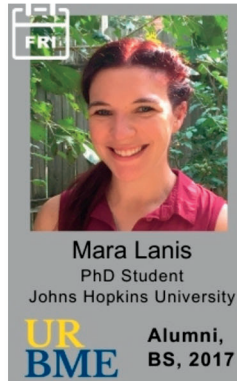




**Cellular and Molecular Mechanobiology II**

Session Chair: Whasil Lee, PhD – University of Rochester, NY  
Session Chair: Eno Ebong – Northeastern University  
Track Chair: Jeffrey G. Jacot, PhD – University of Colorado Anschutz Medical Campus  
Track Chair: Hossein Taviana, PhD – University of Akron


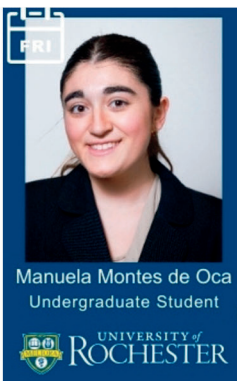
**Platform Session**  
Biomechanics - Platform Session  
Friday, Oct. 25, 8:30 -10:00 AM  
Location: Room 343

**Investigating Co-Activation of CD4+ and CD8+ T-cells Using an Artificial Lymph Node**

Presenting Author: Mara Lanis, BS – Johns Hopkins University  
Co-Author: Natalie K. Livingston, PhD – Massachusetts General  
Co-Author: Pratibha Pradeep – Johns Hopkins Univ.  
Primary Investigator: Jonathan P. Schneck, MD, PhD – Johns Hopkins University


**Poster N12**  
Biomaterials - Poster Session C  
Friday, Oct. 25, 10:00–11:00 AM  
Location: Exhibit Hall E, F & G

**Modeling of Sensors Used to Validate FE models of Articular Joint Contact: A Comparison of Simulated Hertz Contact**

Presenting Author: Manuela Montes de Oca – Univ. of Rochester  
Co-Author: Kalle Chastain, MS – Hospital for Special Surgery  
Primary Investigator: Amy L. Lerner, PhD – Univ. of Rochester


**Poster E1**  
Biomechanics - Poster Session D  
Friday, Oct. 25, 3:30 – 4:30 PM  
Location: Exhibit Hall E, F & G




**Mechanical susceptibility of chondrocytes by Piezo1 modulators and inflammatory cytokines in situ**

Presenting Author: Johann Kintzel – University of Rochester  
Co-Author: Suk Hee Lee – Univ. of Rochester Medical Center  
Primary Investigator: Whasil Lee, PhD – Univ. of Rochester


**Poster D7**  
Biomechanics - Poster Session D  
Friday, Oct. 25, 3:30 – 4:30 PM  
Location: Exhibit Hall E, F & G




**Investigating the Cooperation Between Endothelin B Receptor and Heparan Sulfate in Regulating Endothelin-1 Expression Using qPCR**

Presenting Author: Christina I. Kyriacou – Univ. of Rochester  
Co-Author: Camden Holm, BS – Worcester Polytechnic Institute  
Last Author: Solomon Mensah – Worcester Polytechnic Institute

**Poster H10**  
Cardiovascular Engineering - Poster Session D  
Friday, Oct. 25, 3:30 – 4:30 PM  
Location: Exhibit Hall E, F & G




**Software Development For Fast and Accurate Cell Identification Across Multiple Imaging Modalities**

Presenting Author: Anastasiia Rudaeva – Univ. of Rochester  
Co-Author: Brandon Williams, MS – Boston University  
Primary Investigator: John A. White – Boston University

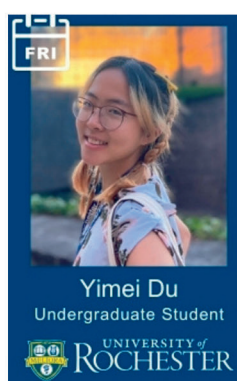
**Poster G8**  
Biomedical Imaging and Instrumentation, Poster Session D  
Friday, Oct. 25, 3:30 – 4:30 PM  
Location: Exhibit Hall E, F & G




**Mechanical stress response of fibroblast cells on Vulvar Lichen Sclerosus patients**

Presenting Author: Faizah M. Ahmed – Univ. of Rochester  
Last Author: Falsetta Megan

**Poster L19**  
Women's Health - Poster Session D  
Friday, Oct. 25, 3:30 – 4:30 PM  
Location: Exhibit Hall E, F & G

**Role of apolipoprotein E isoforms in blood-brain barrier stability**

Presenting Author: Yimei Du – University of Rochester

**Poster J19**  
Nano and Micro Technologies - Poster Session D  
Friday, Oct. 25, 3:30 – 4:30 PM  
Location: Exhibit Hall E, F & G



