

4:36—4:41 pm

Hannah Rasmussen (J. Hoggatt / T. Tate / D. Scadden)

Novel Therapeutics to Enhance Bone Marrow Transplantation

4:42—4:47 pm

Arianna Rech (A. Choudhuri / L. Zon)

Interaction between lineage and signalling transcription factors in the differentiation of erythrocytes

4:48—4:53 pm

Dominick Zheng (J. Rivera-Feliciano / E. Rosado-Olivieri / D. Melton)

A Screen to Identify Novel Secreted Effectors of Activin A in Definitive Endoderm Induction

4:54—5:00 p.m.

Closing remarks

Willy Lensch

5:00—5:25 pm **POSTER PREVIEW and REMOVAL**



5:30—7:30 p.m.

Celebratory Dinner

Cambridge Queen's Head Pub

Mentors and PIs invited



ELEVENTH ANNUAL UNDERGRADUATE INTERNSHIP SYMPOSIUM

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William Anderson, PhD

Administrative Director:

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The Harvard Stem Cell Institute extends its sincere thanks to the

undergraduate internship

selection committee

and to the participating

lab mentors, PIs and faculty guests.

This program would not be possible without your support, engagement and encouragement.



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THURSDAY

13 AUGUST 2015



HARVARD UNIVERSITY

MAXWELL-DWORKIN

ROOM G115

33 OXFORD STREET

CAMBRIDGE, MA USA

PROGRAM SCHEDULE

10:45 am Welcome and introduction
M. William Lensch, PhD | Faculty Co-Director

GROUP A

11:00—11:05 am
Centura Anbarasu (S. Rowbotham / C. Kim)
Investigating the Role of G9a and Glp in Lung Stem Cells and Lung Tumor Progression

11:06—11:11 am
Brenda Briones Miranda (F. Sher / D. Bauer)
Investigating mechanisms whereby noncoding genetic variation influences blood cell traits in a human immortalized hematopoietic stem/progenitor cell line

11:12—11:17 am
Gabrielle Crobsy (D. Carlone / M. Shah / D. Breault)
Understanding the role of mTert+ cells in tooth development

11:18—11:23 am
Laura Hyder (D. Shah)
Analyzing Pharmacological Targets Stimulating Endothelial Emergence of Hematopoietic Stem Cells

11:24—11:29 am
Se-Jin (Joyce) Kim (S. Balbach / S. Orkin)
The role of EZH2 in alveolar rhabdomyosarcoma cells

11:30—11:35 am
Polina Krivykh (B. Singh / E. Buttermore / C. Woolf)
Cancer Chemotherapy-induced Peripheral Neuropathy Phenotypic Screen

11:36—11:41 am
Irene Wong (Y-F. Lu / R. Sugimura / G. Daley)
Ectopic Expression of Combinatorial Transcription Factors Confers Formation of Hematopoietic Progenitors from iPSCs

11:42—11:47 am
Anna Zhao (S. Morris / G. Rowe / G. Daley)
Interrogating the Role of Circadian Rhythm in Leukemogenesis and Hematopoiesis

11:48—11:53 am
Lauren Otto (C. Leung / F. Slack)
Analysis of the transcriptional regulation of let-7 in C. elegans

11:54—11:59 am
Cho Han Chiang (M. Saxena / R. Shivdasani)
Optimization of 4C-seq in Mouse Intestinal Villi Cells

12:00—12:05 pm
Connor Kenny (M-J. Kim / T. Serwold)
Generating a Novel in vitro Culture System for Functional Thymic Epithelial Cell Progenitors

12:06 —12:52 pm POSTER PREVIEW & light lunch

GROUP B

12:55—1:00 pm
May Barakat (A. Brodovskaya / J. Whited)
Characterizing Vascularization Within the Regenerating Axolotl Limb

1:06—1:11 pm
Anastasia Brodovskaya (M. Barakat / J. Whited)
Visualizing Limb Vascularization in Regenerating and Homeostatic Axolotl Limbs

1:12—1:17 pm
Edgar Garcia (R. Morizane / A. Lam / N. Gupta / J. Bonventre)
Modeling Kidney Injury and Fibrosis in Nephron Organoids Derived from hPSCs

