

Tentative Agenda: Human Pluripotency Stem Cell Workshop

Feb 20- 22 2018

Tuesday February 20, 2018	Cell Maintenance
9:00 - 9:30	Welcome Presentation (Introduce Trainers and Trainees)
9:30 – 10:00	Lecture 1: Introduction to hES and IPSC
10:00 – 11:00	Lecture 2: Feeder-Free Culture Systems for Human ES and iPS Cells
11:00 – 11:15	Break
11:15 – 11:30	Lecture 3: Laboratory Safety
11:30- 12:30	Practical Session 1: Evaluate the Quality of hES and iPS Cell Cultures and Plate Coating <ul style="list-style-type: none">• Observe time course of iPS cell cultures to evaluate colony morphology• Plate coating with Matrigel
12:30- 1:30	Lunch
1:30- 4:00	Practical Session 2: Passage and Cryopreserve hES and iPS Cell for Long-Term Maintenance <ul style="list-style-type: none">• Observe demonstration and practice enzyme-free passaging of hES & iPS cells• Discuss cryopreservation of hES and iPS Cell
4:00 – 5:00	Lecture 4: Guest lecture
5:00- 5:30	Wrap up Session
5:30	Workshop Dinner

Wednesday February 21, 2018	Differentiation
9:00 – 10:00	Lecture 5: Differentiation of hES/IPSC Cells
10:00 – 10:30	Practical 3: Observe passaged cells from previous day
10:30- 10:45	Break

10:45- 12:30	<p>Practical 4: Differentiation of hES and iPS Cell using mono-layer and Embryoid Bodies Methods</p> <ul style="list-style-type: none"> • Form Embryoid Bodies using AggreWell™ plates • Replate human hES and iPS Cell as single cells
12:30 - 1:30	Lunch
1:30 – 3:00	Lecture 6: Differentiation of Human ES and iPS Cells into Neural Lineages and Definitive Endoderm lineages
3:00 – 3:15	Break
3:00 – 4:30	<p>Practical Session 5: Neural Differentiation</p> <ul style="list-style-type: none"> • Examine prepared Embryoid Bodies • Harvest Embryoid Bodies and plate • Observations of neural progenitors formed using EB based protocol
4:30 – 5:00	Practical 6: Observation of Definitive Endoderm Cells in Culture
5:00- 5:30	Wrap up

Thursday February 22, 2018	Reprogramming and Gene Editing
9:00 – 10:00	Lecture 7: Introduction to reprogramming
10:00 – 10:15	Break
10:15 – 12:00	Practical Session 7: iPSC Reprogramming
12:00 – 1:00	Lunch
1:00 – 2:00	<p>Practical Session 8: Picking colonies</p> <ul style="list-style-type: none"> • Pick iPS cell and re-plate colony
2:00 – 2:30	Practical Session 9: Observing cultures
2:30 – 3:30	Lecture 8: Gene Editing of hES cells
3:30 – 4:00	<p>Wrap Up Session:</p> <ul style="list-style-type: none"> • Discussion • Quiz • Course Evaluation

