Arnold and Madaleine Penner
8th Annual Musculoskeletal Repair and Regeneration Symposium
Thursday, October 3, 2019

Presented by: Musculoskeletal and Orthopaedic Research Laboratories and Department of Orthopaedic Surgery at Einstein College of Medicine and Montefiore Medical Center
Program Director: Hui (Herb) B. Sun, PhD
University Chairman: Neil J. Cobelli, MD

Lefrak Auditorium in Michael F. Price Center
Albert Einstein College of Medicine
1301 Morris Park Avenue
Bronx, NY 10461
8th Annual Musculoskeletal Repair and Regeneration Symposium
Thursday, October 3, 2019
LeFrak Auditorium (Room 151), Price Center
Albert Einstein College of Medicine
1301 Morris Park Ave. 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:
• Current concepts in musculoskeletal joint diseases and treatments
• Muscle pathology seen in the setting of tendon injury
• “Hot topics” in bone
• Tissue repair and regeneration and immune modulation

GOALS AND FEATURES
This program attempts to address current issues in musculoskeletal repair and regeneration, and disease treatment. The presentations and discussions will focus on up-to-date scientific discoveries and the potential impact of these findings on patient treatment and management in the future. This meeting features:
• 16 outstanding speakers from the region and nationwide
• Poster session and Young Investigator Award session

REGISTRATION
Deadline: September 26, 2019

Please register online at:
http://einstein.yu.edu/departments/orthopaedic-surgery/symposium/registration/

Registration includes continental breakfast, lunch, and reception. Registration is free. Early registration is highly recommended.
CALL FOR ABSTRACTS FOR POSTER SESSION AND YOUNG INVESTIGATOR AWARD

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.

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 a 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 16, 2019 via email to: mia.thi@einstein.yu.edu.

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 template on the website. As the Symposium aims to promote communication within our region, we encourage you to submit your recent work (within 2019) to this Symposium, including work that may have been submitted to other meetings.

PROGRAM DIRECTOR
Hui (Herb) B. Sun, PhD

STEERING COMMITTEE CHAIRS
• Chuanju Liu, PhD
• Scott Rodeo, MD

• J. Christopher Fritton, PhD
• Helen Lu, PhD

PROGRAM OVERSEERS
• Chuanju Liu, PhD
• Helen Lu, PhD
• Jeremy J. Mao, DDS, PhD
• Steven B. Nicoll, PhD
• Maurizio Pacifici, PhD
• Nicola C. Patridge, PhD
• Clinton Rubin, PhD
• Yi-Xian Qin, PhD
• Mitchell B. Schaffler, PhD
• David C. Spray, PhD
• Stavros Thomopoulos, PhD

POSTER SESSION AND YOUNG INVESTIGATOR AWARD COMMITTEE
Chair: Mia M. Thi, PhD
Co-chairs:

• Di Chen, MD, PhD
• David M. Hirsh, MD
• David M. Hirsh, MD
• David T. Corr, PhD
• Bang H. Hoang, MD
• X. Edward Guo, PhD
• Robert J. Majeska, PhD
• Regina Hanstein, PhD
• Jeremy J. Mao, DDS, PhD
• Maurizio Pacifici, PhD
• Yi-Xian Qin, PhD
• Sylvia O. Suadicani, PhD
AGENDA

7:15 – 8:00 am  Check-in and continental breakfast

8:00 – 8:10 am  Introduction and acknowledgements
Hui (Herb) B. Sun, PhD
Opening remarks
Neil J. Cobelli, MD

Session 1 – Current Concepts in Musculoskeletal Joint Diseases and Treatment
Steering Chair: Chuanju Liu, PhD

8:10 – 8:15 am  Introduction
Chuanju Liu, PhD
New York University

8:15 – 8:35 am  Inflammatory regulation of bone injury and repair
Lionel B. Ivashkiv, MD
Hospital for Special Surgery

8:35 – 8:55 am  Purine nucleotides, nucleosides, inflammaging and osteoarthritis
Bruce N. Cronstein, MD
New York University

8:55 – 9:15 am  Substrate-identification for the ADAMTS17 protease and its role in Weill-Marchesani-like syndrome
Dirk Hubmacher, PhD
Icahn School of Medicine at Mount Sinai

9:15 – 9:35 am  Engineering new biologic therapies for arthritis
Farshid Guilak, PhD
Washington University in St Louis

9:35 – 9:40 am  Discussion / Conclusions

9:40 – 10:00 am COFFEE BREAK

Session 2 – "Hot Topics" in Bone
Steering Chair: J. Christopher Fritton, PhD

10:00 – 10:05 am  Introduction
J. Christopher Fritton, PhD
Rutgers, New Jersey Medical School

10:05 – 10:25 am  Altered osteocyte communication in aging
Mitchell B. Schaffler, PhD
City College of New York
10:25 – 10:45 am  Effects of aging on the skeleton
Shoshana Yakar, PhD
New York University

10:45 – 11:05 am  Malignant osteogenesis: Levering tumor suppressor deficiency for proteosome-based therapy
Bang H. Hoang, MD
University of Delaware

