

2020 McGowan Institute Retreat

Pitt McGowan

Program – Draft (2/11/2020)
2020 McGowan Institute Retreat
March 9 and 10, 2020

Monday-March 9, 2020

12:00 pm **Registration Open**
Lobby, Wilson Lodge

1:00-2:30 pm **Trainee Workshop- Academic Vs. Industry Career Paths**
Banquet Room 2
Wilson Lodge- Second Floor

Session Organizers and Chairs:
Piyumi Wijesekara Kankanange
Doctoral Student, Laboratory of Charlie (Xi) Ren
Department of Biomedical Engineering
Carnegie Mellon University

and

Abigail Allen
Doctoral Student, Laboratory of Partha Roy
Department of Bioengineering
University of Pittsburgh

Panel Speakers:
Elaine Soohoo, PhD
Biomedical Engineer
Division of Circulatory Support, Structural and Vascular Devices
Office of Cardiovascular Devices
U.S. Food and Drug Administration

Elizabeth Wayne, PhD
Assistant Professor
Departments of Biomedical Engineering and Chemical Engineering
Carnegie Mellon University

2:30-3:30 pm **Break**

3:30-4:00 pm **Poster Teaser Presentations**
Glessner Ballroom
Wilson Lodge-Ground Floor

Session Organizers and Chairs:
Andrew Duncan, PhD
Assistant Professor
Department of Pathology
University of Pittsburgh

and

Evan Delgado, PhD
Postdoctoral Associate
Department of Pathology
University of Pittsburgh

“CRISPR-based transcriptional repression to perform immunomodulation in vivo”

Farzaneh Moghadam, BS
PhD Student
Department of Pathology
University of Pittsburgh
Poster #11

“Effect of macro-calcification on the failure mechanics of intracranial aneurysmal wall tissue”

Ronald Fortunato, BS
PhD Student
Department of Mechanical Engineering and Materials Science
University of Pittsburgh
Poster #22

“Organ-on-a-chip: three-dimensional self-rolled biosensor array for electrical interrogations of electrogenic spheroids”

Anna Kalmykov, MS
PhD Student
Department of Biomedical Engineering
Carnegie Mellon University
Poster #59

“Contact Lens Delivery of Interleukin-4 for Treatment of Dry Eye Disease Promotes Anti-inflammatory Macrophage Populations”

Alexis Nolfi, BS
PhD Student
Department of Bioengineering
University of Pittsburgh
Poster #37

“foxm1 is required for cardiomyocyte proliferation after zebrafish cardiac injury”

Daniel Zuppo, BS
PhD Student
Department of Developmental Biology
University of Pittsburgh
Poster #19

“Hydrogel-enabled Intratumoral Co-Delivery of Anti-PD-1 Antibody and Adenosine Deaminase in a Mouse Model of Renal Cell Carcinoma”

Ngoc Pham, BS
PhD Student
Graduate School of Pharmaceutical Sciences
Duquesne University
Poster #39

4:00-6:00 pm

Opening Reception and Poster Session

Glessner Ballroom
Wilson Lodge- Ground Floor

Odd numbers posters present 4-5pm
Even number posters present 5-6pm

- 6:00-6:15 pm **Welcome and Opening Address**
 Glessner Ballroom
 Wilson Lodge- Ground Floor
- William R. Wagner, PhD
 Director-McGowan Institute
- 6:15-7:30 pm **Technology Pitches**
 Glessner Ballroom
 Wilson Lodge- Ground Floor
- 7:30-9:00 pm **Movie Night - Screening of “Burden of Genius”**
 Glessner Ballroom
 Wilson Lodge- Ground Floor
- Introduction By:
 Carl Kurlander
 Documentarian and Filmmaker
 Visiting Distinguished Senior Lecturer
 Faculty Adviser, Pitt In Hollywood
 University of Pittsburgh

Tuesday-March 10, 2020

- 7:00 am **Registration Open**
 Lobby
- 7:00-8:00 am **Networking Breakfast**
 Glessner Ballroom
 Wilson Lodge- Ground Floor
- 8:00-9:00 am **Patient Stories**
 Glessner Ballroom
 Wilson Lodge- Ground Floor
- Session Organizer and Chair:
 George Gittes, MD
 Director
 Richard King Mellon Foundation Institute for Pediatric Research;
 Co-Scientific Director
 UPMC Children’s Hospital
- 9:00-9:30 am **Break**
- 9:30-11:00 am **Morning Breakout Sessions (2 concurrent)**
- Session 1 **Team Formation to Address Grand Challenges in Regenerative Medicine**
 Banquet Room 1
 Wilson Lodge- Second Floor
- Do you have an idea for a large-scale proposal that requires new collaborations and team formation? Prospective team leaders will pitch their proposal ideas to the audience. Participants will receive coaching from established leaders on assembling large teams to address unmet clinical needs, fill technological gaps or develop educational tools and experiences.
- Session Organizers and Chair:
 Bryan Brown, PhD

