

**2018 McGowan Retreat Final Agenda
March 2, 2018**

Monday March 5th	Page	Tuesday March 6th	Page
Morning		Morning	
Breakfast and Morning Mixer w/Clinicians	2	Breakfast and Morning Mixer w/Clinicians	11
State of the Institute Address- William Wagner, PhD	2	Morning Breakout Sessions I (3 concurrent)	
McGowan Institute Distinguished Lecture Molly Shoichet, PhD- University of Toronto "Regenerative Strategies-Central Nervous System"	2	-Pittsburgh Biomedical Breakfast	11
		-Opening Doors to the Future of Cardiovascular Regenerative Medicine	12
		-Translating the Science of Tissue Plasticity for Human Performance Optimization and Injury Prevention	13
Morning Breakout Sessions (3 Concurrent)		Morning Breakout Sessions II (3 Concurrent)	
-Cell and Tissue Regenerative Therapies at UPMC	2	-Cancer Immunotherapy	14
-Reproductive Tissue Engineering and Women's Health	3	-Pediatric Innovations	16
-Vision Restoration	5	-Additive Manufacturing	17
Buffet Lunch-Roundtable topics	6	Buffet Lunch	18
Afternoon		Afternoon	
Pop-Up Workshops		Pop-Up Workshops	
-Nano/Microfabrication methods for Medical Applications	6	-Medical Technology Development: From Prototype to FDA Approval	18
-Advancing your early-stage research toward commercial translation	6	-Sponsored Research Project Overview -Pitt is "Open for Business"	18 19
Afternoon Breakout Sessions (3 Concurrent)		Afternoon Breakout Sessions (3 Concurrent)	
-Stem Cells and Aging	7	- Innovations in Clinical Diagnostics and Biomarkers - Drug Delivery	20 20
-Translating Redox Vascular Biology to the Clinic	8	-Strategic Planning Session: Optimizing Human, Materials and Systems Performance	21
-Craniofacial Tissue Engineering	9		
Trainee Rapid Fire Presentations	10		
Evening		Evening	
Poster Session/Evening Reception	11	Reception & Closing Banquet	22
		Keynote Presentation & Poster Awards	

**2018 McGowan Retreat Agenda
March 2, 2018**

Monday-March 5th

7:00 -7:45 AM	Breakfast and Morning Mixer w/Clinicians	University Club Gold Room Second Floor
8:00-8:15 AM	Director's Welcome and State of the Institute Address William R. Wagner, PhD Director of the McGowan Institute for Regenerative Medicine Professor of Surgery, Bioengineering and Chemical Engineering University of Pittsburgh	University Club Ballroom B Second Floor
8:15-9:15 AM	McGowan Institute for Regenerative Medicine Distinguished Lecture <i>Regenerative Strategies in the Central Nervous System</i> Molly Shoichet, PhD University Professor Program in Neuroscience University of Toronto	Ballroom B
9:15-9:30 AM	Break	
9:30-11:30 AM	Morning Breakout Sessions - Session 1 Cell and Tissue Regenerative Therapies at UPMC Organizers and Chairs: J. Peter Rubin, MD, FACS Chair-Department of Plastic Surgery, UPMC Endowed Professor of Plastic Surgery, and Professor of Bioengineering University of Pittsburgh And Lauren Kokai, PhD Research Assistant Professor Department of Plastic Surgery University of Pittsburgh <i>Regenerative Cell and Tissue Therapy Initiative: Harnessing the Power of our Cell Therapy Community</i> Lauren Kokai, PhD (10 minutes) <i>Regenerative Cell and Tissue Therapies at UPMC: A Model for Integrated Delivery of Innovative Therapies</i> J. Peter Rubin, MD, FACS (20 minutes)	Ballroom B

Regenerative Cell Therapy for Sports Medicine and Orthopedic Problems: Opportunities and Challenges

Kentaro Onishi, DO (20 minutes)

Associate Faculty

Assistant Professor

Departments of Physical Medicine and Rehabilitation and of Orthopaedic Surgery

University of Pittsburgh

Adipose Therapy for Foot Pain: A New Paradigm for Treating a Difficult Problem Translated to the Clinic

Jeffrey Gusenoff, MD (20 minutes)

Department of Plastic Surgery

University of Pittsburgh Medical Center

Regenerative Cell Therapy for Brain Injury

Ashu Jadhav, MD, PhD (20 minutes)