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Date & Time	Presenter	Title / Affiliation	Type	Title
Thursday, Oct. 24 8:45 -9:00 AM Room 339	Rebecca Irwin	Faculty (Visiting) Joining UR BME in July 2025	Talk, Orthopedic and Rehab- ilitation Engineering: Articular Cartilage, Meniscus, and Joints	Delayed lubricin injection improves cartilage repair in an in vivo rabbit osteo-chondral defect model
Thursday, Oct. 24 10:00–11:00 AM Exhibit Hall E, F & G	Lila Pender	Undergraduate Student	Poster L2, Tissue Engineering - Poster Session A	Composite Tissue Engineered Approach Based on Microfiber Scaffolds to Resist Hydrogel Contraction
Thursday, Oct. 24 10:00–11:00 AM Exhibit Hall E, F & G	Alexandra Trzpis	Undergraduate Student	Poster C6, Biomaterials - Poster Session A	Characterization of Extracellular Matrix Obtained from Cell-Based Hollow Fiber Membranes
Thursday, Oct. 24 10:00–11:00 AM Exhibit Hall E, F & G	Tram Nguyen	Alumni, BS '22	Poster M13 Biomanufacturing- Poster Session A	3D-printed magnesium isotropic porous scaffolds via multi-material additive manufacturing for bone tissue engineering
Thursday, Oct. 24 2:45 – 3:45 PM Exhibit Hall E, F & G	Xiang Tang	Undergraduate Student	Poster D9 Biomechanics - Poster Session B	Differential expression and functional roles of Piezo1 in articular condyle medial and lateral cartilage in situ
Thursday, Oct. 24 2:45 – 3:45 PM Exhibit Hall E, F & G	Hong Zhang	Undergraduate Student	Poster G1 , Biomedical Imaging and Instrumentation - Poster Session B	Development of an Experimental Platform to Test Integrated Diffuse Correlation Tomography and Ultrasound Probes for Breast Cancer Imaging
Friday, Oct. 25 8:30 -10:00 Room 343	Whasil Lee	Faculty (Primary) Assitant Professor	Platform Session Biomechanics - Platform Session	Cellular and Molecular Mechanobiology II
Friday, Oct. 25 10:00 - 11:00 AM Exhibit Hall E, F & G	Maris Lana	Alumni, BS '22	Poster N12 - Biomaterials - Poster Session C	Investigating Co-Activation of CD4+ and CD8+ T-cells Using an Artificial Lymph Node
Friday, Oct. 25 3:30 – 4:30 PM Exhibit Hall E, F & G	Johann Kintzel	Undergraduate Student	Poster D7 Biomechanics - Poster Session D	Mechanical susceptibility of chondrocytes by Piezo1 modulators and inflammatory cytokines in situ
Friday, Oct. 25 3:30 – 4:30 PM Exhibit Hall E, F & G	Manuela Montes de Oca	Undergraduate Student	Poster E1 Biomechanics - Poster Session D	Modeling of Sensors Used to Validate FE models of Articular Joint Contact: A Comparison of Simulated Hertz Contact
Friday, Oct. 25 3:30 – 4:30 PM Exhibit Hall E, F & G	Anastasiia Rudaeva	Undergraduate Student	Poster G8 Biomedical Imaging and Instru- mentation, Poster Session D	Software Development For Fast and Accurate Cell Identification Across Multiple Imaging Modalities
Friday, Oct. 25 3:30 – 4:30 PM Exhibit Hall E, F & G	Christina I. Kyriacou	Undergraduate Student	Poster H10 Cardiovascular Engineering - Poster Session D	Investigating the Cooperation Between Endothelin B Receptor and Heparan Sulfate in Regulating Endothelin-1 Expression Using qPCR
Friday, Oct. 25 3:30 – 4:30 PM Exhibit Hall E, F & G	Yimei Du	Undergraduate Student	Poster J19 Nano and Micro Technologies - Poster Session D	Role of apolipoprotein E isoforms in blood-brain barrier stability
Friday, Oct. 25, 3:30 – 4:30 PM Exhibit Hall E, F & G	Faizah M. Ahmmed	Undergraduate Student	Poster L19 Women's Health - Poster Session D	Mechanical stress response of fibroblast cells on Vulvar Lichen Sclerosus patients
Saturday, Oct. 26 8:30 - 8:45 AM Room 315	Rebecca Irwin	Faculty (Visiting) Joining UR BME in July 2025	Talk - Neural Engineering Engineering - Neuroimaging	Cerebral Focal Stroke Causes Increased Incidence of Non-Flowing Capillaries Hundreds of Micrometers into the Adjacent Microvasculature
Saturday, Oct. 26, 10:00 - 11:00 AM Exhibit Hall E, F & G	Rebecca Irwin	Faculty (Visiting) Joining UR BME in July 2025	Poster AA5 - Orthopedic and Rehabilitation Engineering, Poster Session E	Medial cartilage defect drives matrix and cell pathology in compartment-matched meniscus
Saturday, Oct. 26, 10:00 - 11:00 AM Exhibit Hall E, F & G	Yeidi N. Yuja Vaquiz	Undergraduate Student	Poster F9, Biomedical Imaging and Instrumentation - Poster Session D	Ultrasound and Photoacoustic Guided Gastrotomy to Prevent Colonic Injury
Saturday, Oct. 26, 10:00 - 11:00 AM Exhibit Hall E, F & G	Julia Rothschild	Undergraduate Student	Poster K4 Nano and Micro Technologies - Poster Session E	Testing of nanoporous silicon-nitride membrane ultrafiltration for hemodialysis
Saturday, Oct. 26 12:45 -1:00 PM Room 340	Martha J. Gdowski	Faculty (Secondary) Associate Professor	Talk - Neural Engineering Engineering - Neuroimaging	Empowering Biomedical Engineers: Advancing Human Anatomy Education through Experiential Learning with Medical Devices