1:18—1:23 pm
Alejandra Lerma-Ortiz (Y. Xie / Z. Li)
CRISPR/Cas9-based Lineage Tracing System by Introducing Random Indel Mutations in Rosa26 or AAVS1

1:24—1:29 pm
Kimberly Ma (A. Cox / M. Fort / A. Tismodes / W. Goessling)
Role that the Hippo pathway effector Yap plays in metabolic reprogramming during development

1:30—1:35 pm
Colin Marts (T. Poggioli / R. Lee)
Producing Bivalent Neuregulin for use as a therapy in a chronic heart failure model

1:36—1:41 pm
Arifeen Rahman (S. Carroll / R. Lee)
Characterizing the role of ARRDC3 in regulating glucagon signaling in the liver

1:41—1:46 pm
Daniel O' Brian (B. Banerjee / R. Sherwood / R. Maas)
Genotyping of cells in a cancer population using a dCas9 directed version of the split Venus system

1:47—1:52 pm
Steven Ryu (C. Muratore / T. Young-Pearse)
Characterizing Neural Development in a DISC1 Disruption Model in Cerebral Organoids

1:53—1:58 pm
Grant Sprow (M. Grinstein / J. Galloway)
Tendon Cell Proliferation in Mus Musculus and the Identification of Distinct Tendon Cell Populations

2:00—2:30 pm POSTER PREVIEW & refreshments

GROUP C

2:30—2:35 pm
Ameed Abualteen (K. Daneshvar / J. Pondick / A. Mullen)
Cas9-Mediated Programming of Human Embryonic Stem Cells Towards Endoderm

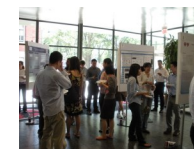
2:36—2:41 pm
Pakanat Decharatanachart (K. McAvoy / A. Sahay)
Impact of Modulating Competition Dynamics of Adult-born Neurons on Hippocampal Afferent Connectivity

2:42—2:47 pm
Alexia Zagouras (N. Guo / A. Sahay)
Examining the Role of Klf9 in Regulation of Activation and Quiescence of Neural Stem Cells in the Adult Hippocampus

2:48—2:53 pm
Petros Fessas (J. Pereira / D. Moakley / B. Wainger)
The effects of SOD1 A4V expression on the transcriptional profile of iPSC-derived motor neurons

2:54—2:59 pm
Caroline Moran (T. Gallegos / I. Drummond)
Morphogen Interactions during Zebrafish Kidney Regeneration

3:00—3:05 pm
Steven Toffel (B. Watmuff / R. Karmacharya)
Optimization of dendritic spine labeling with the carbocyanine dye Dil and immunohistochemistry



Posters on view between
each session break

3:06—3:11 pm
Sarah Kassenaar (J. Kempfle / A. Edge)
Histological Analysis of the Role of Sox2 During Inner Ear Development

3:12—3:17 pm
Nora Torres (J. Moore / Q. Tang / D. Langenau)
Zap70 mutant zebrafish: an immune compromised transplantation model

3:18—3:23 pm
Anirudh Udutha (Y. Zhu / K. Shah)
Developing Therapeutic Stem Cells to Simultaneously Target Cell Proliferation and Death Pathways in Glioblastomas

3:24—3:55 pm POSTER PREVIEW

GROUP D

4:00 — 4:05 pm
Lloyd Chen (A. Crespo / A. van der Zwan / T. Tilburgs / J. Strominger)
Characterization of HLA-C expression in Human extravillous trophoblasts

4:06—4:11 pm
Jason Cheng (M. Tabebordbar / A. Wagers)
CRISPR/Cas9-Mediated Exon-Skipping to Treat Duchenne Muscular Dystrophy

4:12—4:17 pm
Luke Demas (/ Y-C. Hsu)
The Role of Adipogenic Sonic Hedgehog Signaling in Skin Development

4:18—4:23 pm
Danielle Feffer (N. Baryawno / D. Scadden)
Defining driver genes for cancer metastasis via a pooled cDNA in vivo screen

4:24—4:29 pm
Dani Keahi (T. Ahfeldt / L. Rubin)
Histological analysis of NEUROD6 expression in midbrain dopaminergic neurons

4:30—4:35 pm
Priyanka Kumar (K. Ozkan / H. Padmanabhan / J. Macklis)
Directed differentiation of corticospinal motor neurons from endogenous progenitors using modified RNA