Assistant Professor

Departments of Neurology and Neurosurgery

University of Pittsburgh Medical Center

Cell and Tissue Manufacturing: A Primer

Albert Donnenberg, PhD (20 minutes)

Professor of Infectious Disease and Microbiology

Graduate School of Public Health; and

Professor of Medicine

School of Medicine

University of Pittsburgh

Questions and Closing Thoughts (10 minutes)

Session 2

Reproductive Tissue Engineering and Women's Health

Organizer and Chair:

Bryan Brown, PhD

Assistant Professor

Department of Bioengineering

University of Pittsburgh

Ballroom A

First Floor

Magee-Womens Research Institute's Scientific Entrepreneurship and Its Impact

Michael Annichine

Chief Executive Officer

Magee-Womens Research Institute and Foundation

Mesh for Pelvic Organ Prolapse Repair: Optimizing Biomechanics and Exploring the Immune Response

Pamela Moalli, MD, PhD

Associate Professor

Department of Obstetrics, Gynecology & Reproductive Sciences

Division of Urogynecology & Pelvic Reconstructive Surgery

Magee-Womens Hospital of UPMC; and

Associate Professor

Department of Bioengineering

University of Pittsburgh

And

Amanda Artsen, MD

Graduate Medical Trainee

University of Pittsburgh

And

Katrina Knight, PhD

Department of Medicine

University of Pittsburgh

Regenerative Therapies for Medically Induced Infertility

Kyle Orwig, PhD

Professor

Department of Obstetrics, Gynecology & Reproductive Sciences

University of Pittsburgh

And

Michael Buckenmeyer, MS

PhD Candidate

University of Pittsburgh

Tissue Engineering Strategies for Breast Cancer Reconstruction

Kacey Marra, PhD

Associate Professor

Departments of Plastic Surgery and Bioengineering

University of Pittsburgh; and

Director, Plastic Surgery Research Laboratory

Department of Plastic Surgery

University of Pittsburgh School of Medicine

And

Chris Mahoney, MS
PhD Candidate
University of Pittsburgh

And

Ben Schilling, MS
PhD Candidate
University of Pittsburgh

Session 3

Vision Restoration

Gold Room

Co-Sponsoring Institute/Center: Louis J. Fox Center for Vision Restoration

Organizer and Chair:

Jeff Gross, PhD

E. Ronald Salvitti Chair in Ophthalmology Research;
Director, Louis J. Fox Center for Vision Restoration; and
Ocular Development, Disease, and Regeneration Laboratory
University of Pittsburgh School of Medicine

Cellular Level Imaging of Retinal Disease

Ethan Rossi, PhD

Assistant Professor of Ophthalmology
University of Pittsburgh School of Medicine

Gene Therapy for Retinal Degeneration

Leah Byrne, PhD

Assistant Professor
Department of Ophthalmology
University of Pittsburgh

Manipulation of Ocular Pressure and Outflow

Nils Loewen, DMSC, MD, PhD

Associate Professor
Department of Ophthalmology
University of Pittsburgh School of Medicine

Dissecting Molecular Mechanisms of Retinal Axon Degeneration and Regeneration

Takaaki Kuwajima, PhD

Research Assistant Professor
Department of Ophthalmology
University of Pittsburgh School of Medicine

11:30-12:30 PM

Buffet Lunch

Ballrooms A & B

Roundtable Topics:
Organized by Sam LoPresti (Brown Lab)
Roundtables are in Ballroom B only

<i>How to Start a Company</i> Bryan Brown, PhD and Lorenzo Soletti, PhD	<i>Lab Management Policies & Structure – increasing lab efficiency</i> Neill Turner, PhD
<i>Clinical Research Studies</i> Robert Kormos, MD and Leslie Mitrik	<i>Data Analysis/Manipulation</i> Andy Duncan, PhD
<i>Academic Research vs. Start-Ups</i> William Federspiel, PhD	<i>Increasing Data Reproducibility</i> Janette Lamb, PhD and Deborah Hollingshead, MS
<i>Commercialization of Tissue Engineered Solutions</i> Don Taylor, PHD	<i>Mentoring</i> Kacey Marra, PhD
<i>How to Find Start-Up Funding</i> Max Fedor	<i>Big Data</i> Yoram Vodovotz, PhD
<i>Patenting Process at Pitt</i> Alex Ducruet, PhD, CLP	<i>How to Network at Conferences</i> Riccardo Gottardi, PhD

Discussion topics are open seating on a first come, first served basis.

