

Arnold and Madaleine Penner  
**5<sup>th</sup> Annual Musculoskeletal Repair  
and Regeneration Symposium**

Thursday, October 13, 2016

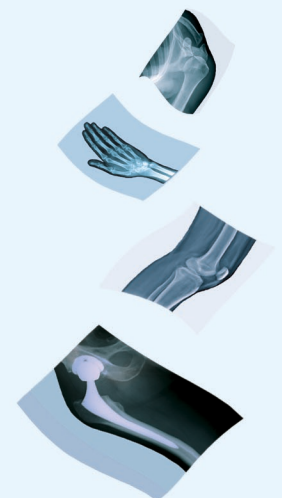
Program Director: **Hui (Herb) B. Sun, PhD**

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



Arnold and Madaleine Penner

# 5<sup>th</sup> Annual Musculoskeletal Repair and Regeneration Symposium

Thursday, October 13, 2016

## **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 5<sup>th</sup> 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, Rensselaer Polytechnic Institute, Cornell University, Thomas Jefferson University, and University of Texas Health Science Center at Houston.

## **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](mailto: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 - Tendon regeneration: Stem cells 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

12:00 – 1:45 pm LUNCH AND POSTER SESSION (Lubin Hall)  
Lunch starts at 12:00 pm; Poster session starts at 12:45pm  
12:00 pm – Faculty photo (Courtyard in front of Lubin Hall)  
12:00 – 12:45 pm – Faculty meeting with lunch (Faculty Club in Lubin Hall)

### Session 3 – Novel views into musculoskeletal degenerative diseases

Steering Chair: James Iatridis, PhD

- 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

- 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**  
StacyAnn Morgan, PhD and Deepak Vashishth, PhD  
Rensselaer Polytechnic Institute
- 4:25 – 4:45 pm      **CXCL12/CXCR4 signaling in skeletal mechanoadaptation and angiogenesis**  
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

5:05-5:25pm

**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**  
**5<sup>th</sup> Annual Musculoskeletal Repair and Regeneration Symposium**  
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**FACULTY MEMBERS**

**Adele Boskey, PhD**

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### Mia M. Thi, PhD

Chair, Poster Session and Young Investigator

Award Committee

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### Rhomina Carrasco

Symposium Coordinator

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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.marriot.com/nycbx](http://www.marriot.com/nycbx)

P: 718-239-3939

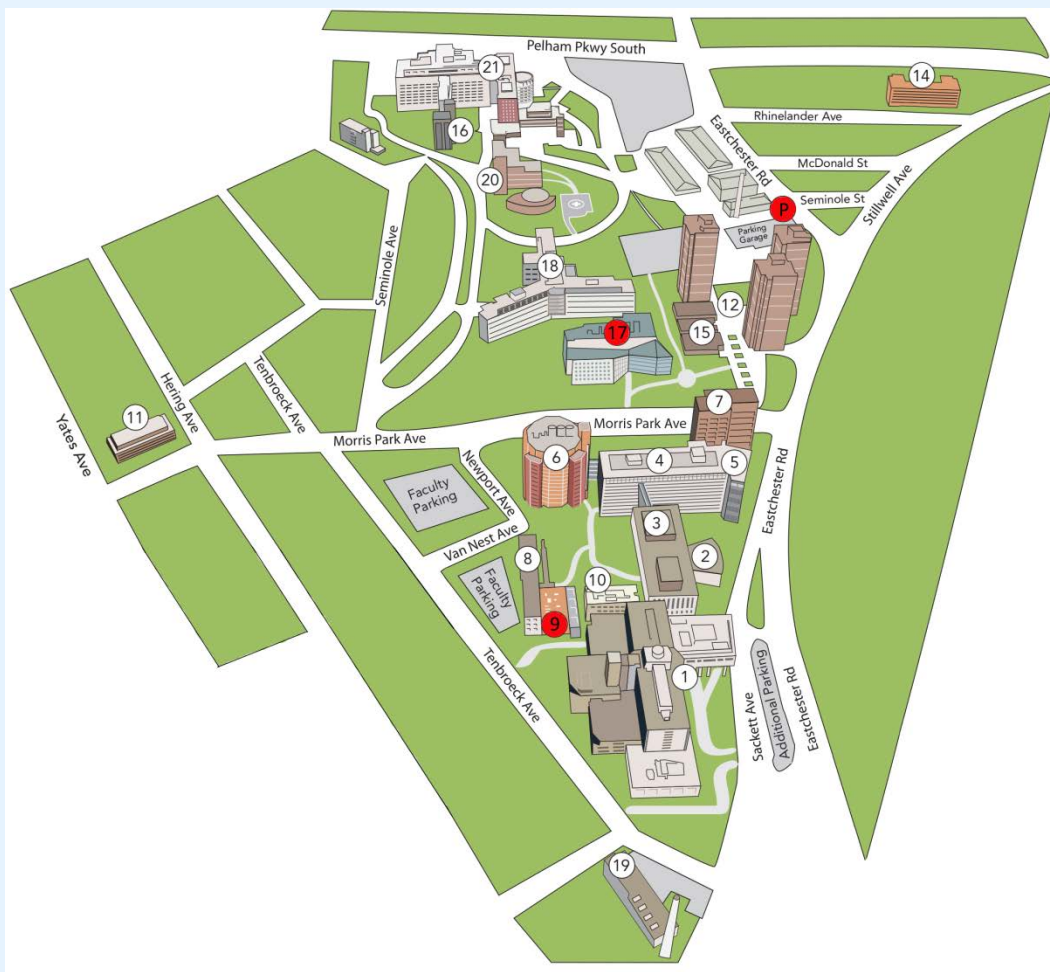
## PARKING INFORMATION

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