

**SCHEDULE**  
**MCGOWAN INSTITUTE FOR REGENERATIVE MEDICINE**  
**2022 ANNUAL RETREAT**  
**University Club – All in-person sessions to be held at the University Club**  
**\*Pediatric Device Initiative Online Session Requires Separate Registration\***

**Monday, March 7<sup>th</sup>, 2022**

**8:00 AM – 9:00 AM (Ballroom A)**

***Breakfast***

**9:00 AM – 9:45 AM (Ballroom B)**

***State of the Institute/Retreat Kickoff***

William Wagner, PhD

Director, McGowan Institute for Regenerative Medicine

Distinguished Professor, Departments of Surgery; Chemical Engineering; and Bioengineering

**10:00 AM – 11:15 AM (Ballroom B)**

***Challenges of Biomedical Innovations and Entrepreneurship***

**Session Chair:**

Charles Sfeir, DDS, PhD

Director, Center for Craniofacial Regeneration

Chair, Department of Periodontics and Preventative Dentistry

Associate Dean, Research, School of Dental Medicine

Associate Professor, Periodontics and Preventative Dentistry, Oral and Craniofacial Sciences; and Bioengineering

**Speakers:**

***The Challenges of Starting a Company: What I Wish I Knew Then***

Kacey Marra, PhD

Professor, Departments of Plastic Surgery; and Bioengineering

***From Bench to Bedside, the LyGenesis Experience***

Eric Lagasse, PharmD, PhD

Associate Professor, Department of Pathology

***Dental, Oral and Craniofacial Tissue Regeneration Consortium***

Charles Sfeir, DDS, PhD

Director, Center for Craniofacial Regeneration

Chair, Department of Periodontics and Preventative Dentistry

Associate Dean, Research, School of Dental Medicine

Associate Professor, Periodontics and Preventative Dentistry, Oral and Craniofacial Sciences;  
and Bioengineering

***Fly on the Wall: Confessions of a Pitt Entrepreneur in Residence***

Tony Torres

Entrepreneur in Residence

Innovation Institute

University of Pittsburgh

**11:30 AM – 12:30 PM (Ballroom A)**

***Lunch***

**12:45 PM – 2:00 PM (Ballroom B)**

***Synthetic Biology Approaches to Regenerative Medicine***

**Session Chair:**

Andrew Duncan, PhD

Associate Professor

Department of Pathology

***Introduction***

Andrew Duncan, PhD

Associate Professor

Department of Pathology

**Speakers:**

***Synthetic Morphogenesis: Build to Understand Human-based Multicellular Systems***

Mo Ebrahimkhani, MD

Associate Professor

Department of Pathology

***Synthetic Human Livers, PLRC Approach and Services***

Alex Soto-Gutierrez, MD, PhD

Associate Professor

Department of Pathology

**Combined Q&A**

## **CATER T32 Fellows, Rapid Fire Talks (Ballroom B)**

### ***Understanding Kidney Disease and Therapies Utilizing Kidney Organoids***

Joseph Maggiore, BS

PhD candidate

Integrative Systems Biology Graduate Program

Medical Scientist Training Program

### ***Understanding and Engineering Hematopoiesis Using a Genetically Engineered Fetal Liver Niche***

Ryan LeGraw, BS

PhD candidate

Cellular and Molecular Pathology Graduate Program

### ***Generation of Innervated Tissue Chip to Study Joint Pain***

Meagan Makarczyk, BS

PhD candidate

Bioengineering Graduate Program

### ***Targeting Stroma-Mediated Drug Resistance in HER2+ Breast Cancer***

Matthew Poskus, BS, MS

PhD candidate

Bioengineering Graduate Program

### ***Modeling Human Post-Implantation Embryogenesis via a Synthetic Circuit***

Joshua Hislop, BS

PhD candidate

Bioengineering Graduate Program

## **2:00 PM – 3:15 PM (Ballroom B)**

### **Regenerative Rehabilitation**

#### **Session Co-Chair:**

Allison Bean, MD, PhD

Assistant Professor, Department of Physical Medicine and Rehabilitation

#### **Session Co-Chair:**

Amrita Sahu, PhD

Assistant Professor, Department of Physical Medicine and Rehabilitation

#### **Introduction:**

Allison Bean, MD, PhD

Assistant Professor, Department of Physical Medicine and Rehabilitation

**Speakers:**

*Sub-additive and suppressive effects of physical therapy on cell therapy in stroke*

Mike Modo, PhD

Professor, Department of Radiology

*Exploring the transcriptome and connectome for the study of muscle-brain axis*

Amrita Sahu, PhD

Assistant Professor, Department of Physical Medicine and Rehabilitation

**Combined Q&A**

**BiRM Fellows, Rapid Fire Talks (Ballroom B)**

*Cell Mechanics of Tissue Shaping and Extrusion*

Sommer Anjum, BS

PhD candidate

Bioengineering Graduate Program

*Use of Computational Morphometry and Modeling to Assess the Impact of Aging and Prolapse Repair on Female Pelvic Anatomy*

Shaniel Bowen, MS

PhD candidate

Bioengineering Graduate Program

*Assessing the Macrophage-Directed Remodeling Kinetics of a Peripheral Nerve Matrix Hydrogel*

