Arnold and Madaleine Penner
5th Annual Musculoskeletal Repair and Regeneration Symposium
Thursday, October 13, 2016

Program Director: Hui (Herb) B. Sun, PhD
University Chairman, Department of Orthopaedic Surgery: Neil J. Cobelli, MD

Presented by: Musculoskeletal and Orthopaedic Research Laboratories
and Department of Orthopaedic Surgery
at Einstein College of Medicine and Montefiore Medical Center

Albert Einstein College of Medicine
Michael F. Price Center and Harold and Muriel Block
Research Pavilion
1301 Morris Park Avenue
Bronx, NY 10461
SYMPOSIUM MISSION
The Albert Einstein College of Medicine Musculoskeletal Repair and Regeneration Symposium seeks to expand the knowledge base within the field, and to foster creativity, collaboration and networking between researchers throughout the region. This year's meeting will emphasize recent advances in translational research in four areas:

- Stem cells and tissue repair: in tendon and beyond
- Novel views into the disc and other degenerative diseases
- New insights in arthritis
- Bone adaption in aging and disease

HIGHLIGHTS FOR 5th ANNUAL SYMPOSIUM
- Dynamic sessions based on the vision and primary contribution from the Steering Committee and Session Chairs: Susannah Fritton, PhD, John A. Hardin, MD, James Iatridis, PhD, Helen H. Lu, PhD.
- World-class scientists, including keynote speakers, will share their viewpoints and their most exciting up-to-date translational research.
- Outstanding speakers from new participating institutions including: University of California, Johns Hopkins University, Rensselaer Polytechnic Institute, Cornell University, Thomas Jefferson University, University of Texas Health Science Center at Houston, and Zhejiang University.

SYMPOSIUM LOCATION AND DATE
October 13, 2016
LeFrak Auditorium (Room 151), Price Center
Albert Einstein College of Medicine
1301 Morris Park Ave. Bronx, NY 10461

STATEMENT OF NEED
Damage to musculoskeletal tissues is a significant cause of morbidity and increased mortality, and is a magnifier of mortality in other clinical diseases such as diabetes and cardiovascular disorders. The innate repair capacities are limited for articular cartilage, tendon, and extensive bone defects.
In addition, current treatments for the repair of injured musculoskeletal tissue are not sufficient to restore the functionality of the original tissue. These daunting challenges present a desperate need for a better understanding of musculoskeletal biology and emphasize the importance of discovering novel repair and regeneration strategies that can be translated to clinical use.

GOALS
This program will address current issues in musculoskeletal repair and regeneration, and disease treatment. Discussions will focus on up-to-date laboratory discoveries and the potential impact of these findings on patient treatment and management in the future.

REGISTRATION
Deadline: October 10, 2016
Registration includes continental breakfast, lunch, and reception.
Registration is free. Early registration is highly recommended.
Click here to register

CALL FOR ABSTRACTS / YOUNG INVESTIGATOR AWARD

POSTER SESSION
We invite investigators to submit abstracts for the poster session, which is an important component of this conference. Posters will be displayed throughout the day with a dedicated poster session.

YOUNG INVESTIGATOR AWARD
Abstracts from graduate students and postdoctoral fellows will be considered for Young Investigator Awards. Three winners will be announced and each will be presented with prize and a plaque during the evening session. Winners will have the opportunity to give a brief highlight of their work (2 minutes) at the end of the award ceremony.
To qualify, you must register and submit an abstract to Dr. Mia M. Thi, the chair of the Poster Session and Young Investigator Award committee, by September 26, 2016 via email to: mia.thi@einstein.yu.edu.

ABSTRACT GUIDELINES
The abstract is limited to 1 page. Include in your abstract the study's objective, a brief statement of methods, a summary of the results obtained, conclusions, and significance. Please see abstract guidelines on the website. As the Symposium aims to promote communication within our region, we encourage you to submit your recent work (within 2015-2016) to this Symposium, including work that may have been submitted to other meetings.
PROGRAM COMMITTEE

PROGRAM DIRECTOR
Hui B. Sun, PhD

STEERING COMMITTEE CHAIRS
• Helen Lu, PhD
• James Iatridis, PhD
• John Hardin, MD
• Susannah Fritton, PhD

PROGRAM OVERSEERS
• Di Chen, PhD
• Mary Goldring, PhD
• Ed Guo, PhD
• Jeremy Mao, DDS, PhD
• Maurizio Pacifici, PhD
• Yi-Xian Qin, PhD
• Mitchell Schaffler, PhD

POSTER SESSION AND YOUNG INVESTIGATOR AWARD COMMITTEE
• Chair: Mia Thi, PhD
• Co-chair: David Hirsh, MD
• Co-chair: Bang Hoang, PhD
• Co-chair: Robert J. Majeska, PhD
• Co-chair: Jeremy J. Mao, DDS, PhD
• Co-chair: Maurizio Pacifici, PhD
• Co-chair: Sylvia O. Suadicani, PhD
AGENDA