11:05 – 11:25 am  How does mechanical loading build bone microstructure: Modeling vs. remodeling?
X. Edward Guo, PhD
Columbia University

11:25 – 11:30 am  Discussion / Conclusions

11:35 pm – 11:45 am: Group photos (Courtyard in front of Lubin Hall)
11:45 – 12:30 pm: Faculty meeting with lunch (Faculty Club in Lubin Hall)
11:45 – 1:55 pm: LUNCH AND POSTER SESSION (Lubin Hall)

Session 3 – Muscle Pathology Seen in the Setting of Tendon Injury
Steering Chair: Scott A. Rodeo, MD

2:00 – 2:05 pm  Introduction
Scott A. Rodeo, MD
Hospital for Special Surgery

2:05 – 2:25 pm  The clinical problem of muscle atrophy and fatty infiltration in rotator cuff injury
Brian T. Feeley, M.D.
University of California, San Francisco

2:25 – 2:45 pm  Impaired muscle growth and regeneration in chronic rotator cuff tears
Samuel R. Ward, M.D.
University of California, San Diego

2:45 – 3:05 pm  Targeted control of skeletal muscle contraction and tendon loading using optogenetics
Megan L. Killian, Ph.D.
University of Delaware

3:05 – 3:25 pm  Mitochondrial dysfunction in tendon and muscle
Scott A. Rodeo, MD
Hospital for Special Surgery

3:25 – 3:30 pm  Discussion / Conclusions

3:30 – 3:50 pm COFFEE BREAK
Session 4 – Tissue Repair and Regeneration and Immune Modulation
Steering Chair: Helen Lu, PhD

3:50 – 3:55 pm  
**Introduction**
Helen Lu, PhD
Columbia University

3:55 – 4:15 pm  
**Pseudotime kinetic analysis of inflammation and immune modulatory treatment in soft tissue injuries**
Edward A. Botchwey, PhD
Georgia Institute of Technology

4:15 – 4:35 pm  
**Biomaterials strategies to modulate inflammation for tissue repair**
Kam W. Leong, PhD
Columbia University

4:35 – 4:55 pm  
**Engineering Materials for Immunomodulation in Osteoarthritis**
Ankur Singh, PhD
Cornell University

4:55 – 5:15 pm  
**Immune regulation of tendon regeneration**
Alice H. Huang, PhD
Icahn School of Medicine at Mount Sinai

5:15 – 5:20 pm  
**Discussion / Conclusions**

5:20 – 5:25 pm Intermission

Young Investigator Awards

5:25 - 5:45 pm  
Young Investigator Awards
Hosted by: Young Investigator Award Committee
Chair: Mia M. Thi, PhD

Closing Remarks and Reception (Lubin Hall)

5:50 pm  
Closing remarks
Neil J. Cobelli, MD

6:00 pm  
Reception and networking
Arnold and Madeleine Penner
8th Annual Musculoskeletal Repair and Regeneration Symposium
Thursday, October 3, 2018

Chairs, Co-Chairs, and Speakers

Edward A. Botchwey, PhD
Associate Professor of Biomedical Engineering
Georgia Institute of Technology
Atlanta, GA

Di Chen, MD, PhD
The John W. and Helen Watzek Professor and Chairman of Biochemistry
Rush University
Chicago, IL

Neil J. Cobelli, MD
Professor and University Chairman of Orthopaedic Surgery
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Rensselaer Polytechnic Institute
Troy, NY

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Director of Clinical and Translational Science Institute
Chief, Division of Translational Medicine
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New York University
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X. Edward Guo, PhD
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Richard L. Menschel Research Chair
David H. Koch Chair in Arthritis and Tissue Degeneration Professor of Medicine and Immunology
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Chuanju Liu, PhD
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New York University
New York, NY
Helen Lu, PhD  
Professor and Vice Chair of Biomedical Engineering  
Columbia University  
New York, NY

Robert J. Majeska, PhD  
Professor of Biomedical Engineering  
The City College of New York  
New York, NY

Jeremy J. Mao, DDS, PhD  
Edwin S. Robinson Professor of Dentistry (in Orthopaedic Surgery, Pathology and Cell biology)  
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Perelman School of Medicine, University of Pennsylvania  
Director of Orthopaedic Research  
Children’s Hospital of Philadelphia  
Philadelphia, PA

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Professor of Biomedical Engineering  
Director, Orthopaedic Bioengineering Research Laboratory  
Associate Dean for Academic Affairs and Int’l Programs, College of Engineering and Applied Sciences  
State University of New York at Stony Brook  
Stony Brook, NY

Scott A. Rodeo, MD  
Attending Orthopedic Surgeon  
Co-Chief Emeritus, Sports Medicine Service  
Professor of Orthopedic Surgery, Weill Cornell Medical College  
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Wallace H. Coulter and Presidential Professor of Biomedical Engineering  
Chair of Biomedical Engineering  
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New York, NY

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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 Kwik Park Parking Lot
1975 Eastchester Road
Bronx, NY 10461
http://www.einstein.yu.edu/visitors/

- 17 - Price Center
- 9 - Lubin Hall
- Red line - Path from Price Center to Lubin Hall