BIOMEDICAL ENGINEERING

University of Arkansas

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Multiscale Quantification of Microstructural Changes in Dermal Collagen in Young and Aged Mice

Authors: Alan Woessner, Jake Jones, Edward Sander, **Kyle Quinn**

Track: Biomedical Imaging and Instrumentation

Session Type: Oral

Presentation Start Time: 8:00 AM – 9:30 AM

Room A316

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Clinical Needs Finding - A Novel Course Promoting Engineering Design, Community Engagement, and Healthcare Innovations

Authors: **Hanna K. Jensen, Raj R. Rao**

Track: Biomedical Engineering Education

Session Type: Oral

Presentation Start Time: 1:30 PM – 3:00 PM

Sidney Marcus Auditorium

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Label-Free Optical Biomarkers for Assessing Calcification Progression in the Aortic Valve

Authors: Ishita Tandon, Olivia Kolenc, Alan Woessner, Isaac Vargas-Lopez, **Kyle Quinn, Kartik Balachandran**

Track: Cardiovascular Engineering

Session Type: Poster

Presentation Start Time: 9:30-5:00PM

Exhibit Hall A Poster #447

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Hydration Level Assessment with Peripheral Venous Pressure Waveform Analysis

Authors: Ali AlAlawi, Md Abul Hayat, Patrick Bonasso, Jeffrey M. Burford, Melvin S Dassinger, **Hanna K. Jensen,** Jingxian Wu, Kevin W. Sexton, **Morten O. Jensen**

Track: Cardiovascular Engineering

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #465

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Vector Flow Imaging for Cardiovascular Applications in Pediatric Patients and Models

Authors: R. Thomas Collins II, Megan Laughlin, **Hanna K. Jensen**, Sean Lang, Elijah Bolin, Joshua Daily, **Morten O. Jensen**

Track: Cardiovascular Engineering

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #492

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Investigation of acute radiation-induced changes in oxygenation in a murine breast tumor model

Authors: Alaa Abdelgawad, Sina Dadgar, **Narasimhan Rajaram**

Track: Biomedical Imaging and Instrumentation

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #530

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Effects Of Anti-CCL2 Cytokine Inhibition In A Subcutaneous Balb/c-CT26 Colon Carcinoma Murine Model

Authors: Shelby N. Bess, Gage J. Greening, **Timothy J. Muldoon**

Track: Cancer Technologies

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #624

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Regenerative Repair of Volumetric Muscle Loss Injuries is Sensitive to Age

Authors: John Kim, Benjamin Kasukonis, Grady Dunlap, Richard Perry, Tyrone Washington, **Jeffrey Wolchok**

Track: Tissue Engineering

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #728

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Size, Concentration, And Time Dependent Effects Of PEGylated Gold Nanoparticles On Cardiovascular Cell Viability

Authors: Jeffrey Henson, Jin-Woo Kim, **Hanna Jensen, Morten Jensen**

Track: Nano and Micro Technologies

Session Type: Poster

Presentation Start Time: 9:30-5:00PM

Exhibit Hall A Poster #751

Presentations at 2018 BMES Annual Meeting

THURSDAY, OCTOBER 18, 2018

TITLE: Development of Chitosan Nanoparticles for the Delivery of Pro-Elastogenic Biomolecules

Authors: Christofer Baldwin, Srikanth Sivaraman, **Raj Rao**

Track: Stem Cell Engineering

Session Type: Poster

Presentation Start Time: 9:30-5:00PM

Exhibit Hall A Poster #927

Presentations at 2018 BMES Annual Meeting

FRIDAY, OCTOBER 19, 2018

TITLE: Efficacy testing of an injectable matrix gel for the treatment of fatty muscle infiltration

Authors: Tai Huynh, John Kim, Grady Dunlap, S. Ahmadi, **Jeffrey Wolchok**

Track: Biomaterials

Session Type: Oral

Presentation Start Time: 1:15 – 2: 45 PM

Room A313

Presentations at 2018 BMES Annual Meeting

FRIDAY, OCTOBER 19, 2018

TITLE: The Effects of Physical Activity on Recovery From Volumetric Muscle Loss with Autologous Repair

Authors: Richard Perry, John Kim, Wesley Haynie, Tyrone Washington, **Jeffrey Wolchok**

Track: Orthopedic and Rehabilitation Engineering

Session Type: Oral

Presentation Start Time: 1:15 – 2:45 PM

Room A304

Presentations at 2018 BMES Annual Meeting

FRIDAY, OCTOBER 19, 2018

TITLE: Using Dimensionless Numbers to Predict Centrifugal Jet Spun Nanofiber Morphology

Authors: Prashanth Ravishankar, Alex Khang, Melissa Laredo, Ugochukwu Odega, **Kartik Balachandran**

Track: Tissue Engineering

Session Type: Oral

Presentation Start Time: 3:30 – 5:00 PM

Room A302

Presentations at 2018 BMES Annual Meeting

FRIDAY, OCTOBER 19, 2018

TITLE: Generation and Characterization of Stem Cell Derived Smooth Muscle Cells for Elastic Matrix Regeneration

Authors: Srikanth Sivaraman, A. Ramamurthi, **Raj R. Rao**

Track: Stem Cell Engineering

Session Type: Poster

Presentation Start Time: 9:30-5:00PM

Exhibit Hall A Poster #446

Presentations at 2018 BMES Annual Meeting

FRIDAY, OCTOBER 19, 2018

TITLE: An achiral peptoid reduces RAGE expression and attenuates inflammatory response: A potential therapeutic for Alzheimer's disease

