

Posters

Targeted exercise interventions for physical and immunological rehabilitation in childhood recipients of bone-marrow transplants. Gillian White, PhD trainee, Exercise Science, Faculty of Kinesiology & Physical Education. Supervisor: Dr. Greg Wells

Characterization of the skeletal phenotype of transgenic mice over-expressing the G-protein G-alpha(s) in osteoblasts. Lucia Zhang, PhD trainee, Pharmacology and Toxicology, Faculty of Medicine. Supervisor/ Co-supervisor: Drs. Jane Mitchell and Marc Grynpas

Derivation and comparison of utility scores for economic evaluation in large datasets: Modelling patient level EQ-5D using the Ontario Best Practices Research Initiative, Mark Tatangelo, PhD trainee, Health Services Research, IHPME, Faculty of Medicine. Supervisor: Dr. Claire Bombardier

Glucocorticoid use patterns in Ontario: A population based study. Mohamed Amine Amiche. PhD trainee, Pharmaceutical Sciences, Faculty of Pharmacy. Supervisor: Dr. Suzanne Cadarette

Muscle micro tissue: An in vivo inspired skeletal muscle model. Moshen Afshar, PhD trainee, IBBME, Faculty of Applied Science & Engineering. Supervisor: Dr. Penney Gilbert

The role of niche architecture on muscle stem cell self-renewal. Richard Cheng, MASc trainee, IBBME, Faculty of Applied Science & Engineering. Supervisor: Dr. Penney Gilbert

The effects of exercise on muscle and bone in a mouse model of Duchenne muscular dystrophy. Nicole Morris, MSc trainee, Pharmacology and Toxicology, Faculty of Medicine. Supervisor/ Co-supervisor: Drs. Jane Mitchell and Marc Grynpas

Does sex and gender influence outcomes in people who have Anterior Cruciate Ligament reconstructive surgery? Sabrina Kolker, MSc trainee, Clinical Epidemiology and Health Care Research, IHPME, Faculty of Medicine. Supervisor: Dr. Aileen Davis

Studying the reconstruction of a critically-sized radius segmental defect in a New Zealand white rabbit model using bone allograft requires intramedullary wire fixation. Sam Park, MSc trainee, Pharmacology and Toxicology, Faculty of Medicine. Supervisor/ Co-supervisor: Drs. Jane Mitchell and Marc Grynpas

Osteocytes' response to mechanical loading supports breast and prostate cancer cell growth and migration. Yu-Heng (Vivian) Ma, MASc trainee, IBBME, Faculty of Applied Science & Engineering. Supervisor: Dr. Lidan You

Preclinical assessment of lithium to enhance fracture healing. Kathak Vachhani, MSC trainee, IMS, Faculty of Medicine. Supervisor: Dr. Cari Whyne

Regional variations in hip fracture patient trajectories. Kristen Pitzul, PhD trainee, IHPME, Faculty of Medicine. Supervisor: Dr. Susan Jaglal

Current Approaches to PRMDs in violinists: A Review. Linnea Thacker, DMA trainee, Faculty of Music. Supervisor: Dr. Lee Bartel

Why do only some women develop postmenopausal osteoporosis? Julia Pasquale, MSc trainee, LMP, Faculty of Medicine. Supervisor: Dr. Marc Grynpas

Overexpression of G alpha 11 protein in osteoblasts attenuates the osteoanabolic response of bone to intermittent PTH treatment. Ariana Dela Cruz, PhD trainee, Pharmacology & Toxicology, Faculty of Medicine. Supervisor: Drs. Jane Mitchell & Marc Grynpas

Development and sensibility evaluation of the Gait Outcomes Assessment List module specific to children with lower limb anomalies. Jennifer Dermott, MSc trainee, Rehabilitation Sciences Institute, Faculty of Medicine. Supervisor/Co-supervisor: Drs. Virginia Wright and Unni Narayanan

The effects of filter cutoff frequency on musculoskeletal simulations of high-impact movements. Sebastian Tomescu, MSc trainee Institute of Medical Sciences, Faculty of Medicine. Supervisors: Drs. Cari Whyne & Naveen Chandrasekhar

Toronto Musculoskeletal Centre 3rd Annual Research Day



Thursday, February 12, 2015
18th Floor, Ben Sadowski Auditorium
Mount Sinai Hospital
600 University Avenue, Toronto



12:30 p.m. POSTER SET-UP

OPENING PRESENTATIONS

1:15 p.m. Welcome: Dr. Aileen Davis, Interim Director, Toronto Musculoskeletal Centre

Opening Remarks: Dr. Alison Buchan, Vice-Dean Research & International Relations, Faculty of Medicine

TMC SCHOLARSHIP AWARDEE PRESENTATIONS

1:25 p.m. Anisotropic stress orients remodeling of mammalian limb bud ectoderm
Kimberly Lau, Post-Doctoral Fellow, Developmental Stem Cell Biology, Hospital for Sick Children

1:35 p.m. A microfluidic system to study the effects of mechanically stimulated osteocytes on osteoclast migration and differentiation
Kevin Middleton, PhD trainee, Institute of Biomaterials and Biomedical Engineering, Faculty of Applied Science and Engineering

1:45 p.m. The role of niche architecture on muscle stem cell self-renewal
Richard Cheng, MSc trainee, Institute of Biomaterials and Biomedical Engineering - Faculty of Applied Science and Engineering

