Monday, June 6, 2016

4:30    Trainee Registration

4:45    Welcome and Introductions

5:00    Dinner

5:30-6:30 Lecture: *Frontiers in Rehabilitative and Regenerative Medicine*
        Gerald Schatten, University of Pittsburgh, Pittsburgh, PA

6:30    Biosafety, Regulatory Restrictions, MOUs, IACUCs, IBCs
        Calvin Simerly, PhD, University of Pittsburgh, Pittsburgh, PA

Tuesday, June 7, 2016

Theme: iPS & Stem Cells/Ethics

8:30-9:30 Lecture: *Molecular Diagnostics*
        Rocky Tuan, PhD, University of Pittsburgh, Pittsburgh, PA

9:30-10:30 Lecture: *The effect of mechanical and biophysical factors on muscle stem cell function and skeletal muscle regeneration*
        Fabrisia Ambrosio, PhD, MPT, University of Pittsburgh, Pittsburgh, PA

10:30-11:00 Break

11:00-12:00 Lecture: *Ethical and Historical Reflections on Regenerative Medicine*
        Henk ten Have, PhD, Duquesne University, Pittsburgh, PA

12:00-1:00 Lunch

1:00-1:30 Lab Introduction: *Stem Cell Culture, Characterization, and iPS Derivation*
          Calvin Simerly, PhD, University of Pittsburgh, Pittsburgh, PA
          Carrie Hartnett-Magee, Magee-Womens Research Institute, Pittsburgh, PA

1:30-5:00 Lab Session: During this lab students will learn to identify healthy undifferentiated PSC colonies, passaging of colonies, and culture techniques as well as examining pluripotency assays. They will also compare and contrast with iPSC culture.
Wednesday, June 8, 2016
Theme: Limb Regeneration / Tissue Engineering

8:30-9:30 Lecture: Limb Regeneration  
Randal Voss, PhD-University of Kentucky, Lexington, KY

9:30-10:30 Lecture: Engineered tissue grafts: opportunities and challenges in regenerative medicine  
Adam Feinberg, PhD-Carnegie Mellon University, Pittsburgh, PA

10:30-11:00 Break

11:00-12:00 Lecture: ECM for Volumetric Muscle Injuries  
Jenna Dziki-University of Pittsburgh, Pittsburgh, PA

12:00-1:00 Lunch

1:00-1:30 Lab Introduction: Bladder decellularization  
Jenna Dziki-University of Pittsburgh, Pittsburgh, PA

1:30-5:00 Lab Session: Bladder decellularization

5:30 Dinner [on own]

Thursday, June 9, 2016
Theme: Theme: Artificial Limbs

8:30-9:30 Lecture: Restoring the sense of touch with a prosthetic hand through a brain interface  
Sliman Bensmaia, PhD-University of Chicago, Chicago, IL

9:30-10:30 Lecture: Heartlander Project  
Cameron Riviere, PhD-Carnegie Mellon University, Pittsburgh, PA

10:30-11:00 Break

11:00-12:00 Lecture: Ten-dimensional anthropomorphic arm control in a human brain-machine interface: difficulties, solutions, and limitations  
Michael Boninger, MD-University of Pittsburgh, Pittsburgh, PA

12:00-1:00 Lunch

1:00-3:00 Tour of HERL Laboratory

3:30 Free Afternoon
Friday, June 10, 2016
Theme: Neural/Spinal Cord Rehabilitation/Pioneer Award/Career Strategies

8:30-9:30  **Lecture: Neurorehabilitation: Five new things**
Nneka Ifejika, MD, MPH- University of Texas, Houston, TX

9:30-10:30  **Lecture: Association of Race, Cultural, and Psychosocial Factors with QOL after Spinal Cord Injury: A Health Services Research Perspective**
Larissa Myaskovsky, PhD-University of Pittsburgh/VA Pittsburgh Healthcare System, Pittsburgh, PA

10:30-11:00  Break

11:00-12:00  **Pioneer Award & Lecture: Biologically Inspired Engineering: From Human Organs-on-Chips to Programmable Nanotechnologies**
Donald Ingber, MD. PhD- Wyss Institute at Harvard University, Boston, MA

12:00-1:00  Lunch

1:00-2:30  Course Participant Presentations w/Five Minute Research Overview

2:30-3:30  Career Strategies – Scholarly Pursuits; Grants, Responsible Conduct

7:00  Closing Dinner Banquet