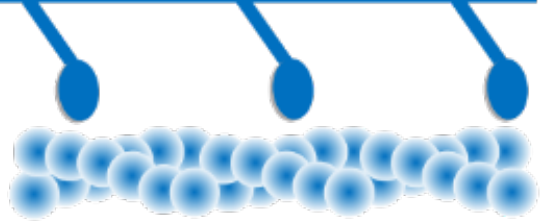


# CTMR



## UW Center for Translational Muscle Research

### 2024 UW CTMR ANNUAL SYMPOSIUM

Tuesday, November 12, 2024

9:00am – 6:30 pm Pacific Time

[Orin Smith Auditorium \(Building C\)](#)

UW, SLU, 850 Republican St. Seattle, WA. 98109 United States

- 8:45 am **Coffee and Tea**, Building C Lobby
- 9:00 am **General Welcome & Introduction to CTMR Cores**  
Administrative Core  
by [Michael Regnier, PhD](#), Director & [Katie Mitzelfelt, PhD](#), Program Manager  
Mechanics and Devices Core  
by [Michael Regnier, PhD](#), Core Director  
Metabolism Core  
by [Dan Raftery, PhD](#), Core Director  
Quantitative Analysis Core  
by [Jen Davis, PhD](#) & [David Beck, PhD](#), Co-Core Directors
- 9:45 am **CTMR Pilot Grant Awardees (Year 5)**  
*Moderator: [David Beck, PhD](#), Co-Core Director, CTMR Quantitative Analysis Core*  
[Shiri Levy, PhD](#), Acting Instructor, Department of Biochemistry  
*Title: [Rejuvenating Aged Muscle Cells Through Epigenetic Reprogramming](#)*  
[Matthew Campbell, PhD](#), Acting Assistant Professor, Department of Radiology  
*Title: [Decreased force in a human 3D engineered muscle tissue model of aging](#)*  
[Logan Murphy, PhD](#), Acting Instructor, Department of Physiology & Biophysics  
*Title: [Muscle strength after cervical spinal cord injury](#)*  
[Matthew Walker, PhD](#), Research Assistant Professor, Department of Anesthesiology & Pain Medicine  
*Title: [Computational approaches to study regulation of mitochondrial RNase P: Implications for muscle mitochondrial biogenesis in heart failure](#)*
- 10:45 am **BREAK**

- 11:00 am **Keynote Session Introduction & Moderator**  
**David Marcinek, PhD**, Co-Investigator, CTMR Metabolism Core
- 11:05 am **Keynote Session: Investigators from the Study of Muscle, Mobility, and Aging (SOMMA)**  
**Steve Cummings, MD**, Professor of Medicine, University of California, San Francisco  
Title: *Translational research, cellular epidemiology and SOMMA*  
**Nancy Glynn, PhD, FACSM, FGSA**, Associate Professor of Epidemiology, University of Pittsburgh  
Title: *Perceived and Performance Fatigability in Older Adults: Measurements and Findings from SOMMA*  
**Paul Coen, PhD**, Associate Investigator at the Translational Research Institute, Advent Health Research Institute  
Title: *Mitochondrial energetics and age-related phenotypes in SOMMA*  
**Panel Discussion, Chair:**  
**Peggy Cawthon, PhD, MPH**, Associate Professor, Epidemiology & Biostatistics, University of California, San Francisco
- 12:30 pm **LUNCH BREAK**, C123A/B, boxed lunches provided
- 1:30 pm **Recent CTMR Pilot Grant Awardees (Year 6)**  
Moderator: **Dan Rafferty, PhD**, Core Director, CTMR Metabolism  
**Silvia Marchianò, PhD, PharmD**, Acting Instructor, Department of Laboratory Medicine & Pathology and **Elaheh Karbassi, PhD**, Acting Instructor, Department of Laboratory Medicine & Pathology  
Title: *Mutational screening of ribonucleotide reductase (RNR) activity for improved cell-based heart regeneration*  
**Joe Powers, PhD**, Assistant Professor Department of Laboratory Medicine & Pathology and Mechanical Engineering  
Title: *Measuring and modeling emergent mechanical behavior of remodeled myocytes due to Filamin C deletion*  
**Wentao Zhu, PhD**, Acting Assistant Professor, Department of Anesthesiology & Pain Medicine  
Title: *A Comprehensive Metabolomics Investigation into the Molecular Mechanisms of ZFYVE1 in a Mouse Model of Heart Failure.*  
**Matthew Childers, PhD**, Research Scientist 4, Department of Bioengineering  
Presented by **Aditi Prabhala**, Master's Student, Bioengineering  
Title: *Examining the Mechanisms of the Dilated Cardiomyopathy-Associated Myosin Mutation R369Q*  
**Joel Chamberlain, PhD**, Research Associate Professor, Division of Medical Genetics, and **Seung Wook Oh, PhD**, Chief Operating Officer, Kinea Bio, Inc.  
Title: *Cell-derived nanoparticle functional assessment in model cells as a delivery platform for muscular dystrophy antisense therapy*  
**Shabnam Salimi, MD, MSc, FAHA**, Acting Instructor, Department of Anesthesiology & Pain Medicine  
Title: *Mechanistic Insights into DOX-induced Accelerated Aging and Mitigation Strategies*

