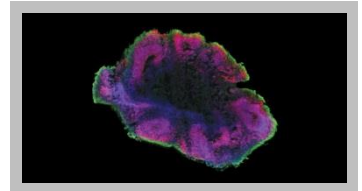
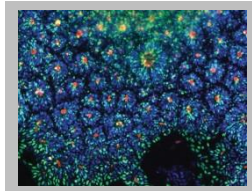
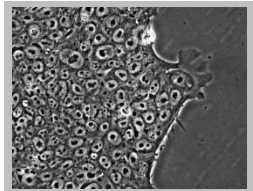
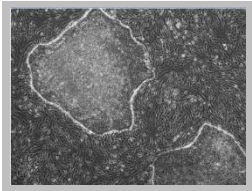
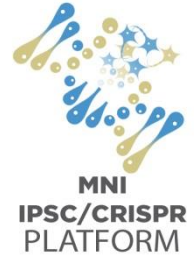


# Human Pluripotent Stem Cell and Organoid Workshop

October 3-5, 2017



A comprehensive 3 day workshop on deriving and maintaining high quality human induced pluripotent stem (hiPS) cells from somatic cells using a defined and feeder-free system, with an emphasis on identifying, isolating and maintaining iPS cell colonies. We will also cover direct differentiation of these cells to neuronal progenitor cells and briefly cover generation and support of cerebral organoids.

We will discuss and demonstrate important aspects of these workflows and participants will receive hands on experience with all techniques.

**Maximum participants: 12**

**To apply:** Register online at <https://www.surveymonkey.com/r/63ZHSC7>

**Application deadline:** September 22, 2017



C Ernst and TM Durcan- iPSC training workshop program (Oct 3 - 5, 2017)

Oct 3	Reprogramming of Somatic Cells into iPSCs	Presenter/ Trainer	Room
8:30 - 9:00	Welcome by Douglas Mental Health University Institute, Montreal Neurological Institute and STEMCELL Technologies  Introductions & Institute intro- Nikta to do why we care/history of stem cells	Dr. Carl Ernst & Dr. Tom Durcan	Douglas
9:00 - 9:45	Introduction: History of Human ES and iPSCs and Their Utilizations	Dr. Nikta Fay	Douglas
9:45 - 10:00	Break		
10:00 - 11:30	Lecture 1: Isolation and Reprogramming of Somatic Cells into iPSCs	Raymond Lam	Douglas
11:30 - 12:30	Lunch (Courtesy of STEMCELL Technologies)		
12:30 - 2:00	Practical Session 1: Isolation of Peripheral Blood Mononuclear Cells (PBMCs) <ul style="list-style-type: none"> <li>• Overview of EasySep™ cell separation system</li> <li>• Demonstrate preparation of PBMCs using SepMate™</li> <li>• Observe culture-expanded blood cells in StemSpan™ SFEM</li> </ul>	Douglas	Douglas
2:00 - 3:30	Practical Session 2: Reprogramming Somatic Cells into iPSCs <ul style="list-style-type: none"> <li>• Demonstrate transfection of human fibroblasts using ReproRNA™-OKSGM</li> <li>• Observe reprogrammed cells cultured in ReproTeSR™</li> </ul>	Douglas	Douglas
3:00 - 3:15	Break		Douglas
3:15 - 4:45	Practical Session 3: Demonstration and Hands-On Practice with Selection and Picking of iPSC Cell Colonies	Douglas	Douglas
4:45 - 5:00	Wrap Up Session	Douglas	Douglas

Oct 4	hPSC Maintenance	Presenter/ Trainer	Room
9:00 - 10:30	Lecture 2: Feeder-Free Culture Systems for Human ES and iPSCs	Raymond Lam	MNI
10:30 - 10:45	Break		MNI
10:45 - 11:45	Practical Session 4: Evaluate the Quality of Human ES and iPSC Cell Cultures and Plate Coating <ul style="list-style-type: none"> <li>• Observe time course of hPSC cultures to evaluate colony morphology</li> <li>• Plate coating with mTeSR™1 &amp; Matrigel® or TeSR™-E8™ &amp; Vitronectin XF™</li> </ul>		MNI
11:45 - 12:45	Lunch (Courtesy of STEMCELL Technologies)		
12:45 - 2:45	Practical Session 5: Passaging Human ES and iPSCs <ul style="list-style-type: none"> <li>• Demonstration and hands-on practice with enzyme-free passaging of hPSCs using Gentle Cell Dissociation Reagent (GCDR) and ReLeSR™</li> </ul>		MNI
2:45 - 3:45	Practical Session 6: Cryopreservation and Thawing of hPSCs		MNI
3:45 - 4:00	Wrap Up Session		MNI

C Ernst and TM Durcan- iPSC training workshop program (Oct 3 - 5, 2017)

Oct 5	hPSC Differentiation Towards Ectoderm	Presenter/ Trainer	Room
9:00 - 9:30	Lecture 3a: Differentiating Human ES and iPS Cells in Defined Culture Environments with STEMdiff™ Kits	Raymond Lam	MNI
9:30 - 10:30	Lecture 3b: Differentiation of Human ES and iPS Cells Towards Ectoderm Using the STEMdiff™ System	Raymond Lam	MNI
10:30 - 10:45	Break		MNI
10:45 - 12:00	Guest Lecture: Generation of Cerebral Organoid from Human ES and iPS Derived Neural Progenitors	MNI	MNI
12:00 - 1:00	Lunch (Courtesy of STEMCELL Technologies)		
1:00 - 2:00	Practical Session 7: Generate EBs using AggreWell™ and Prepare Single Cells for Monolayer-Based Protocols		MNI
2:00 - 3:00	Practical Session 8: Differentiation of Human ES and iPS Cells to Neural Progenitors <ul style="list-style-type: none"> <li>● Examine neural aggregates in AggreWell™</li> <li>● Observe time course of differentiated neural progenitor cultures</li> <li>● Assess neural induction by scoring neural rosette formation from EBs</li> </ul>		MNI
3:00 - 3:15	Break		MNI
3:15 - 4:30	Practical Session 9: Overview of Differentiation of Human ES and iPS Derived Neural Progenitors Towards Cerebral Organoid <ul style="list-style-type: none"> <li>● Preparation of neural progenitors</li> <li>● Matrigel embedding of neural progenitors</li> <li>● Time course observations of hPSC derived Cerebral organoids</li> </ul>	MNI	MNI
4:30 - 5:00	Wrap Up Session <ul style="list-style-type: none"> <li>● Q&amp;A</li> <li>● Quiz</li> <li>● Course Evaluation</li> </ul>		MNI