Tyler Meder, BS

PhD candidate

Bioengineering Graduate Program

*Engineering Rotating Apical-Out Airway Organoid for Assessing Respiratory Cilia Motility*

Piyumi Wijesekara, BS

PhD candidate

Bioengineering Graduate Program

Carnegie Mellon University

**3:30 PM – 5:30 PM (Ballroom A)**

Poster Session

Hors d'oeuvres and Drinks

*Odd-numbered posters will be presented from 3:30 to 4:30 pm, and even-numbered posters will be presented from 4:30 to 5:30 pm.*

**Tuesday, March 8<sup>th</sup>, 2022**

**8:00 AM – 9:00 AM (Ballroom A)**

**Breakfast**

**9:00 AM – 10:15 AM (Ballroom B)**

**Cardiovascular Bioengineering**

**Session Chair:**

Rama Mukkamala, PhD

Professor, Departments of Anesthesiology and Perioperative Medicine; and Bioengineering

**Speakers:**

**9:00 AM – 9:25 AM**

***Predictive Analytics for Critical Care***

Michael Pinsky, MD

Professor, Departments of Critical Care Medicine; Cardiovascular Diseases; Clinical & Translational Science, Anesthesiology; and Bioengineering

**9:25 AM – 9:50 AM**

***Hospital Cardiac Output Monitoring***

Rama Mukkamala, PhD

Professor, Department of Anesthesiology and Perioperative Medicine; and Bioengineering

**Rapid Fire Talks (Ballroom B)**

**9:50 AM – 10:15 AM**

***Cuffless Blood Pressure***

Cederick Landry, PhD

Postdoctoral Associate

Department of Bioengineering

***Regenerative Treatments for Abdominal Aortic Aneurysm***

Ande Marini, BS

PhD Candidate

Bioengineering Department

***Oxygenator for Premature Babies***

Katelin Omecinski, BS

PhD Candidate

Bioengineering Department

**10:30 AM – 11:45 AM (Ballroom B)**

***Overview of the Center for Military Medicine Research – Strategic Partnerships & Funding Opportunities***

**Session Chair:**

Ron Poropatich, MD

Director, Center for Military Medicine Research

Professor, Departments of Pulmonary, Allergy, and Critical Care Medicine; Sports Medicine and Nutrition

**Speakers:**

***CMMR Overview, Partnerships (MIRM, SSoE, Trauma/Transfusion, DoD, VA), Omnibus IV Update, and Upcoming Meetings***

Ron Poropatich, MD

Director, Center for Military Medicine Research

Professor, Departments of Pulmonary, Allergy, and Critical Care Medicine; Sports Medicine and Nutrition

***Trauma and Transfusion Medicine Research Center and upcoming HERETIC meeting October 2022***

Philip Spinella, MD

Associate Medical Director, Center for Military Medicine Research

Co-Director, Trauma and Transfusion Medicine Research Center

Professor, Surgery and Critical Care Medicine

***Commercialization and Overview of SBIR, STTR, and AFWERX***

Jan Berkow, MBA

Program Manager for Commercialization, Center for Military Medicine Research

***Swanson School of Engineering Partnership with the Center for Military Medicine Research and Department of Defense***

Eva Lai, PhD

Director for Partnerships and Innovations

Swanson School of Engineering

***Community Engagement/Defense Innovation Economy in Pittsburgh***

Ann Gleeson, MS

Managing Director, Center for Military Medicine Research

**11:20AM – 11:45 AM**

**Discussion**

**12:00 PM – 1:00 PM (Ballroom A)**

**Lunch**

**3:00 PM – 4:30 PM (Online)**

**\* Requires Separate Registration Here: <https://www.pdforum.org/> \***

***Pediatric Device Trial Infrastructure: Clinical investigation of an implantable pediatric ventricular assist device - NHLBI PumpKIN (Pumps for Kids Infants and Neonates) Trial***

**Session Chair:**

Harvey Borovetz, PhD (chair)  
Distinguished Professor, Department of Bioengineering, University of Pittsburgh

**Panel Members:**

Harvey Borovetz, PhD  
Distinguished Professor, Department of Bioengineering, University of Pittsburgh

Ashley Magnavita, MPH, PMP  
PumpKIN contact of record, [www.clinicaltrials.gov](http://www.clinicaltrials.gov)  
Clinical Trial Monitoring & Protocol Design  
Director, Clinical Research Project Management, HealthCore

Kurt Dasse, PhD  
Member, NIH Executive Committee for the PumpKIN Program  
President, VADovations, Inc.

Tim Baldwin, PhD  
Former Deputy Chief of Advanced Technologies & Surgery Branch, NHLBI Division of Cardiovascular Sciences, Program Officer for PumpKIN  
Senior Staff Fellow/Reviewer, Circulatory Support Devices Team, FDA

Richard Schaub, PhD  
PumpKIN Site Support Center Preparedness & Bioengineering Pump Management  
Adjunct Assistant Professor of Bioengineering, University of Pittsburgh  
Sr. Director of Artificial Heart Program, UPMC  
Sr. Director of Mechanical Circulatory Support, Procirca