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
Arnold and Madaleine Penner

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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, 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.

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)

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<th>Time</th>
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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  
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 |
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
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FACULTY MEMBERS

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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  
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