1:00-2:00 PM

Pop-Up Workshops

Nano-and Microfabrication Methods for Medical Applications Gold Room

Organizer:
Esta Abelev, PhD
Technical Director
Petersen Institute of Nanoscience and Engineering
University of Pittsburgh

About the Session:

The goal of this workshop is to show Pitt research community the capability of Nanoscale Fabrication and Characterization Facility (NFCF) in the field of medical device fabrication. We will show examples of devices that can be fabricated at NFCF facility like novel drug delivery systems, biosensors and more.

Advancing Your Early-Stage Research Toward Commercial Translation Ballroom B

Organizer:
Donald P. Taylor, PhD, MBA, MS
Founder and Executive Director
sciVelo; and
Assistant Vice Chancellor
Commercial Translation in the Health Sciences
University of Pittsburgh

Objectives:

1. Become familiar with the scope and scale of commercial translation
2. Learn how to write an effective proposal for grants that seek commercial translation projects
3. Share best practices and unmet needs for commercial translation to become more widely adopted

2:15- 4:15 PM

**Afternoon Breakout Sessions –
Session 4**

Ballroom B

Stem Cells and Aging

Co-sponsoring Institute/Center:
Aging Institute/AR3T

Organizer and Chair:

Fabrisia Ambrosio, PhD, MPT

Director of Rehabilitation

UPMC International; and

Associate Professor

Department of Physical Medicine & Rehabilitation

University of Pittsburgh

Keynote Lecture: Mitochondria, Aging and Stem Cell Function

Toren Finkel, MD, PhD (35 minutes)

Professor of Medicine

Division of Cardiology

G. Nicholas Beckwith III and Dorothy B. Beckwith Chair in Translational Medicine

Director, Aging Institute of UPMC and University of Pittsburgh

Biologic Strategies to Regenerate Aging Intervertebral Discs

Nam Viet Vo, PhD (20 minutes)

Associate Professor

Department of Orthopaedic Surgery

University of Pittsburgh School of Medicine

Endogenous DNA Damage Drives Dilated Cardiomyopathy

Aditi Gurkar, PhD (20 minutes)

Assistant Professor of Medicine

Division of Geriatric Medicine

Department of Medicine

University of Pittsburgh

Mitochondrial Architecture as Read-Out for Cell Memory and Aging

Amin Cheikhi, PhD (20 minutes)

Postdoctoral Assignment

School of Medicine

University of Pittsburgh

Panel Discussion (30 minutes)

Session 5

Gold Room

Translating Redox Vascular Biology to the Clinic

Co-sponsoring Institute/Center:

Vascular Medicine Institute

Organizer and Chair:

Mark Gladwin, MD

Professor and Chair

Department of Medicine; and

Director, Pittsburgh Heart, Lung, and Blood Vascular Medicine Institute (VMI)

University of Pittsburgh

Heme Redox Regulation and NO Signaling

Adam Straub, PhD

Assistant Professor

Department of Pharmacology and Chemical Biology; and

Principal Investigator, Vascular Medicine Institute

University of Pittsburgh

Nitrated Fatty Acids: The Road from Discovery to the Clinic

Francisco Schopfer, PhD

Associate Professor

Department of Pharmacology and Chemical Biology

University of Pittsburgh

Globins as Carbon Monoxide Poisoning Antidotes

Mark Gladwin, MD

Professor and Chair

Department of Medicine; and

Director, Pittsburgh Heart, Lung, and Blood Vascular Medicine Institute (VMI)

University of Pittsburgh

Targeting Fbxo48/AMPK Axis in Metabolic Diseases

Bill Chen, PhD

Director, Small Molecule Therapeutic Center

Co-Director, Acute Lung Injury Center of Excellence

Division of Pulmonary, Allergy and Critical Care Medicine

Department of Medicine

University of Pittsburgh

Platelet Mitochondrial Bioenergetics in Pulmonary Hypertension

Quyen Nguyen, MD
Associate Professor
Fellow, Pulmonary & Critical Care Medicine
UPMC Montefiore Hospital