Authors: Lauren Wolf, Shannon Servoss PhD, Melissa Moss PhD

Track: Cellular and Molecular Engineering

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #693

Presentations at 2018 BMES Annual Meeting

FRIDAY, OCTOBER 19, 2018

TITLE: An In Vivo Weight Drop Model to Investigate the Secondary Effects of Multiple Traumatic Brain Injuries

Authors: Celeste Dunn, Nasya Sturdivant, Sara Venier, Houston Lamb, Hector Rosas-Hernandez, Syed Ali, **Jeffrey Wolchok, Kartik Balachandran**

Track: Neural Engineering

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #801

Presentations at 2018 BMES Annual Meeting

FRIDAY, OCTOBER 19, 2018

TITLE: Novel Method for Emboli Analog Formation Towards Improved Stroke Retrieval Devices

Authors: Anne Preut, Megan Laughlin, **Hanna Jensen**, Jamie Hestekin, **Morten Jensen**

Track: Neural Engineering

Session Type: Poster

Presentation Start Time: 9:30 – 5:00 PM

Exhibit Hall A Poster #806

Presentations at 2018 BMES Annual Meeting

SATURDAY, OCTOBER 20, 2018

TITLE: In Vivo, Label-Free Multiphoton Microscopy Quantifies Age-Related Differences In Skin Wound Metabolism

Authors: Jake Jones, Hallie Ramser, **Kyle Quinn**

Track: Biomedical Imaging and Instrumentation

Session Type: Oral

Presentation Start Time: 8:15 – 8:30 AM

Room A315

Presentations at 2018 BMES Annual Meeting

SATURDAY, OCTOBER 20, 2018

TITLE: Visualizing Ischemic Skin Flap Necrosis Through Phasor Analysis of Auto fluorescence Lifetime Images

Authors: Hallie Ramser, Alan Woessner, S. Morteza Seyed Jafari, Fabian Blank, Maziar Shafighi, Helmut Beltraminelli, Ralph A. Schmid, Thomas Geiser, Robert Hunger, Amiq Gazdhar, **Kyle Quinn**

Track: Biomedical Imaging and Instrumentation

Session Type: Oral

Presentation Start Time: 8:45 – 9:00 AM

Room A315

Presentations at 2018 BMES Annual Meeting

SATURDAY, OCTOBER 20, 2018

TITLE: Characterizing metabolic changes in Leigh's Syndrome using label-free multiphoton microscopy

Authors: Olivia Kolenc, Ajibola Bakare, Isaac Vargas Lopez, Joshua Stabach, Shilpa Iyer, **Kyle Quinn**

Track: Biomedical Imaging and Instrumentation

Session Type: Oral

Presentation Start Time: 9:15 – 9:30 AM

Room A315

Presentations at 2018 BMES Annual Meeting

SATURDAY, OCTOBER 20, 2018

TITLE: Deconvoluting the Heterogeneity of Subcellular Cell Protrusion with Variable Lengths

Authors: Lucy Woodbury, Chuangqi Wang, Hee June Choi, Kwnmoo Lee

Track: Undergraduate Research and Design

Session Type: Poster

Presentation Start Time: 9:30 – 1:00 PM

Exhibit Hall A Poster #25

Presentations at 2018 BMES Annual Meeting

SATURDAY, OCTOBER 20, 2018

TITLE: Development of a Model for Accelerated Fatigue Testing of Venous Valves

Authors: Olga Brazhkina, Megan Laughlin, Hanna Jensen, Kevin Haney, Marc Girardot, **Morten Jensen**

Track: Undergraduate Research and Design

Session Type: Poster

Presentation Start Time: 9:30 – 1:00 PM

Exhibit Hall A Poster #387

Presentations at 2018 BMES Annual Meeting

SATURDAY, OCTOBER 20, 2018

TITLE: 233Connectivity and Spectral Analysis of Pre- and Post-Ictal Periods using Intracranial EEG

Authors: A. Jex, L. Larson-Prior, D. Escalona-Vargas.

Track: Undergraduate Research and Design

Session Type: Poster

Presentation Start Time: 9:30 – 1:00 PM

Exhibit Hall A Poster #233

Track Chair- Biomedical Imaging and Instrumentation (**Dr. Kyle Quinn)**

Session Chair- Detection, Therapy and Monitoring (**Dr. Kyle Quinn)**

Session Chair- Optics and Spectroscopy in Blood and Cardiovascular Applications (**Dr. Timothy Muldoon)**

Session Chair- Cancer Imaging (**Dr. Narasimhan Rajaram)**

Session Chair- Cardiovascular Engineering, Device Technologies and Biomedical Robotics, Vascular Devices and Hemodynamics (**Dr. Morten Jensen)**

Session Chair- Natural Biomaterials (**Dr. Jeffrey Wolchok**)

Abstract Reviewer- Biomaterials (**Dr. Raj Rao; Dr. Jeffrey Wolchok**); Cellular & Molecular Bioengineering (**Dr. Raj Rao**) Cardiovascular Engineering (**Dr. Raj Rao**; **Dr. Morten Jensen**); Stem Cell Engineering (**Dr. Raj Rao**); Biomedical Imaging & Instrumentation (**Dr. Narasimhan Rajaram; Dr. Timothy Muldoon**)

FACULTY service at BMES 2018

University of Arkansas

PROUD TO BME

University of Arkansas

Shelby Bess- 2018 BMES Student Travel Award

Alaa Abdelgawad- 2018 BMES Student Travel Award

Ishita Tandon -2018 BMES Career Development Award

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