

BIOS 206 Mini-course, March 3 – 14, 2014

Stem Cells and Regeneration: Transitioning from Basic Research to Clinical Therapies

Faculty Organizer: Dr. Michele Calos

Units: 2, Time 1:15 – 3:30 PM; lectures: room G1161, labs: room G1165, Lokey Stem Cell Building

Week 1.

Mon, Mar 3. 1:15 – 2:30, Michele Calos, Ph.D., Dept. Genetics, Stanford, *Brief Introduction to Course, and Stem Cell Therapy for Muscular Dystrophies*

Tues, Mar 4. 1:15 – 2:30, Matthew Porteus, M.D., Ph.D., Dept. Pediatrics, Stanford, *Genome Editing and Therapeutic Strategies in Hematopoietic Cells*

Wed, Mar 5. 1:15 – 2:15, Jane Lebkowski, Ph.D., President of Research, Asterias Biotherapeutics. *Embryonic Stem Cell Therapy for Spinal Cord Injury*

<2:15 – 2:30, Refreshment break>

2:30 – 3:30, Ann Tsukamoto, Ph.D., Executive Vice President, StemCells Inc., *Developing Therapeutics Based on Human Neural Stem Cells*

Thurs, Mar 6. Laboratory. 1:15 – 3:30. TAs: Dr. Chris Bjornson, Dr. Chunli Zhao, Jonanthan Geisinger (Calos Lab) Intramuscular injection and luciferase live imaging of stem cells.

Fri. Mar 7. No class (MPC Current Issues in Genetics talk 12 PM, M-315)

Week 2.

Mon, Mar 10. 1:15 – 2:30, Birgitt Schuele, M.D., Parkinson's Institute, *Stem Cells and Parkinson's Disease*

Tues, Mar 11. Laboratory, 1:15 – 3:30. Nucleofection of DNA into mouse embryonic fibroblasts.

Wed, Mar 12. 1:15 – 2:15, Joe Wu, M.D., Ph.D, Dept. Radiology, and Director, Cardiovascular Institute, Stanford, *Stem Cells and the Heart*

<2:15 – 2:30, Refreshment break>

2:30 – 3:30, Joe Gold, Ph.D. Cardiovascular Institute, Stanford, *Regulatory Path for Stem Cell Therapies*

Thurs, Mar 13. Laboratory, 1:15 – 3:30. View GFP-expressing transfected cells in scope and quantify by FACS analysis.

Fri, Mar 14. 1:15 – 2:30. Casey Case, Ph.D., Chief Scientific Officer, SanBio, *Translation of Mesenchymal Stem Cell Products from Bench to Clinic*

<2:30 – 3, Refreshment Break>

3 – 4 PM. Gary Steinberg, M.D., Ph.D., Depts. Neurosurgery and Neurology, Stanford, *Clinical Trial of Stem Cell Therapy for Stroke*