Globin X, Nitrite and Heart Regeneration

Paola Corti, PhD
Research Assistant Professor
Division of Cardiology
Vascular Medicine Institute
University of Pittsburgh

Session 6
Craniomaxillofacial Tissue Engineering

Co-sponsoring Institute/Center:
U24 Consortium

Conference Room B
Third Floor
Must Take Elevator

Organizer and Chair:
Alejandro Almarza, PhD
Associate Professor
Department of Oral Biology
School of Dental Medicine
University of Pittsburgh

Born Without an Ear: Current and Future Solutions for Congenital Auricular Deformities

Noel Jabbour, MD, MS, FACS
Assistant Professor
Department of Otolaryngology;
Fellowship Director
Division of Pediatric Otolaryngology;
Associate Director
Otolaryngology Residency Program;
Director, Congenital Ear Center
University of Pittsburgh

Vital-Dent

Juan Taboas, PhD
Assistant Professor
Department of Oral Biology
School of Dental Medicine
Department of Biomedical Engineering
Swanson School of Engineering
University of Pittsburgh

Lessons from Developmental Biology toward Regeneration

Heather Szabo-Rogers, PhD
Assistant Professor
Department of Oral Biology
Center for Craniofacial Regeneration
School of Dental Medicine
University of Pittsburgh

Dental Stem Cells and Scaffold-free Tissue Engineering for Craniofacial Regeneration

Fatima Syed-Picard, PhD
Assistant Professor
Department of Oral Biology
School of Dental Medicine
University of Pittsburgh

4:15- 4:30 PM

Break

4:30- 5:00 PM

Rapid Fire Presentations

Ballroom B

Organizer and Chair:
Andrew Duncan, PhD
Assistant Professor
Department of Pathology
University of Pittsburgh

Differences in Neural Stem Cell Identity and Differentiation Capacity Modulate Divergent Regenerative Outcomes in Lizards and Salamanders (Poster #25)

Aaron Sun, BS
MSTP student, Rocky Tuan Lab, University of Pittsburgh

A Multi-Organ Microphysiological System that Models Dormant-Emergent Metastatic Breast Cancer Progression (Poster #75)

Amanda Clark, PhD
Research Associate, Alan Wells Lab, University of Pittsburgh

Potential Rheological Treatment of Sickle Cell Disease (SCD) by Reducing Vaso-Occlusion in Small Vessels (Poster #43)

Daniel Crompton, BS
Graduate student, Marina Kameneva Lab, University of Pittsburgh

RegenMatrix- A Growth Factor-Free Bone Graft for Craniofacial Bone Regeneration (Poster #59)

Akhil Patel, MS
Graduate student, Shilpa Sant Lab, University of Pittsburgh

Extracellular Matrix Hydrogel Downregulates Neoplastic Esophageal Cell Phenotype (Poster #101)

Lindsey Saldin, BS
Graduate student, Stephen Badylak Lab, University of Pittsburgh

Computationally Optimizing the Compliance of Biopolymer Tissue Engineered Vascular Grafts (Poster #35)

Ehab Tamimi, MS
Graduate student, Jonathan Vande Geest Lab, University of Pittsburgh

5:00- 6:00 PM **Poster Session*/Evening Reception** **University Club Ballroom A**
Even numbers present **First Floor**

6:00- 7:00 PM **Poster Session*/Evening Reception** **Ballroom A**
Odd numbers present

*Poster session awards sponsored by SciVelo

Tuesday March 6th

7:00 -7:45 AM **Breakfast and Morning Mixer with Clinicians** **Ballroom A**
BioBreakfast Sponsored

8:00-10:00 AM **Pittsburgh Biomedical Breakfast** **Ballroom A**
Session 7

Organizer and Chair:
Christian Manders
Promethean LifeSciences, Inc.

