

Arnold and Madaleine Penner
**9th Annual Musculoskeletal Repair
and Regeneration Symposium
Virtual Event**

Thursday, October 8, 2020

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

Program Director: **Mia M. Thi, PhD**

University Chairman: **Neil J. Cobelli, MD**



Arnold and Madaleine Penner

9th Annual Musculoskeletal Repair and Regeneration Symposium – Virtual Event

Thursday, October 8, 2020

SYMPOSIUM MISSION

The Albert Einstein College of Medicine and Montefiore Medical Center Musculoskeletal Repair and Regeneration Symposium continues to seek and 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:

- New insights in bone
- Tissue engineering and regenerative medicine
- Tendon and ligament regenerative healing
- Advances in musculoskeletal diseases

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:

- 8 outstanding speakers from the United States and Europe
- Lightening e-poster session and Young Investigator Award session

REGISTRATION

Deadline: **October 5, 2019**

Please register online at:

<http://einstein.yu.edu/departments/orthopaedic-surgery/symposium/registration/>

Registration is free. Early registration is highly recommended.

An email with the information to virtually join the meeting will be sent to the registrants' email prior to meeting. Please note that only those who registered will be granted access.

CALL FOR ABSTRACTS FOR POSTER SESSION AND YOUNG INVESTIGATOR AND CLINICAL YOUNG INVESTIGATOR AWARDS

We invite investigators to submit abstracts for the virtual lightening **e-poster session**, which is

an important component of this conference.

Abstracts from graduate and medical students, residents and postdoctoral fellows will be considered for **Young Investigator Awards and Clinical Young Investigator Award**. Four winners, three from Young Investigator category and one from Clinical Young Investigator category will be announced and each will be presented with a prize and a plaque. To qualify, you must register and submit an abstract to Dr. Zeynep Seref-Ferlengez, the chair of the Poster Session and Young Investigator Award committee, by **September 11, 2020** via email to: sereffer@montefiore.org.

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 2020) to this Symposium, including work that may have been submitted to other meetings. **Please note: Two PowerPoint slides with 2 minutes audio must be submitted for all accepted posters by October 2, 2020.**

PROGRAM DIRECTOR

Mia M. Thi, PhD

STEERING COMMITTEE CHAIRS

- Alesha Castillo, PhD
- James Iatridis, PhD
- Woojin Han, PhD
- David Corr, PhD
- Lionel Ivashkiv, MD
- Bang Hoang, MD

PROGRAM OVERSEERS

- Michael Detamore, PhD
- Susannah Fritton, PhD
- Mary Goldring, PhD
- Steven Goldring, MD
- Ed Guo, PhD
- John Hardin, MD
- David Hirsh, MD
- James Iatridis, PhD
- Lionel Ivashkiv, MD
- Thorsten Kirsch, PhD
- Catherine Kuo, PhD
- Chuanju Liu, PhD
- Helen Lu, PhD
- Jeremy Mao, DDS, PhD
- Steven Nicoll, PhD
- Maurizio Pacifici, PhD
- Nicola Patridge, PhD
- Clinton Rubin, PhD
- Yi-Xian Qin, PhD
- Mitchell Schaffler, PhD
- David Spray, PhD
- Stavros Thomopoulos, PhD

e-POSTER SESSION AND YOUNG INVESTIGATOR AWARD COMMITTEE

Chair: Zeynep Seref-Ferlengez, PhD

Co-chairs

- Ugur Ayturk, PhD
- David Corr, PhD
- X. Edward Guo, PhD
- Regina Hanstein, PhD
- David Hirsh, MD
- Bang Hoang, PhD
- Robert Majeska, PhD
- Jeremy Mao, DDS, PhD
- Yi-Xian Qin, PhD
- Sylvia Suadicani, PhD

AGENDA

8:00 – 8:10 am Introduction and acknowledgements
Mia M. Thi, PhD
Opening remarks
Neil J. Cobelli, MD

Session 1 – New insights in bone Steering chair: Alesha Castillo, PhD

8:10 – 8:15 am **Introduction**
Alesha Castillo, PhD
New York University

8:15 – 8:35 am **Skeletal Stem and Progenitor Cells (SSPCs) in Bone Growth, Homeostasis and Repair**
Christa Maes, PhD
KU Leuven, Belgium

8:35 – 8:55 am **Bone Mechanotransduction - Checks and Balances**
Karl Lewis, PhD
Cornell University

8:55 – 9:05 am **Discussion / Conclusions**

9:05 – 9:15 am **BREAK**

Session 2 – Tissue engineering and regenerative medicine Steering chair: James Iatridis, PhD, co-chair: Woojin Han, PhD

9:15 – 9:20 am **Introduction**
James Iatridis, PhD
Icahn School of Medicine at Mount Sinai

9:20 – 9:40 am **Spatially functionalized biomaterials to direct osteochondral tissue regeneration**
Lesley W. Chow, PhD
Lehigh University

9:40 – 10:00 am **Synthetic designer matrices for skeletal muscle stem cell transplantation**
Woojin Han, PhD
Georgia Institute of Technology, Icahn School of Medicine at Mount Sinai

