      **Welcome and Opening Remarks**  
Lynda F. Bonewald, Ph.D., University of Missouri, Kansas City, Missouri, USA  
NIH Representatives

---

**SESSION 1**  
**8:00 a.m. – 10:15 a.m.**

**Bone and Muscle Interactions during Development**  
Chairs: Thomas L. Clemens, Ph.D., Johns Hopkins University, Baltimore, Maryland, USA  
Dawn DW Cornelison, Ph.D., University of Missouri, Columbia, Missouri, USA

---

**8:00 a.m.**      **Effects of Muscle Forces on Bone Shape during Embryogenesis**  
Elazar Zelzer, Ph.D., Weizmann Institute of Science, Rehovot, Israel

**8:30 a.m.**      **Hedgehog-Dependent, Bone-Mediated Regulation of Skeletal Muscle Development**  
Bradley B. Olwin, Ph.D., University of Colorado, Boulder, Colorado, USA

**9:00 a.m.**      **Normal and Pathological Bone and Muscle Development in Children and Adolescents**  
Mary B. Leonard, M.D., MSCE, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, USA

**9:30 a.m.**      **Determinants of Peak Bone and Muscle Mass**  
Sundeep Khosla, M.D., Mayo Clinic, Rochester, Minnesota, USA

**10:00 a.m.**      **Session 1 Panel Discussion**  
All Session 1 speakers and chairs

---

**BREAK/EXHIBITS OPEN/POSTER VIEWING**  
**10:15 a.m. – 10:35 a.m.**

---

**SESSION 2**  
**10:35 a.m. – 12:50 p.m.**

**Aging: Changes in Muscle and Bone, Linkages and Shared Etiologies**  
Chairs: Eric S. Orwoll, M.D., Oregon Health and Science University, Portland, Oregon, USA  
Roger A. Fielding, Ph.D., Tufts University, Boston, Massachusetts, USA

---

**10:35 a.m.**      **Markers for Sarcopenia: Lessons from Osteoporosis**  
Steven R. Cummings, M.D., San Francisco Coordinating Center, San Francisco, California, USA

**11:05 a.m.**      **Mobility and Falls**  
Stephanie A. Studenski, M.D., M.P.H., University of Pittsburgh, Pittsburgh, Pennsylvania, USA

**11:35 a.m.**      **Etiology of Concomitant Bone and Muscle Loss**  
Tamara B. Harris, M.D., M.S., National Institute on Aging, NIH, Bethesda, Maryland, USA

- 12:05 p.m. Muscle and Brown Fat: Origins and Relationships to Bone**  
Clifford J. Rosen, M.D., Maine Medical Center Research Institute, Scarborough, Maine, USA
- 12:35 p.m. Session 2 Panel Discussion**  
All Session 2 speakers and chairs
- 

**LUNCH AND PANEL DISCUSSION**  
**12:50 – 1:45 p.m.**

---

**The Power of Collaborations – A Conversation Starter**

Chairs: Lynda F. Bonewald, Ph.D., University of Missouri, Kansas City, Missouri, USA  
Roger A. Fielding, Ph.D., Tufts University, Boston, Massachusetts, USA

Panelists: Steven R. Cummings, M.D., San Francisco Coordinating Center, San Francisco, California, USA  
Glen Nuckols, Ph.D., National Institute of Arthritis and Musculoskeletal and Skin Diseases, NIH, Bethesda, Maryland, USA  
Nathan K. LeBrasseur, Ph.D., Mayo Clinic, Rochester, Minnesota, USA  
Mark A. Febbraio, Ph.D., Baker IDI Heart & Diabetes Institute, Melbourne, Australia

---

**POSTER SESSION**  
**1:45 – 2:45 p.m.**

---

**SESSION 3**  
**2:45 p.m. – 4:30 p.m.**

**Common Mechanisms Influencing Bone and Muscle Mass-‘Pleotropy’**

Chairs: Karyn Esser Ph.D., University of Kentucky, Lexington, Kentucky, USA  
Douglas P. Kiel, M.D., M.P.H., Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, Boston, Massachusetts, USA

---

- 2:45 p.m. Genetic Determinants**  
Douglas P. Kiel, M.D., M.P.H., Institute for Aging Research, Hebrew SeniorLife and Harvard Medical School, Boston, Massachusetts, USA
- 3:15 p.m. Signaling Pathways Mediating Skeletal Muscle Mass and Function**  
David Glass, M.D., Novartis Institutes for BioMedical Research Inc, Cambridge, Massachusetts, USA
- 3:45 p.m. The Growth Hormone -IGF-1 Axis in Bone and Muscle**  
Thomas L. Clemens, Ph.D., Johns Hopkins University, Baltimore, Maryland, USA
- 4:15 p.m. Session 3 Panel Discuss**  
All Session 3 chairs and speakers
- 

**BREAK/EXHIBITS OPEN/POSTER VIEWING**  
**4:30 p.m. – 4:50 p.m.**

---

**YOUNG INVESTIGATOR PRESENTATIONS**  
**4:50 p.m. – 6:05 p.m.**

---

- 4:50 p.m. Introductions and Award Presentations**  
Lynda F. Bonewald, Ph.D., University of Missouri, Kansas City, Missouri, USA
- 5:05 p.m. A Muscle Specific Factor Increases Survival of Dexamethasone-Stressed Osteocytes**  
Katharina Jähn, University of Missouri School of Medicine, Kansas City, Missouri, USA
- 5:20 p.m. Effect of Orchidectomy on the Musculoskeletal System of Myostatin Knock Out Mice**  
Vanessa Dubois, University of Leuven, Leuven, Belgium
- 5:35 p.m. Acute Exposure to Fibroblast Growth Factor 23 Increases Cardiac Contractility**  
Chad D. Touchberry, Ph.D., University of Missouri School of Medicine, Kansas City, Missouri, USA
-