1:55p.m. Macrophages in bone rejuvenation
Linda Vi, PhD trainee, Institute of Medical Science and Hospital for Sick Children

2:05 p.m. Hedgehog signaling in synovial joint development and disease: Interaction with beta-catenin signaling
Jason Rockel, Post-Doctoral Fellow, Developmental and Stem Cell Biology, Hospital for Sick Children

2:15 p.m. Enhancing nucleus pulposus tissue formation in-vitro: A novel approach
Rahul Gawri, Post-Doctoral Fellow, Lunenfeld-Tanenbaum Research Institute

**RECIPIENTS OF THE 2014-2015
BONE & MINERAL SCHOLARSHIP AWARDS**

2:25 p.m. Marc Grynepas, PhD, Director Bone and Mineral Group, University of Toronto

BREAK & POSTER VIEWING

2:35 p.m. Collaborative Program in Musculoskeletal Sciences Trainee Posters

INVITED SPEAKERS

3:45 p.m. Arthritis from research to clinical treatment: from now to the future

Genetics - Katherine Siminovitch, M.D., FRCP(C), Senior Scientist, Mount Sinai Hospital, Samuel Lunenfeld-Tanenbaum Research Institute and Division of Advanced Diagnostics - Infection & Immunity

Biologics - Edward C. Keystone, M.D., FRCP(C), Professor of Medicine, Mount Sinai Hospital

**RECIPIENTS OF THE 2015 ORAL AND
POSTER AWARDS**

4:45 p.m. Rita Kandel, MD, Director, Collaborative Program in Musculoskeletal Sciences

CLOSING REMARKS

4:55 p.m. Aileen Davis, PhD, Interim Director, Toronto Musculoskeletal Centre



Toronto Musculoskeletal Centre

3rd Annual Research Day

OPENING PRESENTATIONS

1:15 p.m. **WELCOME**
Dr. Aileen Davis, Interim Director, Toronto Musculoskeletal Centre

OPENING REMARKS
Dr. Alison Buchan, Vice-Dean, Faculty of Medicine

TMC SCHOLARSHIP AWARDEE PRESENTATIONS

1:25 p.m. **ANISOTROPIC STRESS ORIENTS REMODELLING OF MAMMALIAN LIMB BUD ECTODERM**
Kimberly Lau, Post-Doctoral Fellow, Developmental Stem Cell Biology, Hospital for Sick Children

1:35 p.m. **A MICROFLUIDIC SYSTEM TO STUDY THE EFFECTS OF MECHANICALLY STIMULATED OSTEOCYTES ON OSTEOCLAST MIGRATION AND DIFFERENTIATION**
Kevin Middleton, PhD Trainee, Institute of Biomaterials and Biomedical Engineering, Faculty of Applied Science and Engineering

1:45 p.m. **THE ROLE OF NICHE ARCHITECTURE ON MUSCLE STEM CELL SELF-RENEWAL**
Richard Cheng, MSc Trainee, Institute of Biomaterials and Biomedical Engineering, Faculty of Applied Science and Engineering

1:55 p.m. **MACROPHAGES IN BONE REJUVENATION**
Linda Vi, PhD Trainee, Institute of Medical Science and Hospital for Sick Children

2:05 p.m. **HEDGEHOG SIGNALING IN SYNOVIAL JOINT DEVELOPMENT AND DISEASE: INTERACTION WITH BETA-CATENIN SIGNALING**
Jason Rockel, Post-Doctoral Fellow, Developmental Stem Cell Biology, Hospital for Sick Children

2:15 p.m. **ENHANCING NUCLEUS PULPOSUS TISSUE FORMATION IN-VITRO: A NOVEL APPROACH**
Rahul Gawri, Post-Doctoral Fellow, Lunenfeld-Tanenbaum Research Institute

RECIPIENTS OF THE 2014-2005 BONE & MINERAL SCHOLARSHIP AWARDS

2:25 p.m. Marc Grynpas, PhD, Director, Bone & Mineral Group, University of Toronto

BREAK & POSTER VIEWING

2:35 p.m. **COLLABORATIVE PROGRAM IN MUSCULOSKELETAL SCIENCES TRAINEE POSTERS**

RECIPIENTS OF THE 2015 ORAL AND POSTER AWARDS

4:45 p.m. Rita Kandel, MD, Director, Collaborative Program in Musculoskeletal Sciences

CLOSING REMARKS

4:55 p.m. Aileen Davis, PhD, Interim Director, Toronto Musculoskeletal Centre

3:45 p.m. INVITED SPEAKERS

ARTHRITIS FROM RESEARCH TO CLINICAL TREATMENT: FROM NOW TO THE FUTURE

GENETICS - Katherine Siminovitch, MD, FRCP(C)

Senior Scientist, Mount Sinai Hospital, Samuel Lunenfeld-Tanenbaum Research Institute and Division of Advanced Diagnostics - Infection & Immunity, Toronto General Research Institute (TGR)

BIOLOGICS - Ed Keystone, MD, FRCP(C)

Professor of Medicine, Mount Sinai Hospital



THURSDAY, FEBRUARY 12, 2015
18TH FLOOR
BEN SADOWSKI AUDITORIUM
MOUNT SINAI HOSPITAL