Informal networking (30 minutes)

Opening Remarks: Comments on the 2018 JP Morgan Healthcare Conference

Christian Barrow (30 minutes)
Executive Director of Life Sciences
JP Morgan

And

George Santo
Vice President
Middle Market Life Sciences Banking
JP Morgan

Keynote Lecture: Unleashing AI and Data for Medicine

Nick Nystrom (one hour)
Director, Pittsburgh Supercomputing Center

**Opening Doors to the Future of Cardiovascular
Regenerative Medicine**

Ballroom B

Session 8

Organizers and Chairs:

Robert Kormos, MD, FRCS(C), FACS, FAHA
Brack G Hattler Professor of Cardiothoracic Transplantation
Professor Cardiothoracic Surgery and Bioengineering
Department of Cardiothoracic Surgery
Heart and Vascular Institute
University of Pittsburgh Medical Center

And

Alan Hirschman, PhD
Professor of Bioengineering
Swanson School of Engineering
University of Pittsburgh

Session objectives:

- 1) To be exposed to cutting edge Bioengineering and Regenerative Medicine for Cardiovascular diagnostic and therapeutic applications.
- 2) To provide challenging supportive feedback to investigators with new and evolving science by capitalizing on the collective strengths of experts from the University of Pittsburgh Center for Medical Innovation and the McGowan Institute for Regenerative Medicine
- 3) To encourage investigators to develop realistic timelines and mileposts for their research
- 4) To help new investigators focus on the value proposition of their work (What differentiates their work from the rest of the pack?)

Heart Valve Structure, Functional Heterogeneity and Mechanics

Antonio D'Amore, PhD (15 Minutes)
Research Assistant Professor
Departments of Surgery and Bioengineering
University of Pittsburgh

Acute In Vivo Assessment of Tissue Engineered Heart Valves: Early Successes and Challenges

Garrett Coyan, MD (10 Minutes)
Integrated 6-year Residency Program (PGY4)-Department of Cardiothoracic Surgery
University of Pittsburgh Medical Center

A Regenerative Stem-Cell Therapy for Abdominal Aortic Aneurysm

Justin Weinbaum, PhD (15 Minutes)
Research Assistant Professor
Department of Bioengineering
University of Pittsburgh

Biomechanical Properties and Stress Mapping Dissection Probability Models in Ascending Aortas of Patients Sustaining Acute Type A Aortic Dissection

Leonid Emerel, MD (10 Minutes)

Integrated 6-year Residency Program (PGY5)-Department of Cardiothoracic Surgery
University of Pittsburgh

Biocarpets: A Novel Approach to Peripheral Arterial Disease

Jonathan Vande Geest, PhD (10 minutes)

Professor

Department of Bioengineering
University of Pittsburgh

Molecular Therapeutics for the Heart Using Ultrasound

Flordeliza Villanueva, MD (15 Minutes)

Professor of Medicine

Division of Cardiology

Vice Chair for Pre-Clinical Research

Department of Medicine
University of Pittsburgh

Sickle Cell Hemoglobin Replacement Therapy

Luke Ziegler, BS (10 Minutes)

Hemorheology, Hemodynamics and Artificial Blood Research Laboratory

McGowan Institute for Regenerative Medicine

University of Pittsburgh

Novel Biological Muscle Powered Heart Assist Device

Edgar Aranda-Michel, BS (15 Minutes)

MD/PhD Candidate

Medical Scientist Training Program (MSTP)

University of Pittsburgh and Carnegie Mellon University

**Translating the Science of Tissue Plasticity for Human
Performance Optimization and Injury Prevention
Session 9**

Gold Room

Organizer and Chair:

Brad Nindl, PhD, FACSM

Professor and Director

Neuromuscular Research Laboratory/Warrior Human Performance Research Center

Department of Sports Medicine and Nutrition

School of Health and Rehabilitation Sciences

University of Pittsburgh

Neurobiology Plasticity: Corticospinal Basis of Persistent Functional Deficits after Traumatic Musculoskeletal Injury

Shawn Flanagan, PhD
Assistant Professor
Department of Sports Medicine and Nutrition
University of Pittsburgh

Muscle Plasticity: Interpreting Contemporary Treatments of Soft Tissue Injury and Prevention, of Mice and Men and Muscle

Matt Kostek, PhD, FACSM
Assistant Professor
Department of Physical Therapy
Duquesne University

Bone Plasticity: "Exploiting the Adaptive Bone Formation Process to Prevent Stress Fractures in Warfighters"

Julie Hughes, PhD
Research Physiologist
U.S. Army Research Institute of Environmental Medicine

Endocrine Plasticity: "Role of the Insulin-Like Growth Factor-I (IGF-I) System in Mediating the Beneficial Aspects of Physical Activity"