- 5:50 p.m. Concomitant Volumetric Muscle Loss Impairs an Early Vascular Response in a Composite Bone-Muscle Defect Model**  
Nick J. Willett, Ph.D., Georgia Institute of Technology, Atlanta, Georgia, USA
- 6:05 p.m. The Identification and Characterization of New Proteins Essential for Drosophila Myotendinous Junction Formation**  
Zong-Heng Wang, University of Missouri School of Medicine, Kansas City, Missouri, USA

---

**WELCOME AND NETWORKING RECEPTION/POSTER VIEWING**  
**6:20 p.m. – 7:20 p.m.**

---

**DINE AROUND WITH SPEAKERS**  
**7:30 p.m.**

---

*July 18, 2012*

---

**BREAKFAST/EXHIBITS OPEN**  
**7:00 a.m. – 8:00 a.m.**

---

**SESSION 4**  
**8:00 a.m. – 9:45 a.m.**

**Defective Mechanotransduction and Repair**

Chairs: Regis J. O' Keefe, M.D., University of Rochester Medical Center, Rochester, New York, USA  
Joseph A. Houmard, Ph.D., East Carolina University, Greenville, North Carolina, USA

---

- 8:00 a.m. Disuse-induced Loss of Muscle/Bone Mass: Always Predictive of Loss of Function?**  
Susan A. Bloomfield, Ph.D., Texas A&M University, College Station, Texas, USA
- 8:30 a.m. Exercise: Surprises Regarding the Effects of Vibration on Bone and Muscle**  
Clinton T. Rubin, Ph.D., Stony Brook University, Stony Brook, New York, USA
- 9:00 a.m. Orthopaedic Applications and Repair: Gaps in Our Knowledge of the Role of Muscle on Bone Repair**  
Regis J. O' Keefe, M.D., University of Rochester Medical Center, Rochester, New York, USA
- 9:30 a.m. Session 4 Panel Discussion**  
All Session 4 speakers and chairs
- 

**BREAK/EXHIBITS OPEN/POSTER VIEWING**  
**9:45 a.m. – 10:05 a.m.**

---

**SESSION 5**  
**10:05 a.m. – 11:50 p.m.**

**Preventing and Treating Muscle and Bone Loss**

Chairs: Roger A. Fielding, Ph.D., Tufts University, Boston, Massachusetts, USA  
Nathan K. LeBrasseur, Ph.D., Mayo Clinic, Rochester, Minnesota, USA

---

- 10:05 a.m. Nutrition: Effect of Vitamin D in Muscle and Relationship to Bone**  
Bess Dawson-Hughes, M.D., Tufts University, Boston, Massachusetts, USA
- 10:35 a.m. Progress in Clinical Trials for ACVR2B**  
Teresa A. Zimmers, Ph.D., Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, Pennsylvania, USA
- 11:05 a.m. A Regenerative Medicine Approach to Musculotendinous Tissue Reconstruction**  
Stephen F. Badylak, D.V.M., Ph.D., M.D., University of Pittsburgh, Pittsburgh, Pennsylvania, USA

**11:35 a.m.      Session 5 Panel Discussion**  
All Session 5 speakers and chairs

---

**LUNCH AND POSTER VIEWING**  
**11:50 p.m. – 12:50 p.m.**

---

**SESSION 6**  
**12:50 p.m. – 3:05 p.m.**

**Emerging Areas**

Chairs: Robert Marcus, M.D. Stanford University, Stanford, California, USA  
Vincent J. Caiozzo, Ph.D., University of California, Irvine, California, USA

---

- 12:50 p.m.      Osteocalcin and the Regulation of Muscle Mass**  
Gerard Karsenty, M.D., Ph.D., Columbia University Medical Center, New York, New York, USA
- 1:20 p.m.      Muscle as an Endocrine Organ**  
Mark A. Febbraio, Ph.D., Baker IDI Heart & Diabetes Institute, Melbourne, Australia
- 1:50 p.m.      The Wnts in Muscle-Bone Cross Talk**  
Mark L. Johnson, Ph.D., University of Missouri, Kansas City, Missouri, USA
- 2:20 p.m.      Regulatory Interactions between Myeloid Cells and Skeletal Muscle**  
James G. Tidball, Ph.D., University of California, Los Angeles, California, USA
- 2:50 p.m.      Session 6 Panel Discussion**  
All Session 6 speakers and chairs
- 

**BREAK/EXHIBITS/POSTER VIEWING**  
**3:05 p.m. – 3:30 p.m.**

---

**SESSION 7**  
**3:30 p.m. – 4:30 p.m.**

**Meeting Wrap Up**

Chair: Lynda F. Bonewald, Ph.D., University of Missouri, Kansas City, Missouri, USA

---

- 3:30 PM      Panel Discussion - Where Do We Go From Here?**  
Session chairs and inclusion of NIH representatives
- Lyndon Joseph, Ph.D., National Institute on Aging, NIH, Bethesda, Maryland, USA
  - Joan A. McGowan, Ph.D., National Institute of Arthritis and Musculoskeletal and Skin Diseases, NIH, Bethesda, Maryland, USA
  - Glen Nuckols, Ph.D., National Institute of Arthritis and Musculoskeletal and Skin Diseases, NIH, Bethesda, Maryland, USA
  - John Williams, Ph.D., National Institute on Aging, NIH, Bethesda, Maryland, USA
  - Karen Winer, M.D., National Institute of Child Health and Human Development, NIH, Bethesda, Maryland, USA
- 

**Meeting Adjourns**  
**4:30 p.m.**