## Platform Presentations

**Thursday, October 18**

**Platform Session • Thurs – 1 • 8:00am – 9:30am**

**8:00AM**

**“Cellular Energetic Requirements During Cell Migration in Confined 3D Spaces”**
M. Zanotelli, A. Rahman-Zaman, F. Bordeleau, J. VanderBurgh, P. Taufalele, C. Reinhart-King
Track: Cell Migration - Cellular and Molecular Bioengineering • Thurs–1–12, Room A404

**Platform Session • Thurs – 2 • 1:30pm – 3:00pm**

**1:30 PM**

**“Contraction of the Cell Rear is Essential for Driving Nuclear Translocation Through Confinements”**
Track: Cellular and Molecular Bioengineering - Cancer Cell Motility and Migration • Thurs–2–12, Room A404

**1:45 PM**

**“Engineering biomaterial microenvironments to facilitate long-term, clinical-scale skeletal muscle stem cell expansion”**
K. Kim, A. Loiben, B. Cosgrove
Track: Stem Cell Engineering - Advanced Biomanufacturing and Translation of Stem Cell Therapies • Thurs–2–18, Room A408

**2:15 PM**

**“E-Cadherin Facilitates Breast Cancer Metastasis in Non-Motile Phenotypically Sorted Subpopulation”**
L. Hapach, S. Carey, Z. Goldblatt, T. Cao, D. Pokhriyal, J. Li, F. Bordeleau, M. King, C. Reinhart-King
Track: Cancer Technologies - Tumor Metastasis • Thurs–2–3, Room A410

**2:45 PM**

**“Cooperative Migration Between Invasive and Non-Invasive Cancer Subpopulations Optimizes Metastasis”**
L. Hapach, S. Carey, Z. Goldblatt, W. Wang, C. Reinhart-King
Track: Cellular and Molecular Bioengineering - Cancer Cell Motility and Migration • Thurs–2–12, Room A404

**Platform Session • Thurs – 3 • 3:45pm – 5:15pm**

**4:30 PM**

**“Lymphatics-like Microdevices to Study the Role of Lymphoid Microenvironment on B Cell Receptor Signaling in Chemoresistant Human B Cell Lymphomas”**
F. Apoorva, A. Loiben, S. Shah, L. Fontan, B. Kirby, A. Melnick, B. Cosgrove, A. Singh
Track: Cancer Technologies - Cancer Immunomengineering • Thurs–3–3, Room A410

**“TRAIL-coated Leukocytes to Kill Circulating Tumor Cells in the Flowing Blood from Prostate Cancer Patients”**
N. Ortiz Otero, J. Marshall , T. Subramanian , D. Sahasrabudhe, E. Messing , M. King
Track: Cellular and Molecular Bioengineering - ImmunoEngineering • Thurs–3–12, Room A404

**“Cell-free DNA Profiling of Peritoneal Fluid is a Novel Test for Peritoneal Dialysis-Associated Infection”**
Track: Bioinformatics, Computational and Systems Biology - Systems Approaches to Therapy, Therapeutics, and Precision Medicine • Thurs–3–15, Room A407

**5:00 PM**

**“Inference of Cytokine Networks in Sputum and Peripheral Blood Associated with AE-COPD”**
K. Norman, C. Freeman, N. Bidthanapally, M. Han, F. Martinez, J. Curtis, K. Arnold
Track: Bioinformatics, Computational and Systems Biology - Systems Approaches to Therapy, Therapeutics, and Precision Medicine • Thurs–3–15, Room A407
Platform Presentations

Friday, October 19

Platform Session • Fri - 1 • 8:00am – 9:30am

8:00AM
“Glycation Decreases Intrafibrillar Collagen Mineralization with Effects on Breast Cancer Cells”
S. Choi, N. Vidavsky, L. Estroff, C. Fischbach
Track: Biomaterials - Natural Biomaterials • Fri–1–2, Room A312

9:15AM
“Mechanical Behavior Of Autologous Fibrin Sealants For Cartilage Repair”
R. Irwin, J. Commins, I. Cohen, L. Bonassar, L. Fortier
Track: Orthopedic and Rehabilitation Engineering - Cartilage and Osteoarthritis • Fri-1-17, Room A304

Platform Session • Fri - 2 • 1:15pm – 2:45pm

1:15PM
“In-vivo Preservation of Volume and Topographic Detail of Auricular Cartilage Using Biocompatible 3D-Printed Scaffold”
Track: Biomaterials - Scaffolds I • Fri-2–2, Room A312

1:30PM
“Abrupt Transitions in Matrix Stiffness Create Endothelial Stress Concentrations”
J. VanderBurgh, A. Potharazu, C. Reinhart-King
Track: Biomechanics - Mechanobiology of Cell Adhesion • Fri–2–6, Room A315
Platform Presentations

**Platform Session**  •  Sat - 1  •  8:00am – 9:30am

**8:00AM**
“Lamin Mutations Cause Mechanically-induced Nuclear Envelope Rupture and DNA Damage in Muscle Fibers”
Track: Biomechanics - Cellular and Molecular Bioengineering - Cellular and Molecular Biomechanics: Mechanobiology  •  Sat–1–12, Room A404

**9:00AM**
“Nuclear Deformability and Expression of Lamin A/C as Predictors of Metastatic Potential in Breast Cancer Cells”
E. Bell, P. Shah, A. McGregor, P. Isermann, D. Kim, M. Smolka, P. Span, J. Lammerding
Track: Cancer Technologies - Physical and Biochemical Pathways in Cancer  •  Sat–1–3, Room A410

**9:15AM**
“Heterogeneities in Vascular Stiffness Disrupt Endothelial Monolayer Integrity”
J. VanderBurgh, H. Hotchkiss, A. Potharazu, C. Reinhart-King
Track: Cardiovascular Engineering - Cardiovascular Mechanobiology  •  Sat–1–10, Room A401

**Platform Session**  •  Sat - 2  •  1:30pm – 3:00pm

**2:06PM**
“Effect of local demyelination in the corpus callosum on mTBI mechanism”
S. Snyder, L. Crawford, D. Putnam
Track: Undergraduate Research & Design - Undergraduate Research & Design II  •  Room A408

**Platform Session**  •  Sat - 3  •  3:15pm – 4:45pm

**3:30PM**
“High-throughput Single-cell Profiling of Viral Genotypes and Host Phenotypes During Viral Infection”
S. Keshavjee, P. Burnham, M. Saikia, J. Parker, I. De Vlaminck
Track: Bioinformatics, Computational and Systems Biology - Systems Biology of Infectious Disease  •  Sat–3–12, Room A304