Brad Nindl, PhD, FACSM
Professor and Director
Neuromuscular Research Laboratory/Warrior Human Performance Research Center
Department of Sports Medicine and Nutrition
School of Health and Rehabilitation Sciences
University of Pittsburgh

10:00-10:30 AM

Break

10:30 AM-12:30 PM

**Morning Breakout Sessions -
Session 10**

Cancer Immunotherapy

Organizer and Chair:
Don Taylor, PhD, MBA, MS
Founder and Executive Director
sciVelo; and
Assistant Vice Chancellor
Commercial Translation in the Health Sciences
University of Pittsburgh

Ballroom B

And

Julie Cramer, PhD, MS
Commercial Translation Program Manager
sciVelo
University of Pittsburgh

Session Details:

Cancer immunotherapy stimulates, or otherwise modulates, a person's immune system to attack cancer cells. In this session, you will learn about the state of cancer immunotherapy, hear clinical and industry perspectives as well as stories of commercial translation and innovative solutions. Following short presentations, there will be an engaging panel discussion focused on cancer immunotherapy commercial translation and clinical use.

Session Objectives:

- 1) Showcase Pitt/UPMC as a leader in cancer immunotherapy
- 2) Facilitate collaborations and discussions on commercial translation in cancer immunotherapy

Speakers:

Novel Targets in Immunotherapy for Cancer
Diwikar Davar, MBBS, MSc (15 minutes)
Assistant Professor of Medicine
Division of Hematology/Oncology
Department of Medicine
University of Pittsburgh

Peptide-Based Immunotherapy for Childhood Gliomas
Ian Pollack, MD (15 minutes)
Co-director, Brain Tumor Program
University of Pittsburgh Cancer Institute;
Chief, Pediatric Neurosurgery
Children's Hospital of Pittsburgh of UPMC; and
A. Leland Albright Professor of Neurosurgery
University of Pittsburgh School of Medicine

Vaccines for Cancer Prevention and A Lot More
Olivera Finn, PhD (15 minutes)
Distinguished Professor
Departments of Immunology and Surgery
University of Pittsburgh School of Medicine

Tumor-Derived Exosomes as Potential Biomarkers in Cancer
Theresa Whiteside, PhD (15 minutes)
Professor of Pathology, Immunology, and Otolaryngology
University of Pittsburgh School of Medicine; and
Laboratory Director of Immunologic Monitoring and Cellular Products Laboratory
University of Pittsburgh Cancer Institute

Developing Multi-Mechanistic Cancer Immunotherapies, Experiences in Academia and Industry

Stephen Thorne, PhD (15 minutes)

Assistant Professor

Departments of Surgery and Immunology

University of Pittsburgh School of Medicine; and

Leader of Small Animal Optical and Ultrasound Imaging Services

In Vivo Imaging Facility

University of Pittsburgh Cancer Institute

Break (10 minutes)

Panel Discussion (30 minutes)

Cancer immunotherapy commercial translation and clinical use

Session 11

Ballroom A

Pediatric Innovations

Co-sponsoring Institute/Center:

Department of Pediatrics

Organizer and Chair:

George Gittes, MD

Benjamin R. Fisher Chair of Pediatric Surgery

Surgeon-in-Chief

Director of Surgical Research

Children's Hospital of Pittsburgh; and

Professor of Surgery and of Pediatrics

University of Pittsburgh School of Medicine

Keynote Lecture: New Research Initiatives at Children's Hospital of Pittsburgh of UPMC

Terence Dermody, MD (40 minutes)

Vira I. Heinz Professor and Chair

Department of Pediatrics

Children's Hospital of Pittsburgh; and

Professor of Microbiology and Molecular Genetics

University of Pittsburgh School of Medicine

Physician-in-Chief and Scientific Director, Children's Hospital of Pittsburgh of UPMC

Neuromonitoring After Brain injury in Pediatrics

Mioara Manole, MD, FAAP (20 minutes)

Director of Basic and Translational Research

Division of Pediatric Emergency Medicine

Children's Hospital of Pittsburgh of UPMC;

Associate Director

Safar Center for Resuscitation Research; and

Assistant Professor of Pediatrics

University of Pittsburgh School of Medicine

And

Theodore Huppert, PhD
Associate Professor
Departments of Radiology and Bioengineering
University of Pittsburgh

The Biomarkers for Infant Brain Injury Score (BIBIS): Improving Identification of Intracranial Hemorrhage in Infants and Young Children Using Serum Biomarkers