2:15 pm

### Poster Lightning Talks

Moderator: **Katie Mitzelfelt, PhD**, Program Manager, CTMR

**Kyrah Turner**, Graduate Student, Tanner Lab, Molecular Biosciences, WSU  
*Ablation of cardiac myosin binding protein-C induces cell signaling for fibrosis and hypertrophy prior to morphological remodeling of the myocardium*

**Anna V. Naumova, PhD**, Research Associate Professor, Radiology  
*Circumferential Strain Recovery after Human Cardiomyocyte Transplantation in Minipigs using a Novel Frequency-based Method for Myocardial Tagging and Quantification*

**Åshild Telle, PhD**, Postdoc, Boyle Lab, Bioengineering  
*Mechanical modeling of cardiac fibrosis with explicit spatial representation of myocyte loss and collagen alignment*

**Lindsey Anderson, PhD**, Acting Assistant Professor, Geriatric Research, VA Puget Sound  
*Metabolomic Perturbations during Androgen Deprivation Therapy are Associated with Decline in Function but not Lean Mass*

**Trevor Mollot**, Graduate Student, Sniadecki Lab, Bioengineering  
*Conditions for Optimal Acute Retention of Stem Cell-derived Cardiomyocytes for Intramyocardial Injections in Sprague Dawley Rats*

**Riya Keshri, PhD**, Postdoc, Ruohola-Baker Lab, Biochemistry  
*A direct reprogramming of fibroblast into skeletal muscles targeting receptor signaling pathways with AI-designed heterofusions*

**Kerry Kao**, Graduate Student, Regnier Lab, Bioengineering  
*A molecular scale investigation of the mechanisms of contractile dysfunction for the hypertrophic cardiomyopathy MYH7 G256E mutation*

**Christian Mandrycky, PhD**, Postdoc, Mack & Regnier Labs, Bioengineering  
*Modeling distal arthrogryposis with stem cell derived skeletal muscle*

2:45 pm

**Poster Break & Scavenger Hunt**, Building C Lobby

4:00 pm

### CTMR Investigator Talks

Moderator: **Jen Davis, PhD**, Co-Core Director, CTMR Quantitative Analysis Core

**Jenny Robinson, PhD**, Assistant Professor, Orthopaedic Surgery & Sports Medicine & Mechanical Engineering

Title: *Tools to Interrogate Sex Differences in Estrogen Signaling for Musculoskeletal Applications*

**Bert Tanner, PhD**, Associate Professor, Washington State University

Title: *Emulating muscle-tendon dynamics via real-time feedback at the onset of contractile activation in single skeletal muscle fibers*

**Hichem Tassaout, PharmD, PhD**, Acting Assistant Professor, Department of Neurology

Title: *SIMPLI-GT: A Novel Gene Replacement Method to Express Large Proteins in Musculoskeletal Diseases*

**Loretta Little**, Managing Director, Washington Research Foundation

Title: *Pathways to Commercialization*

- 5:00 pm **Featured Research Talk**  
*Introduction & Moderator: [Michael Regnier, PhD](#), Director, CTMR*  
[Shelly Sakiyama-Elbert, PhD](#), Professor Department of Bioengineering and Vice Dean of Research and Graduate Education, UW School of Medicine  
Title: *Strategies for spatial and temporal control of drug delivery to enhance motor nerve regeneration.*
- 5:20 pm **CTMR Renewal Celebration**, Building C Lobby  
*Speakers:*  
[Michael Regnier, PhD](#), Director, CTMR  
[Shelly Sakiyama-Elbert PhD](#), Vice Dean, UW School of Medicine  
[Jihui Yang, PhD](#) Vice Dean, UW College of Engineering  
[Jen Davis, PhD](#), Interim Director of The Institute for Stem Cell & Regenerative Medicine, Director of the Center for Cardiovascular Biology  
**Poster Scavenger Hunt Drawing**
- 5:40 pm **Poster Session and Reception**, Building C Lobby  
Appetizers, beer, wine, and soft drinks will be served
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Questions? Please contact: Katie Mitzelfelt, [kmitz@uw.edu](mailto:kmitz@uw.edu)

<http://ctmr.washington.edu/>