Associate Professor
Department of Bioengineering
Department of Obstetrics, Gynecology, and Reproductive Sciences
Clinical and Translational Science Institute
McGowan Institute for Regenerative Medicine
University of Pittsburgh

Keynote (30 minutes)

Douglas Weber, PhD
Associate Professor
Department of Bioengineering
University of Pittsburgh

DoD and Trauma Care in Rucksack (15-20 minutes)

Ron Poropatich, MD
Director, Center for Military Medicine Research
Health Sciences and Professor of Medicine
Division of Pulmonary, Allergy, and Critical Care Medicine
University of Pittsburgh;
Senior Advisor for Telemedicine
University of Pittsburgh Medical Center

Dental and Craniofacial (15-20 minutes)

Charles Sfeir, DDS, PhD
Associate Dean of Research
University of Pittsburgh School of Dental Medicine;
Associate Professor
Clinical and Translational Science Institute;
Associate Professor
Departments of Oral Biology and the Department of Periodontology
School of Dental Medicine and the School of Engineering;
Founding Director
Center for Craniofacial Regeneration

The Need for Large Interdisciplinary Teams for Whole Organ Engineering (15 minutes)

Keith Cook, PhD
Professor and Associate Department Head for Graduate Education
Department of Biomedical Engineering
Carnegie Mellon University

Research Experiences for Undergraduates for the McGowan Institute Summer School (15 minutes)

Bryan Brown, PhD

Session 2

Synthetic Biology and Regenerative Medicine

Banquet Room 3
Wilson Lodge- Second Floor

Session Organizer and Chair:
Mo Ebrahimkhani, MD
Associate Professor
Department of Pathology
School of Medicine;
Member, Pittsburgh Liver Research Center
University of Pittsburgh

“Linking Synthetic Biology with Mechatronic Systems”

Warren Ruder, PhD
Associate Professor
Department of Bioengineering
University of Pittsburgh

“Building Engineered Systems with Synthetic Biology”

Philip LeDuc, PhD
William J. Brown Professor
Department of Mechanical Engineering
Director, Center for the Mechanics and Engineering of Cellular Systems
Carnegie Mellon University

“Synthetic Control of Gene Regulatory Networks by CRISPR: The Roadmap to Human Translation”

Samira Kiani, MD
Associate Professor
Department of Pathology, Division of Experimental Pathology
School of Medicine
Pittsburgh Liver Research Center
University of Pittsburgh

“Optogenetic Control of Telomere Clustering by Protein Phase Separation in ALT Cancer”

Huaiying Zhang, PhD
Assistant Professor
Department of Biological Sciences
Carnegie Mellon University

9:30-11:00 am

Commercialization Office Hours- *by appointment only*

Conference Room 3
Wilson Lodge- Second Floor

Session Organizer and Chair:

Don Taylor, PhD, MBA, CLP
Assistant Vice Chancellor, Health Sciences Translation
Executive Director, sciVelo;
Co-Director, Center for Commercial Applications of Healthcare Data and of the Clinical and Translational Science Institute;
Associate Director, Center for Medical Innovation;
Associate Professor, Biomedical Informatics and Plastic Surgery, School of Medicine;
Associate Professor of Bioengineering
Swanson School of Engineering
University of Pittsburgh

Advisors:

Alex Ducruet, PhD, CLP
Director, Licensing and Intellectual Property
Innovation Institute
University of Pittsburgh

Seth Boudreaux, PhD
Senior Manager, Business Development and Licensing
Center for Technology Transfer and Enterprise Creation
Carnegie Mellon University

Shawn Bengtson, RQAP-GLP
Director, Quality Assurance-Quality Systems Program
McGowan Institute for Regenerative Medicine

Dennis P. Swanson, MS
Assistant Dean for Special Projects
Professor, Pharmacy and Therapeutics
University of Pittsburgh

11:00am-1:00 pm

Lunch, Diversity Lecture and Awards

Glessner Ballroom
Wilson Lodge- Ground Floor

Speaker:

Paula K. Davis, MA
Assistant Vice Chancellor for Health Sciences Diversity
Schools of Health Sciences
University of Pittsburgh

Poster Awards:

Chair: Andy Duncan, PhD

1:00pm-2:30 pm

Afternoon Breakout Sessions (2 concurrent)

Session 3

Translating Early Stage University Research into the Healthcare Marketplace

Banquet Room 1
Wilson Lodge- Second Floor

Session Organizers and Chairs:

Alan Hirschman, PhD
Executive Director
Center for Medical Innovation;
Professor of Bioengineering
Swanson School of Engineering
University of Pittsburgh

and

Scott Morley, MBA
Coulter Program Director and EIR
Innovation Institute
University of Pittsburgh

“University of Pittsburgh Center for Medical Innovation Early Stage Seed Grant Program – Overview and Results”

Alan Hirschman, PhD

“From Bench, to Bedside, to Business: Commercializing your Medtech Innovation”

