### 2018 McGowan Retreat Draft Agenda
February 23, 2018

<table>
<thead>
<tr>
<th>Monday March 5th</th>
<th>Page</th>
<th>Tuesday March 6th</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morning</strong></td>
<td></td>
<td><strong>Morning</strong></td>
<td></td>
</tr>
<tr>
<td>Breakfast and Morning Mixer w/Clinicians</td>
<td>2</td>
<td>Breakfast and Morning Mixer w/Clinicians</td>
<td>9</td>
</tr>
<tr>
<td>State of the Institute Address- William Wagner, PhD</td>
<td>2</td>
<td>Morning Breakout Sessions I (3 concurrent)</td>
<td></td>
</tr>
<tr>
<td><strong>McGowan Institute Distinguished Lecture</strong>&lt;br&gt;Molly Shoichet, PhD- University of Toronto&lt;br&gt;&quot;Regenerative Strategies-Central Nervous System&quot;</td>
<td>2</td>
<td>Pittsburgh Biomedical Breakfast&lt;br&gt;-Opening Doors to the Future of Cardiovascular Regenerative Medicine&lt;br&gt;-Translating the Science of Tissue Plasticity for Human Performance Optimization and Injury Prevention</td>
<td>9</td>
</tr>
<tr>
<td><strong>Morning Breakout Sessions (3 Concurrent)</strong></td>
<td></td>
<td><strong>Morning Breakout Sessions II (3 Concurrent)</strong></td>
<td></td>
</tr>
<tr>
<td>-Cell and Tissue Regenerative Therapies at UPMC&lt;br&gt;-Reproductive Tissue Engineering and Women's Health&lt;br&gt;-Vision Restoration</td>
<td>2 3 3</td>
<td>-Cancer Immunotherapy&lt;br&gt;-Pediatric Innovations&lt;br&gt;-Additive Manufacturing</td>
<td>12 14 15</td>
</tr>
<tr>
<td><strong>Buffet Lunch-Roundtable topics</strong></td>
<td>4</td>
<td><strong>Buffet Lunch</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Afternoon</strong></td>
<td></td>
<td><strong>Afternoon</strong></td>
<td></td>
</tr>
<tr>
<td>Pop-Up Workshops</td>
<td>4</td>
<td>Pop-Up Workshops</td>
<td>16 16 17</td>
</tr>
<tr>
<td>-Nano/Microfabrication methods for Medical Applications&lt;br&gt;-Advancing your early-stage research toward commercial translation</td>
<td></td>
<td>-Pediatric Device Prototyping&lt;br&gt;-Sponsored Research Project Overview&lt;br&gt;-Pitt is “Open for Business”</td>
<td></td>
</tr>
<tr>
<td><strong>Afternoon Breakout Sessions (3 Concurrent)</strong></td>
<td></td>
<td><strong>Afternoon Breakout Sessions (3 Concurrent)</strong></td>
<td></td>
</tr>
<tr>
<td>-Stem Cells and Aging&lt;br&gt;-Translating Redox Vascular Biology to the Clinic&lt;br&gt;-Craniomaxillofacial Tissue Engineering</td>
<td>5 6 7</td>
<td>-Novel Biomarker Detection&lt;br&gt;-Drug Delivery&lt;br&gt;-Strategic Planning Session: Optimizing Human, Materials and Systems Performance</td>
<td>17 18 19</td>
</tr>
<tr>
<td><strong>Trainee Rapid Fire Presentations</strong></td>
<td>8</td>
<td><strong>Evening</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Evening</strong></td>
<td></td>
<td><strong>Evening</strong></td>
<td></td>
</tr>
<tr>
<td>Poster Session/Evening Reception</td>
<td>9</td>
<td>Reception &amp; Closing Banquet</td>
<td>19</td>
</tr>
<tr>
<td><strong>Evening</strong></td>
<td></td>
<td>Keynote Presentation &amp; Poster Awards</td>
<td>19</td>
</tr>
</tbody>
</table>
2018 McGowan Retreat Agenda
February 23, 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  University Club Ballroom B
                Second Floor
William R. Wagner, PhD
Director of the McGowan Institute for Regenerative Medicine
Professor of Surgery, Bioengineering and Chemical Engineering
University of Pittsburgh

8:15 - 9:15 AM  McGowan Institute for Regenerative Medicine Distinguished Lecture
Regenerative Strategies in the Central Nervous System  Ballroom B
Molly Shoichet, PhD
University Professor
Program in Neuroscience
University of Toronto

9:15 - 9:30 AM  Break

9:30 - 11:30 AM  Morning Breakout Sessions - Session 1  Ballroom B
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