Rachel Berger, MD, MPH (20 minutes)
Child Protection Team
Pittsburgh Child Advocacy Center
Children's Hospital of Pittsburgh of UPMC; and
Director
Child Abuse Research
Safar Center for Resuscitation Research
University of Pittsburgh

Gene Therapy for Diabetes

George Gittes, MD (20 minutes)
Benjamin R. Fisher Chair of Pediatric Surgery
Surgeon-in-Chief
Director of Surgical Research
Children's Hospital of Pittsburgh; and
Professor of Surgery and of Pediatrics
University of Pittsburgh School of Medicine

Open Moderated Discussion

Session 12
Additive Manufacturing

Gold Room

Organizer and Chair:
Adam Feinberg, PhD
Associate Professor
Departments of Biomedical Engineering and Materials Science and Engineering; and
Principal Investigator, Regenerative Biomaterials and Therapeutics Group
Carnegie Mellon University

Additive Manufacturing Approaches to Resorbable Metals, Ceramics and Polymers

Abhijit Roy, PhD (20 minutes)
Research Assistant Professor
Department of Bioengineering
University of Pittsburgh

Allevi: Automating Biology
Margaret Prendergast (20 minutes)
Director of Bioengineering
Allevi

Incorporating Cell Signaling into Bioprinting Applications
Phil Campbell, PhD (20 minutes)
Research Professor
Institute for Complex Engineered System
Carnegie Institute of Technology
School of Engineering
Carnegie Mellon University

3D Printing for Articular Cartilage Repair: The Development of Functional Bio-Ink
Hang Lin, PhD (20 minutes)
Research Assistant Professor
Center for Cellular and Molecular Engineering
Department of Orthopaedic Surgery
School of Medicine
University of Pittsburgh

3D Bioprinting of Soft and Living Materials Using Open Source Hardware
T.J. Hinton, PhD (15 minutes)
Postdoctoral Fellow
Department of Biomedical Engineering
Materials Science & Engineering
Carnegie Mellon University

Panel Discussion: Current and Future Opportunities in 3D Bioprinting (30 minutes)

12:30-1:30 PM

Lunch

Ballroom B

1:30-2:30 PM

Pop-Up Workshops
Medical Technology Development: From Prototype to FDA Approval
Organizer:
Eric Sugalski
President and Founder
Smithwise

Ballroom A

About the workshop:

Clinical and technical innovators are key to solving some of the world's most challenging healthcare problems. However, developing a new medical technology can be a daunting task for most early-stage innovators. Smithwise, a medical device designer and developer with offices in Boston and Philadelphia, will provide a crash course on the Medtech process, from first prototype to FDA approval and beyond. Case studies highlighting diagnostics,

wearables, surgical tools, and Class III implant devices will be used to illustrate the Medtech process in action

**Sponsored Project Research Overview:
Successful Submission and Post Award Management**

Gold Room

Organizer:
Brian Smith
Senior Financial Analyst
McGowan Institute for Regenerative Medicine

About the workshop:

The purpose of this session is to provide participants with a broad overview of the various aspects involved in sponsored projects administration, including preparation of proposals utilizing the University's "Pitt Electronic Research Information Solution (PERIS) portal as well as financial and administrative management of funded grants. Staff members from McGowan Institute's Fiscal Operations Department will present current information about University and departmental policies and procedures as they relate to the daily management of sponsored projects. Topics such as budgeting, purchasing, travel policies and reporting requirements will be discussed.

Pitt is Open for Business

Conference Room B

Organizers:
Brian Vidic
Executive Director
Research Operations and Business Engagement Office
University of Pittsburgh

Third Floor
Must Take Elevator

And

Amy Phillips, MBA
Business Development Manager
Innovation Institute and Drug Discovery Institute
University of Pittsburgh

About the workshop:

In an effort to support Chancellor Gallagher's "Pitt is Open for Business" proclamation, the University of Pittsburgh has introduced an initiative called "Making Research Work." Making Research Work (MRW) enables University shared research facilities and labs to open themselves to work directly with industry and other external partners in a simple, transactional manner. Fee for Service, Third Party Lab Use, and Industry Co-Location are three of many new contract vehicles now in place and ready to use. This workshop will highlight how your Pitt facility or lab can work with the MRW team, how to get started, contract vehicles available, and how these new engagement pathways can broaden/strengthen relationships with industry.