Scott Morley, MBA

“Building a Research Program with an Eye on Commercialization”

Morgan Fedorchak, PhD
Assistant Professor
Department of Ophthalmology
University of Pittsburgh School of Medicine

“Sowing the Seeds of a Successful Aortic Stent Design Program”

Bryan Tillman, MD, PhD
Associate Professor
Division of Vascular Surgery
Department of Surgery

University of Pittsburgh Medical Center

and

Youngjae Chun, PhD
Associate Professor
Department of Industrial Engineering
Swanson School of Engineering
University of Pittsburgh

“The Long and Winding Road to Technology Commercialization”

Jeremy Kimmel, PhD
Vice President of New Technology
ALung Technologies;
Commercial Translation Program Manager
Pitt SciVelo

“Laboratory Practices that Enhance Chances for Industry Partnerships and Clinical Translation”

Steven Badylak, DVM, PhD, MD
Professor
Department of Surgery
University of Pittsburgh;
Deputy Director
McGowan Institute for Regenerative Medicine;
Director
Center for Pre-Clinical Tissue Engineering
McGowan Institute for Regenerative Medicine

Session 4

Regenerative Tissue Therapies and Cancer Risk/Progression

Banquet Room 3
Wilson Lodge- Second Floor

Session Organizers and Chairs:

Faina Linkov, PhD, MPH
Associate Professor of Ob/Gyn and Epidemiology
University of Pittsburgh School of Medicine;
Department of Obstetrics, Gynecology & Reproductive Sciences
Magee-Womens Research Institute

and

Lauren Kokai, PhD
Faculty
Department of Plastic Surgery
University of Pittsburgh School of Medicine;
Co-Director
Adipose Stem Cell Center
University of Pittsburgh

“Stem Cells and Cancer: An Overview”

Faina Linkov, PhD, MPH

“Post-Mastectomy Reconstruction with Tumor Suppressing Autologous Adipose Tissue”

Lauren Kokai, PhD

“Pleural Environment in Cardiovascular Disease and Cancer”

Vera Donnenberg, PhD
Associate Professor
Department of Cardiothoracic Surgery
University of Pittsburgh

“Adipose Derived Stem Cells: From Bench to Bedside”

Asim Ejaz, PhD
Research Assistant Professor
Department of Plastic Surgery
University of Pittsburgh School of Medicine

Panel discussion with speakers- 20 min

1:00-2:30 pm

Commercialization Office Hours- *by appointment only*

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Executive Director, sciVelo;
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Swanson School of Engineering
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Innovation Institute
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Dennis P. Swanson, MS
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Professor, Pharmacy and Therapeutics
University of Pittsburgh

2:30-3:00 pm

Break

3:00-4:30 pm

Afternoon Breakout Sessions (2 concurrent)

Session 5

Fireside Chat with Local Entrepreneurs

Terrace Room
Wilson Lodge Second Floor

In this informal session, attendees will engage with a panel of academic entrepreneurs and CEOs from local start-up companies to learn tips for success in starting a new company.

Session Organizer and Chair:
Don Taylor, PhD

Panelists:

Cecelia Yates, PhD
Associate Professor
Department of Health Promotion & Development
School of Nursing
University of Pittsburgh

Andrew Brown, PhD
Assistant Director
Commercial Translation Programs
sciVelo
University of Pittsburgh;
Clinical Assistant Professor
Department of Periodontics and Preventative Medicine
University of Pittsburgh School of Dental Medicine

Session 6

Scientific Session: Pulmonary Injury Repair, Regeneration and Transplantation

Banquet Room 3
Wilson Lodge- Second Floor

Session Organizer and Chair:
Charlie (Xi) Ren, PhD
Assistant Professor
Department of Biomedical Engineering
Carnegie Mellon University

“Mitochondrial Dysfunction in Aging and Pulmonary Fibrosis”

Marta Bueno, PhD
Research Assistant Professor of Medicine
Aging Institute & Division of Pulmonary, Allergy and Critical Care Medicine
University of Pittsburgh

“Engineering of Pulmonary Stem Cells”

Charlie (Xi) Ren, PhD

“Donor Lung Preservation and Transplantation “

Kentaro Noda, PhD
Research Assistant Professor
Department of Cardiothoracic Surgery
University of Pittsburgh Medical Center

“De Novo Lung Biofabrication”

Erica Comber
Doctoral Student, Laboratory of Keith Cook
Department of Biomedical Engineering
Carnegie Mellon University

3:00-4:30 pm

Commercialization Office Hours- *by appointment only*

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Wilson Lodge- Second Floor

Session Organizer and Chair:

Don Taylor, PhD, MBA, CLP

Assistant Vice Chancellor, Health Sciences Translation

Executive Director, sciVelo;

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Director, Quality Assurance-Quality Systems Program

McGowan Institute for Regenerative Medicine

Dennis P. Swanson, MS

Assistant Dean for Special Projects

Professor, Pharmacy and Therapeutics

University of Pittsburgh

4:30 pm

Departure