

2020 McGowan Institute Retreat

Pitt McGowan

Program – Final
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

Ron Jankowski, PhD
Vice President of Scientific Affairs
Cook MyoSite

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 Reform 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

Julie A. Phillippi, PhD
Program Chair, 2020 McGowan Retreat

William R. Wagner, PhD
Director-McGowan Institute

6:15-7:30 pm

Technology Pitch Competition

Glessner Ballroom
Wilson Lodge- Ground Floor

Session Organizer and Moderator:

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

Judges:

Kacey G. Marra, PhD

Professor

Departments of Plastic Surgery and Bioengineering;

Vice Chair of Research

Department of Plastic Surgery

University of Pittsburgh

Seth Boudreaux, PhD

Senior Manager

Business Development and Licensing

Carnegie Mellon University

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 **Opening Plenary: A Patient Story of McGowan/CHP Partnership and New Pediatric Initiatives**
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
Children’s Hospital of Pittsburgh of UPMC

David Chi, MD
Associate Professor
Department of Otolaryngology
Clinical Director, Division of Pediatric Otolaryngology
Children’s Hospital of Pittsburgh of UPMC

and

Sutton Family

Short talks from CHP Faculty

“Uncovering kidney injury modulators to design therapeutics”
Sunder Sims-Lucas, PhD
Assistant Professor
Department of Pediatrics
Children’s Hospital of Pittsburgh of UPMC

Second talk: TBD

9:00-9:30 am **Break: Coffee and Refreshments**
Glessner Ballroom
Wilson Lodge- Ground Floor

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

Session Organizer 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

“Go Big or Go Home (and Write Your R01)”

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

“Overview of the Center for Military Medicine Research with Case Example”

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”

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 Biofabricated Organ Engineering”

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

“A First Experience in Regenerative Medicine”

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: Andrew 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

“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*

Conference Room 3
Wilson Lodge- Second Floor

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

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

2:30-3:00 pm

Break
Coffee and Refreshments
Banquet 2- Second Floor

3:00-4:30 pm

Afternoon Breakout Sessions (2 concurrent)

Session 5

Fireside Chat with Local Entrepreneurs
Banquet 1
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

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

Session 6

Pulmonary Injury Repair, Regeneration and Transplantation

Banquet Room 3
Wilson Lodge- Second Floor

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

and

Keith Cook, PhD
Professor and Associate Department Head for Graduate Education
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*

Conference Room 3
Wilson Lodge- Second Floor

Session Organizer and Chair:
Scott Morley, MBA

Coulter Program Director and Entrepreneur-in-Residence
Innovation Institute
University of Pittsburgh

Advisors:

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

4:30 pm

Departure