10:00 – 10:10 am **Discussion / Conclusions**

10:10 – 10:20 am BREAK

Session 3 – Tendon and ligament regenerative healing

Steering chair: David Corr, PhD

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|------------------|--|
| 10:20 – 10:25 pm | Introduction
David Corr, PhD
Rensselaer Polytechnic Institute |
| 10:25 – 10:45 pm | Immune modulation of tendon and ligament healing
Connie Chamberlain, PhD
UW-Madison |
| 10:45 – 11:05 am | Fiber-based Models of Soft Tissue Healing
Helen Lu, PhD
Columbia University |
| 11:05 – 11:15 am | Discussion / Conclusions |

11:15 – 11:25 am BREAK

11:25 – 12:45 pm **Concurrent lightening e-poster sessions**

12:45 – 12:55 pm BREAK

Session 4 – Advances in musculoskeletal diseases

Steering chair: Lionel Ivashkiv, MD; co-chair: Bang Hoang, MD

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|-----------------|---|
| 12:55 – 1:00 pm | Introduction
Lionel Ivashkiv, MD
The Hospital for Special Surgery, Weill Cornell Medical College |
| 1:00 – 1:20 pm | Epigenomic Changes Accompanying the Progression of Surgically Induced Osteoarthritis
Miguel Otero, PhD
The Hospital for Special Surgery |
| 1:20 – 1:40 pm | Protecting patients from Infection: Optimizing patients, implants, and our environment.
Nicholas M. Bernthal, MD
David Geffen School of Medicine, UCLA |
| 1:40 – 1:50 pm | Discussion / Conclusions |

1:50 – 2:00 pm BREAK

Young Investigator Awards
Chair: Zeynep Seref-Ferlengez, PhD

2:00 – 2:10 pm Young Investigator Awards
Hosted by: *Young Investigator Award Committee*

Closing Remarks

2:10 pm Closing remarks
Neil J. Cobelli, MD

Arnold and Madaleine Penner
8th Annual Musculoskeletal Repair and Regeneration Symposium
Thursday, October 3, 2018

Chairs, Co-Chairs, and Speakers

Ugur Ayturk, PhD

Assistant Scientist of Musculoskeletal Integrity Program,
Hospital for Special Surgery
New York, NY

Nicholas M. Bernthal, MD, FAOA

Associate Professor
Chief, Division of Musculoskeletal Oncology
Director, UCLA Global Orthopaedic Initiative
Department of Orthopaedic Surgery
David Geffen School of Medicine at UCLA
Los Angeles, CA

Alesha Castillo

Assistant Professor of Biomedical Engineering, and
Orthopaedic Surgery
New York University
New York, NY

Lesley W. Chow, PhD

Assistant Professor of Bioengineering
Materials Science & Engineering
Lehigh University
Bethlehem, PA

Connie Chamberlain, PhD

Associate Scientist of Orthopedics and Rehabilitation
School of medicine and Public Health
University of Wisconsin-Madison.
Madison, WI

Neil J. Cobelli, MD

Professor and University Chairman of Orthopaedic
Surgery
Albert Einstein College of Medicine and Montefiore
Medical Center
Bronx, NY

David T. Corr, PhD

Associate Professor of Biomedical Engineering
Rensselaer Polytechnic Institute
Troy, NY

X. Edward Guo, PhD

Professor and Chair of Biomedical Engineering
Columbia University
New York, NY

Woojin Han, PhD

Assistant Professor of Orthopaedics,
Icahn School of Medicine at Mount Sinai
NIH NRSA Postdoctoral Fellow,
Parker H. Petit Institute for Bioengineering and
Bioscience
Georgia Institute of Technology
Atlanta, GA

Regina Hanstein, PhD

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David M. Hirsh, MD

Professor of Orthopaedic Surgery
Albert Einstein College of Medicine and Montefiore
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Bronx, NY

Bang H. Hoang, MD

Professor of Orthopaedic Surgery
Albert Einstein College of Medicine and Montefiore
Medical Center
Bronx, NY

James Iatridis, PhD

Professor of Orthopaedics and Neurosurgery
Vice-Chair for Research
Director of Spine Research
Icahn School of Medicine at Mount Sinai
New York, NY

Lionel Ivashkiv, MD.

Chief Scientific Officer, Director of HSS Genomics Center
Richard L. Menschel Research Chair
David H. Koch Chair in Arthritis and Tissue Degeneration
Professor of Medicine and Immunology
Weill Cornell Medicine, Hospital for Special Surgery
New York, NY

Karl Lewis, PhD

Assistant Professor of Biomedical Engineering
Meinig School of Biomedical Engineering
Cornell University
Ithaca, NY

Helen Lu, PhD

Professor and Vice Chair of Biomedical Engineering
Columbia University
New York, NY

Christa Maes, PhD

Professor of Development and Regeneration
Laboratory for Skeletal Cell Biology and Physiology
Skeletal Biology and Engineering Research Center
KU Leuven, Belgium

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)
College of Dental Medicine, Columbia University
New York, NY

Miguel Otero, PhD

Assistant Scientist of Tissue Engineering Regeneration
and Repair Program
Co-Director, Derfner Foundation Precision Medicine
Laboratory
Hospital for Special Surgery
New York, NY

Yi-Xian Qin, PhD

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
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CONTACT INFORMATION

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Zeynep Seref-Ferlengez, PhD

Chair, Poster Session and Young Investigator

Award Committee

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