

4:23—4:28 pm

**Apoorva Rangan ~ Harvard** (S. Tavakoli / A. Wagers)  
*A Small Molecule Approach to Increasing Skeletal Muscle Engraftment Frequency in Zebrafish*

4:29—4:34 pm

**Henna Hundal ~ Harvard** (A. Shah / R. Lee)  
*Ras-related Protein Rab11a is Essential for Thioredoxin Interacting Protein-Mediated Fructose Uptake in the Mouse Intestinal Epithelium*

4:35—4:45 p.m.

**Presentation of Nada Anzak Award**  
**M. William Lensch and Maureen Herrmann**

**Closing Remarks**  
and **William Anderson**

4:45—5:15 pm **POSTER PREVIEW and REMOVAL**



5:30—7:30 p.m.

**Celebratory Dinner**  
**Mentors and PIs invited**  
**HSCI ~ Bauer Building Lobby**

**@Harvardstemcell**

# THIRTEENTH ANNUAL UNDERGRADUATE INTERNSHIP SYMPOSIUM

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## Harvard Stem Cell Institute Internship Program (HIP)

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HSCI Executive Director:  
*Brock Reeve, M.Phil., MBA*

Faculty Director:  
*William Anderson, PhD*

Administrative Director:  
*Maureen Herrmann, EdM*

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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9 AUGUST 2018**

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# PROGRAM SCHEDULE



Posters on view between  
each session break

11:00 am Welcome and introduction

**William Anderson, PhD**

Faculty Co-Director

## GROUP A

11:15—11:20 am

**Ghazal Aghagoli ~ Brown** (S. Freeburg / W. Goessling)

*Wnt Signaling Modulates Hepatobiliary Development in Zebrafish*

11:21—11:26 am

**Vandit Shah ~ Nirma University**

(I. Oderberg / W. Goessling)

*Liver Intestinal Cross-talk: Using Single-Cell RNA Sequencing to Study Liver Regeneration in Zebrafish*

11:27—11:32 am

**Nada Attia ~ Harvard** (Y. Kitamura / K. Shah)

*Evaluating the Significance of DR4, DR5, and EGFR Presence in Breast to Brain Metastatic Cell Lines in Conferring Sensitivity to Targeted Stem Cell Therapeutics*

11:33—11:38 am

**Nina Cheng ~ Drexel** (J. Khalsa / K. Shah)

*Characterization of the Tumor Microenvironments of Four Stem Cell-derived Immunocompetent Murine Models for GBM Immunotherapy*

11:39—11:44 am

**Deepika Kurup ~ Harvard** (V. Lagomarsino / T. Young-Pearse)

*Investigation of Endosomal-Lysosomal Trafficking in Alzheimer's Disease using Patient-derived iPSCs*

11:45—11:50 am

**Gabriella Le Blanc ~ McGill** (M. Fernandez / T. Young-Pearse)

*Investigating Neurotoxicity of Membrane-anchored A $\beta$  Fragments in Alzheimer's Disease*

11:51—11:56 am

**Alan Wong ~ Harvard** (K. Johnson / G. Dardik / N. Leigh / R. Oshiro / J. Whited)

*Systemic Signals and Mediators Underlying Systemic Cell Cycle Activation in Axolotl*

11:57 am—12:02 pm

**Aaron Sandoval ~ Univ. of Florida** (G. Dunlap / J. Whited)

*Identifying the Role of Amphiregulin in Axolotl Limb and Mouse Digit Tip Regeneration*

12:03—12:08 pm

**Arpita Jajoo ~ Tufts** (F. Shamsi / Y-H Tseng)

*Investigating the Expression Patterns of SOX5 and HOXA5 in Brown Adipocyte Differentiation*

**12:09 —12:55 pm POSTER PREVIEW & light lunch**

## GROUP B

1:00—1:05 pm

**Ananya Gupta ~ Johns Hopkins** (S. Dubois / J. Dvornick / S. Agarwal)

*Modeling Pearson Marrow Pancreas Syndrome using Human Induced Pluripotent Stem Cells (iPSCs) Harboring Mitochondrial DNA Deletions*

1:06—1:11 pm

**Anthony Kang ~ Northwestern Univ.** (M. Feigenson / V. Rosen)

*Identification of Meniscus-specific Genes in Developing Murine Hindlimbs*

1:12—1:17 pm

**Sobhi Kazmouz ~ Monmouth College** (J. Whangbo / J. Ritz)

*Investigating the Immune Profiles of Chronic Graft-versus-Host Disease Patients after Stopping Low Dose Interleukin-2 Therapy*