7:15 – 8:00 am  Check-in and continental breakfast
8:00 – 8:10 am  Opening remarks
               Neil J. Cobelli, MD

Session 1 - Stem cells and tissue repair and regeneration: in tendon and beyond
Steering Chair: Helen Lu, PhD

8:10 – 8:35 am  Evaluation of Tendon-Specific Endothelial-Derived Stem Cells in Rotator Cuff Repair
                Scott Rodeo, MD
                The Hospital for Special Surgery

8:35 – 9:00 am  Stem Cells and Skeletal Muscle Tissue Engineering
                Johnny Huard, PhD
                University of Texas Health Science Center at Houston

9:00 – 9:25 am  Regulation of tendon regeneration
                Alice Huang, PhD
                Icahn School of Medicine at Mount Sinai

9:25 – 9:50 am  Engineering a Biomimetic Microenvironment to Prime Stem Cells for Enhanced Tissue Regeneration
                Wan-Ju Li, PhD
                University of Wisconsin-Madison

9:50 – 10:10 am COFFEE BREAK

Session 2 – New insights in arthritis
Steering Chair: John Hardin, MD

10:10 – 10:35 am Autoimmunity in Juvenile Idiopathic Arthritis
                Laura Santambrogio, PhD
                Albert Einstein College of Medicine

10:35 – 11:00 am Regulation of inflammatory responses in tumor necrosis factor-activated and rheumatoid arthritis synovial macrophages by JAK inhibitors
                Lionel Ivashkiv, MD
                The Hospital for Special Surgery

11:00 – 11:25 am Beta-catenin is a Key Mediator in the Development of Spondyloarthritis
                Di Chen, PhD
                Rush University

11:25 – 11:50 am Energy sensor AMPK in cartilage homeostasis and osteoarthritis
                Ru Liu-Bryan, PhD
                University of California, San Diego
**Session 3 – Novel views into musculoskeletal degenerative diseases**  
Steering Chair: James Iatridis, PhD

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| 1:45 – 2:10 pm | **Elucidating Mechanisms of Tendon Damage by Measuring Multiscale Unloaded Recovery Following Tensile Loading**  
Dawn Elliot, PhD  
University of Delaware |
| 2:10 – 2:35 pm | **In search of biomarkers of back pain: systemic cytokine profiles in patients with intervertebral disc disorders**  
Nadeen Chahine, PhD  
The Feinstein Institute for Medical Research |
| 2:35 – 3:00 pm | **Genetic Mouse Models of Accelerated Intervertebral Disc Degeneration and Regeneration**  
Chitra L. Dahia, Ph.D.  
Hospital for Special Surgery |
| 3:00 – 3:25 pm | **Injury, inflammation, and altered mechanotransduction in the intervertebral disc**  
James Iatridis, PhD  
Icahn School of Medicine at Mount Sinai |

**3:25 – 3:45 pm COFFEE BREAK**

**Session 4 – Bone Adaptation in Aging and Disease**  
Steering Chair: Susannah Fritton, PhD

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| 3:45 – 4:05 pm | **Bone mineralization changes due to aging and disease**  
Adele Boskey, PhD  
Hospital for Special Surgery |
| 4:05 – 4:25 pm | **Effects of bone matrix proteins on fracture and fragility**  
Deepak Vashishth, PhD  
Rensselaer Polytechnic Institute |
| 4:25 – 4:45 pm | **Mechanical adaptation of the skeleton during homeostasis and repair**  
Alesha Castillo, PhD  
New York University |
| 4:45 – 5:05 pm | **Role of estrogen signaling in load-based skeletal adaptation**  
Marjolein van der Meulen, PhD  
Cornell University |
Low magnitude mechanical signals as an anabolic signal to the skeleton in aging and disease
Clint Rubin, PhD
Stony Brook University

Young Investigator Awards / Reception (Lubin Hall)

5:30 pm  Young Investigator Awards
Chair: Mia M. Thi, PhD

5:40 pm  Closing remarks
Neil J. Cobelli, MD

5:40 – 6:15 pm  Reception and networking
Arnold and Madaleine Penner
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FACULTY MEMBERS

**Adele Boskey, PhD**
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Symposium Location
Albert Einstein College of Medicine
Michael F. Price Center and Harold and Muriel Block Research Pavilion
1301 Morris Park Avenue, Bronx, NY 10461
Directions: http://www.einstein.yu.edu/visitors/

HOTEL INFORMATION
Residence Inn by Marriott
The Bronx at Metro Center Atrium
1776 Eastchester Road, Bronx, NY 10461
The hotel is a 10 minute walk from the Symposium.
www.marriott.com/nycbx
P: 718-239-3939

PARKING INFORMATION
The PF Parking lot
1975 Eastchester Road
Bronx, NY 10461
http://einstein.pfparking.org/location.php

Site Map
• 17 Price Center
• 9 Lubin Hall
• P Parking