Regenerative Cell and Tissue Therapy Initiative: Harnessing the Power of our Cell Therapy Community
Lauren Kokai, PhD (10 minutes)

Regenerative Cell and Tissue Therapies at UPMC: A Model for Integrated Delivery of Innovative Therapies
J. Peter Rubin, MD, FACS (20 minutes)
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

TBD
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
TBD
Kyle Orwig, PhD
Professor
Department of Obstetrics, Gynecology & Reproductive Sciences
University of Pittsburgh

TBD
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

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 AM-12:30 PM  **Buffet Lunch**
Roundtable Topics:

<table>
<thead>
<tr>
<th>How to start a company</th>
<th>Lab Management Policies &amp; Structure – increasing lab efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bryan Brown, PhD and Lorenzo Soletti, PhD</td>
<td>Neill Turner, PhD</td>
</tr>
<tr>
<td>Clinical research studies</td>
<td>Data Analysis/Manipulation</td>
</tr>
<tr>
<td>Robert Kormos, MD</td>
<td>Andy Duncan, PhD</td>
</tr>
<tr>
<td>Academic research vs. Start-ups</td>
<td>Increasing Data Reproducibility</td>
</tr>
<tr>
<td>William Federspiel, PhD</td>
<td>Janette Lamb, PhD and Deborah Hollingshead, MS</td>
</tr>
<tr>
<td>Commercialization of tissue engineered solutions</td>
<td>Mentoring</td>
</tr>
<tr>
<td>Don Taylor, PHD</td>
<td>Kacey Marra, PhD</td>
</tr>
<tr>
<td>How to find start-up funding</td>
<td>Big Data</td>
</tr>
<tr>
<td>Max Fedor</td>
<td>Yoram Vodovotz, PhD</td>
</tr>
<tr>
<td>Patenting process at Pitt</td>
<td>How to network at conferences</td>
</tr>
<tr>
<td>Alex Ducruet, PhD, CLP</td>
<td>Riccardo Gottardi, PhD</td>
</tr>
</tbody>
</table>

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**  
**Conference Room B**  
**Third Floor**  
**Must Take Elevator**

**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

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

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

Nitrate 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

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  

Aaron Sun  
Rocky Tuan Lab  

Amanda Clark  
Alan Wells Lab  

Daniel Crompton  
Marina Kameneva Lab  

Lindsay Saldin  
Stephen Badylak Lab  

Akhil Patel  
Shilpa Sant Lab

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**  
**Session 7**  
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**  
**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
3) Encourage investigators to develop realistic timelines and mileposts for their research
4) 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

Biocarpet: 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
Marina Kameneva, PhD (10 Minutes)
Research Professor of Surgery
University of Pittsburgh School of Medicine;
Professor of Bioengineering
University of Pittsburgh; and
Director of the Artificial Blood Program
McGowan Institute for Regenerative Medicine

*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

Q&A after each presentation

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

**Gold Room**

**Session 9**
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
10:00-10:30 AM  
Break

10:30 AM-12:30 PM  
Morning Breakout Sessions -  
Session 10  
Ballroom B

**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

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 (50 minutes)
Cancer immunotherapy commercial translation and clinical use

Session 11
Pediatric Innovations
Ballroom A

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)

Open Moderated Discussion

Session 12
Additive Manufacturing
Organizer and Chair:
Adam Feinberg, PhD

Gold Room
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**  
Prashant Kumta, PhD (20 minutes)  
Edward R. Weidlein Chair Professor with Tenure  
University of Pittsburgh Swanson School of Engineering and School of Dental Medicine  
Professor  
Departments of Bioengineering, Chemical and Petroleum Engineering, Mechanical  
Engineering and Materials Science, and Department of Oral Biology;  
Engineering Director  
Center for Craniofacial Regeneration; and  
Founding Director  
Center for Complex Engineered Multifunctional Materials  
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  Ballroom A
Medical Technology Development: From Prototype to FDA Approval
Organizer:
Eric Sugalski
President and Founder
Smithwise

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
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

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
Chair:
TBA

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
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

Conference Room B
Third Floor
Must Take Elevator
Executive Director
Center for Military Medicine Research
Health Sciences
University of Pittsburgh

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 Ballroom

6:00- 8:00 PM  Closing Banquet  William Pitt Union Ballroom

Clinical Translation-New Technologies Helping Patients
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:
Vision of Health Care in 10 Years
Steven Shapiro, MD
Executive Vice President
Chief Medical and Scientific Officer
President, Health Services Division
University of Pittsburgh Medical Center

Poster Awards- Sponsored by SciVelo