1:18—1:23 pm

**Young Joon Kim ~ Columbia** (B. Aubrey / S. Armstrong)

*Investigating Synthetic Lethal Targeting of IKZF1/IKAROS during Menin and DOT1L Inhibition in Human Leukemia*

1:24—1:29 pm

**Matthew Diaz ~ Harvard** (T. Zhao / D. Scadden)

*Optimization of a Screening Assay for the Discovery of Small Molecules to Induce Osteosarcoma Differentiation*

1:30—1:35 pm

**Gretchen Long ~ SUNY Polytechnic** (M. Gupta / C. Kim)

*Treating BRG1 Deficiency in Lung Adenocarcinoma with ATR Inhibition*

1:36—1:41 pm

**Mert Mestanoglu ~ Bahcesehir Univ. School of Medicine**

(J. Stanicka / S. Hegarty / Z. He)

*Phophotome-wide CRISPR Deletion Screen for Regulators of CNS Regeneration*

1:42—1:47 pm

**Licyel Paulas Condori ~ Univ. Mayor de San Simon**

(J. Frame / T. Long / T. North)

*The Potential Crosstalk between Glucose Metabolism and Inflammation in Enhancing Red Blood Cell Specification and/or Differentiation*

1:48—1:53 pm

**Dulanjalee Senadeera ~ South Asian Institute of Technology and Medicine** (S. Raj/N. Xubo/T. Cutia/ J. Galloway/A. Craft)

*Testing Bioactive Molecules on Mouse ESC Cells to Identify a Change in Cell Fate to Generate Cartilage and Tendon Tissues*

**1:54—2:30 pm POSTER PREVIEW**

## GROUP C

2:35—2:40 pm

**Abby Thurm ~ UCLA** (B. Trinh / A. Ebralidze / D. Tenen)

*The Regulation of Hematopoietic Transcription Factor PU.1 by Long Non-coding RNA*

2:41—2:46 pm

**Dalton Brunson ~ Harvard** (C. Yan / M. Hayes / M. Theodorou/ E. Garcia / K. McCarthy / D. Do / N. Iftima /D. Langenau)

*Assessing Combinatory Effect of PARP Inhibitor with DNA Damaging Agent on Rhabdomyosarcoma at Single Cell Resolution*

2:47—2:52 pm

**James Coleman ~ Harvard** (N. Guo / A. Sahay)

*Examination of Klf9 Expression in Adult Neural Stem Cells*

2:53—2:58 pm

**Xiaotian Liao ~ Minerva Schools at KGI** (S. Nandakumar / V. Sankaran)

*Treating Hemophilia A with CRISPR-mediated Gene Activation in Hematopoietic Cells*

2:59—3:04 pm

**Ruhi Kanwar ~ Stanford** (K. Daneshvar/ A. Kratkiewicz/ A. Mullen)

*All-in-One CasRx System for Efficient RNA Knockdown*

3:05—3:10 pm

**Gurbani Kaur ~ Harvard** (J.J. Tan / J. Guyette / H. Ott)

*Development of Three-Dimensional Heart Tube Constructs to Model Human Heart Development in vitro*

3:11—3:16 pm

**Mai-Linh Ton ~ Harvard** (W. Hendriks / C. Bragg)

*Role of the SVA Retrotransposon in X-Linked Dystonia Parkinsonism*

3:17—3:22 pm

**Lujia (Cha Cha) Yang ~ Harvard** (A. Waghray / J. Rajagopal)

*Characterizing the Role of IGFBP6 in Human Airway Epithelium as a Possible Injury Marker*

3:23—3:28 pm

**Jordan Franklin ~ Harvard** (Z. Smith / A. Meissner)

*Understanding the Induction of Epigenetic Lesions in Cancer*

**3:29—4:00 pm POSTER PREVIEW & refreshments**

## GROUP D

4:05 — 4:10 pm

**Michelle Ko ~ Harvard** (S. Simmons / M. Daly / J. Levine / F. Zhang/ P. Arlotta)

*In vivo Perturb-Seq to Understand the Convergent and Divergent Pathways in Autism Spectrum Disorder*

4:11—4:16 pm

**Giulio Deangeli ~ Sant'Anna School, University of Pisa**

(M. Ko / X. Jin / S. Simmons / M. Daly / J. Levine / F. Zhang / P. Arlotta)

*In silico Characterization of the Transcriptomic Phenotype in Mouse Brain Cell Types after Perturbation of Autism Spectrum Disorder Genes*

4:17—4:22 pm

**jisoo Kim ~ Harvard** (Y. Itoh / A. Engmann / J. Macklis)

*Investigating the Function(s) of Ctip2 in Corticospinal Neuron Axon Extension*