

BIOENG 1002: Intramural Internship

2017 Fall Technical Symposium

Number of presentations = **37**

Abigail Snyder

Mentor: Dr. David Vorp

Assessment of Human Stem Cell Retention and Host Cell Invasion in an Implanted Seeded Tubular Scaffold

Yousif Shwetar

Mentor: Dr. Marc Simon

Assessment of Patient Hemodynamics Pre-Left Ventricle Assist Device Implant to Determine Change of Right Ventricle Failure

Danielle Stark

Mentor: Dr. Michael Modo

Mapping the Extracellular Matrix: Immunohistological Visualization and Image Acquisition

Monica Bell

Mentor: Dr. Steven Abramowitch

Development of Auxetic Meshes for Pelvic Organ Prolapse Repair

Kelsey Toplak

Mentor: Dr. Michael Amit (Karmiel, Israel)

Novel Injectable Biomimetic Intervertebral Hydrogel Disks

Meredith Lie-Atjam

Mentor: Dr. Michael Amit (Karmiel, Israel)

Novel Injectable Biomimetic Hydrogel for Intervertebral Disc Degeneration

John Driggers

Mentor: Dr. April Chambers

Finding Anatomical Volume Using 3D Scanner

Kalon Overholt

Mentor: Dr. Rocky Tuan

A New Bioreactor for Osteoarthritis Study

Jake Donovan

Mentor: Dr. George Stetten

The Micro-blip

Oliver Snyder

Mentor: Dr. George Stetten

Texture Simulation with One Degree-of-Freedom

Eric Zhang

Mentor: Dr. Ian Sigal

Prototyping a Fourier Ptychographic Imaging System for Polarized Light Microscopy of the Optic Nerve Head

Nowa Bronner

Mentor: Dr. Oliver Schlüter

Examination of Two Tet-On Constructs with Sh95 in the Visual Cortex

Sam Pollock

Mentor: Dr. Jonathan Vande Geest

Method for Thermoforming Abdominal Aortic Aneurysm Grafts

Shayla Goller

Mentor: Dr. Lance Davidson

Tissue Assembly Using Flat Cell Sheets

Eric Cecco

Mentor: Dr. Mark Gladwin

The Effect of Oxygen on Nitrite Reduction to Nitric Oxide by the Mitochondrial Molybdopterin Enzyme mARC2

Lea Wenger

Mentor: Dr. William de Groat

Effect of Gleevec on Bladder Contractions in Neonatal and Adult Rats

Hannah Liu

Mentor: Dr. Bok Seng Yeow

Four-Point Fortune-Teller-Inspired Origami Grasper in Minimally Invasive Surgery

Jacob Meadows

Mentor: Dr. Bok Seng Yeow

Preliminary Development of a Low-Cost Endoscope for Nasopharyngoscopy

Tyler Bray

Mentor: Dr. Alexander Spiess

Development of a 3D Printed, Low Cost Thumb Prosthetic

Ellen Martin

Mentor: Dr. Kurt Beschorner

*Characterizing the Required Friction during Ladder Climbing***Shane McKeon**

Mentor: Dr. Howard Aizenstein

*Co-registration of in-vivo and ex-vivo Human MRI Brain Images***Sidney Cannon-Bailey**

Mentor: Dr. Navit Roth

*Testing Apparatus for a Device to Minimize Hand Tremors***Alex Metelow**

Mentor: Dr. William Federspiel

*Oscillating Hollow Fiber Membrane Artificial Lung***Bianca De**

Mentor: Dr. William Federspiel

*Extracorporeal Recirculation with Immobilized IL-8 for Neutrophil CXCR-1/2 Downregulation***Eliza Schally**

Mentor: Dr. Tracy Cui

*Development of a Neural Electrode Coating Capable of Local Drug Delivery***Larissa Allen**

Mentor: Dr. Tracy Cui

*L1 as an Inhibitor of Neural Microglia Response***Noah Freedman**

Mentor: Dr. Tracy Cui

*Effects of Microelectrode PEDOT/fCNT Density on Dopamine Detection via Square Wave Voltammetry***Catherine Smith**

Mentor: Dr. Rich Debski

*Rat Rotator Cuff Supraspinatus Tendon Structural Properties***Ian Moran**

Mentor: Dr. Savio L-Y. Woo

*Development of the Magnesium Ring for the Human ACL***Christine Heisler**

Mentor: Dr. Bryan Brown

Effect of Extracellular Nerve Matrix Hydrogel on Recovery After Peripheral Nerve Injury

Ruben Hartogs

Mentor: Dr. Bryan Brown

Effect of Nerve ECM Gel on Functional Recovery after Peripheral Nerve Crush Injury

Kathryn LaBelle

Mentor: Dr. Bryan Brown

Effect of Peripheral Nerve-Specific Extracellular Matrix Hydrogel on Recovery after Peripheral Nerve Injury

Ethan Paules

Mentor: Dr. Stephen Badylak

Injectable Extracellular Matrix to Treat Ulcerative Colitis in a Rat Model

Michael Cohan

Mentor: Dr. Stephen Badylak

BARD Competitive Study and Characterization of MBV-associated IL-33

James Kern

Mentor: Dr. Youngjae Chun

Biocompatibility and Functionality Assessment of a Novel Nitinol Tongue Prosthetic Device to Treat Dysphagia

Teresse Chambers

Mentor: Dr. Vaughn Cooper

Modeling the Evolution of Pseudomonas Aeruginosa in Biofilms

Nathan Fleming

Mentor: Dr. Aaron Batista

Pre-movement Neural Basis for Behavior Deviation