

AGS/NIA U13 Osteoporosis and Soft Tissue (Muscle/Fat) Disorders

March 11-12, 2019

Bethesda, MD

Draft Agenda

Planning Committee: Bruce Troen (co-chair), Cathleen Colón-Emeric (co-chair), Roger Fielding, Doug Kiel, Lyndon Joseph, Cliff Rosen, Kenneth L. Seldeen, Sarah Berry, James White, Elena Volpi, Denise Kathryn Houston

Day 1: Opening Remarks and Introduction (8am – 9am)

1. Introductions, conference goals, conference format – **Bruce Troen, University at Buffalo School of Medicine**
2. Framing the discussion with clinical cases - **Cathleen Colón-Emeric, Duke University School of Medicine**
 - a. Hospitalized older adults with immobility
 - b. Sarcopenic obesity and increased fracture risk in diabetes mellitus

Scientific Session Format: Sessions will include 5 talks, each about 10 minutes. Speakers will be asked to refer to at least one of the clinical cases when developing their talk. One of the co-chairs, planning committee members, or moderators will review each talk before the session and provide a 2-3 minute discussion of the clinical/basic science context after each presentation to promote translational discussion.

Day 1: Topic 1 (9 am to 10:40): The Hallmarks of Aging in Muscle, Bone, and Soft Tissue – Implications for Clinical Case Studies

Moderator: **Cliff Rosen, Maine Medical Center**

1. Genomic instability, telomere attrition, and epigenetic alterations
Speaker: **TBA**
2. Proteostasis and autophagy
Speaker: **Jim White, Duke University**
3. Nutrient sensing
Speaker: **Christopher Adams, U. Iowa**
4. Mitochondrial dysfunction
Speaker: **TBA**
5. Stem Cell Exhaustion, senescence
Speaker: **Charlotte Peterson, U. Kentucky**

Close session with 20-minute moderated discussion focused on identifying gaps and future questions.

Day 1: Morning Break (10:40 to 11am)

Day 1: Topic 2 (11am– 12:40pm): Epidemiology and Clinical Measures

Moderator: Roger Fielding, Tufts University

1. Epidemiology – Life trajectories of lean body, fat, and bone mass changes
Speaker: **Cyrus Cooper, University of Southampton**
2. Body Composition– Measures, physiologic and functional impact, health disparities
Speaker: **Anne Newman, University of Pittsburgh**
3. Environmental Interactions
Speaker: **Tamara Harris, National Institute on Aging**
4. Population-level Genetics – human gene-muscle-bone associations
Speaker: **Douglas P. Kiel, Hebrew SeniorLife and Harvard Medical School**
5. Biomarkers
Speaker: **Kimberly Huffman, Duke University**

Close session with 20-minute moderated discussion focused on identifying gaps and future questions.

Day 1: Lunch and Networking 12:40 to 2pm – Junior faculty attendees will have an opportunity to interact with senior leaders in the field at lunch tables arranged by research topics.

Day 1: Topic 3 (2pm to 3:40pm): Management and Medical Decision-Making

Moderator: Sarah Berry, Harvard Medical School Affiliate

1. Clinical phenotypes and targeting
Speaker: **Bruce Troen, University at Buffalo School of Medicine**
2. Weight reduction
Speaker: **Denise Kathryn Houston, Wake Forest School of Medicine**
3. Exercise
Speaker: **Marco Pahor, University of Florida**
4. Nutritional Factors impacting muscle, fat, and bone
Speaker: **Shivani Sahni, Hebrew SeniorLife and Harvard Medical School**
5. Myostatin/activin receptor pathways and SARMS
Speaker: **Shalender Bhasin, Brigham and Women's Hospital and Harvard Medical School**

Close session with 20-minute moderated discussion focused on identifying gaps and future questions.

Day 1: Afternoon Break (3:40 to 4pm)

Day 1: Small Group Sessions (4pm to 5pm)

Break-out sessions: Each group will be carefully pre-selected and tasked with identifying priorities and agendas on a specific topic. There will be a pair of moderators in each session. The moderators will be asked to prepare 3 slides – first 2 slides will summarize key discussion points and final slide will list up to 3 critical priorities for advancing the field.

Break out group topics and questions:

1. **Health Disparities (Nicole Wright, University of Alabama at Birmingham):** What disparities in muscle-bone diseases exist and what is their impact on health outcomes and cost? What mechanisms underlie these disparities, including genetic, environmental, and behavioral factors? How can interventions for sarco-osteoporosis be modified to improve impact for minority populations?
2. **Multi-disciplinary/multi-factorial interventions and education (TBA):** What are key components of multidisciplinary and/or multi-factorial interventions to reduce the impact of sarco-osteoporosis? How can the overlap in muscle bone diseases be exploited to obtain pleiotropic benefits? How should existing models of care be modified to address the overlap of muscle/bone/fat? What are the most salient health-related outcomes that should be measured in such interventions? What aspects/assessments of functional capacity and mobility disability would be most useful? How can interdisciplinary partners/team members be best integrated in assessment and intervention paradigms?
3. **Pharmacologic interventions (Ken Seldeen, University at Buffalo):** What new pathways/targets should be tested for potential pleiotropic effects on muscle, fat and bone? How does the physiologic overlap of muscle/fat/bone impact potential toxicities of pharmacologic therapies? Will patients and clinicians accept pharmacologic therapies for sarco-osteopenia?
4. **Trial design and outcomes (Roger Fielding, Tufts University):** What populations/conditions should be targeted? What outcomes should be measured and what is a minimally clinically important change? What potential toxicities should be assessed?
5. **Biomarkers/imaging (Jim White, Duke University):** What biomarkers/imaging technologies are currently available and what are their indications? Limitations? What characteristics of new screening modalities would be most important for sarco-osteoporosis?
6. **Polypharmacy and Co-morbid conditions (Sarah Berry, Harvard Medical School):** How does the presence of common co-morbid conditions change the presentation/impact/treatment of sarco-osteoporosis? What medications impact muscle and bone, and what is their impact on the other tissue? How does risk for falls impact screening/diagnosis/treatment of sarco-osteoporosis? How can interdisciplinary team-based assessment be best utilized in this setting?

Day 1: Free time 5-6pm

Day 1: Reception and Dinner (6-9pm) Rising Star Poster Session – During the reception, the Rising Star attendees and any other junior faculty who wish to participate will present posters for feedback from senior conference attendees and collaborative opportunities.

Day 2: Moving the Field forward: Priorities, Agenda-setting, Wrap-up (8am to 11:45am)

8am to 9am: Setting Priorities for the Field Stakeholder Group Panel Discussion – Brief remarks about their group's priorities and panel discussion from key stakeholders including

NIH, Industry Scientists, National Osteoporosis Foundation, AHRQ, National Bone Health Alliance

9am – 10am: Small groups 1-3 provide 10-minute reports from the break-out groups with 10 minutes of discussion after each.

10 to 10:15am – Break

10:15 – 11:15am – Small groups 4-6 provide 10 minute reports from the break-out groups with 10 minutes of discussion after each.

11:15am to 11:45am – Moderated Discussion/Brainstorming

Day 2: Closing Remarks from the Chairs, Evaluation, Thank you's (11:45-Noon) Box lunches available for attendees

Day 2: Rising Stars: Afternoon Session for Junior Investigators Noon to 3pm)

This will be a dynamic, hands on workshop designed for junior faculty attendees and select senior leaders in the field

12-1pm - Lunch and networking – tables designated around topics or methodologies

1-2 pm - Mock review session: specific aims page feedback from peers and senior reviewers

2-3 pm - Workshop: building research collaborations