2:30- 3:00 PM

Break

3:00- 5:00 PM

Afternoon Breakout Sessions –

Session 13

Innovations in Clinical Diagnostics and Biomarkers

Ballroom A

Chairs:

Julie Cramer, PhD, MS
Commercialization Translation Program Manager
sciVelo
University of Pittsburgh

And

Evan Delgado, PhD
Post-Doctoral Researcher
Department of Cellular and Molecular Pathology
University of Pittsburgh

Breast Cancer Genetic Profiling

Nick Smith
Graduate Student Researcher
Department of Pharmacology and Chemical Biology
University of Pittsburgh

Bladder Cancer Biomarkers

Bill LaFramboise, PhD
Associate Professor
Department of Pathology
University of Pittsburgh Medical Center

ECG Method to Detect Non-ST Cardiac Events

Salah Al Zaiti, PhD, RN, ANP-BC
Assistant Professor
Acute & Tertiary Care
School of Nursing
University of Pittsburgh

Orthostatic Hypotension Detection to Predict Falls

Eunice Yang, PhD
Assistant Professor
Department of Mechanical Engineering
University of Pittsburgh at Johnstown

Session 14

Gold Room

Drug Delivery

Organizer and Chair:

Morgan Fedorchak, PhD
Assistant Professor of Ophthalmology, Chemical Engineering, and
Clinical & Translational Sciences; and
Director, Ophthalmic Biomaterials Laboratory
University of Pittsburgh

Introduction to session

Morgan Fedorchak, PhD (5 minutes)

Citius, Altius, Fortius: Drug Delivery and the Generation, and Destruction, of Value in Drug Development

Michael Hufford, PhD (30 minutes)

Vice President for Regulatory Affairs, Behavioral Science, and Innovation
Pinney Associates

Multiplexing Antibodies in Inflammatory Tissues

Wilson Meng, PhD (15 minutes)

Associate Professor of Pharmaceutics
Duquesne University

Shaping Up the Macrophage Polarization with Nanomaterials

Shilpa Sant, PhD (15 minutes)

Assistant Professor
Departments of Pharmaceutical Sciences and of Bioengineering
University of Pittsburgh

Skip-the-Line to Translation: Developing Formulations for Industry

Riccardo Gottardi, PhD (15 minutes)

Research Assistant Professor
Center for Cellular and Molecular Engineering
Department of Orthopaedic Surgery
University of Pittsburgh

Break (10 minutes)

Panel Discussion/Q&A (30 minutes)

Session 15

Strategic Planning Session: Optimizing Human, Materials and Systems Performance

Co-sponsoring Center:
Center for Warfighter Readiness

Organizer:

Ron Poropatich, PhD
Executive Director
Center for Military Medicine Research
Health Sciences
University of Pittsburgh

Conference Room B

Third Floor

Must Take Elevator

Scope of Session: This session will focus on the keys aspects for optimizing human, materials and systems performance for military success on wide-spread multi-domain battlefields. Collectively we will chart a course for the future – with the goal of developing a

strategic plan for initializing and executing a Center of Excellence focusing on warfighter readiness and maneuverability with degraded medical resources and encumbered combat mobility.

5:00- 6:00 PM

Reception

William Pitt Union Assembly Hall

6:00- 8:00 PM

Closing Banquet

William Pitt Union Assembly Hall

Reflections on the Patient Experience in Respiratory Failure and the Story of Alung

Jonathan D’Cunha, MD, PhD, FACS

Associate Professor of Surgery

Department of Cardiothoracic Surgery;

Vice Chair, Research and Education; and

Chief, Division of Lung Transplant/Lung Failure

University of Pittsburgh

And

William J. Federspiel, PhD

William Kepler Whiteford Professor

Department of Bioengineering

University of Pittsburgh; and

Director, Medical Devices Laboratory

McGowan Institute for Regenerative Medicine

Keynote Presentation:

Pittsburgh as the Future of Health Care-Role of the Local Biomedical Research Ecosystem

Steven Shapiro, MD

Executive Vice President

Chief Medical and Scientific Officer

President, Health Services Division

University of Pittsburgh Medical Center

Poster Awards

Presented by Andrew Duncan, PhD

Sponsored by SciVelo