Institute for Stem Cell and Regenerative Medicine
Stem Cell Symposium
April 5, 2019, 2:45 – 3:05pm, 5:15 – 6:30pm
(Selected for oral presentation)

Posters

1. Spatially restricted stromal Wnt signaling suppresses proliferative potential of prostatic epithelial stem cells through TGFβ
   Xing Wei, Li Zhang, Zhicheng Zhou, Oh-Joon Kwon, Yiqun Zhang, Hoang Nguyen, Baijun Dong, Wei Xue, Chad J Creighton, Michael Ittmann, Li Xin

2. Dynamics of genome reorganization during human cardiogenesis reveal an RBM20-dependent splicing factory
   Alessandro Bertero, Paul A. Fields, Vijay Ramani, Giancarlo Bonora, Galip G. Yardimci, Hans Reinecke, Lil Pabon, William S. Noble, Jay Shendure, Charles E. Murry

3. Sox2 regulates bipotent potential of Sca-1+ luminal cells of murine prostatic proximal ducts
   Oh-Joon Kwon, Li Zhang, Deyong Jia, Chad J Creighton, Li Xin

4. Biochemical and physical cues combine to augment iPSC-derived skeletal muscle differentiation and maturation for improved disease modeling
   Shawn Luttrell, Jean-Baptiste Dupont, Alec Smith, Deok-Ho Kim, David L. Mack

5. High-Content Screening of Drug Targets for Duchenne Muscular Dystrophy in Engineered Heart Tissue
   Samantha Bremner, Nathan J Sniadecki, David L Mack

6. Targeted gene activation directs trophoblast trans-differentiation using the novel designed epigenetic inhibitor, EED binder-dCAS9
   Shiri Levy and Hannele Ruohola-Baker

7. Thermofluidics for spatial control of gene activation
   Daniel C. Corbett, Bagrat Grigoryan, Jordan S. Miller, Kelly R. Stevens

8. Engineered liver tissue as an in vivo model to probe the dynamics of human liver regeneration over time
   Chelsea L. Fortin, Yuliang Wang, Sarah H. Saxton, Kelly R. Stevens

9. Spatiotemporal Control of Cell Fate by Soluble Signal Patterning
   Mary Regier and Kelly R. Stevens

10. Hepatoblast organoids have bipotential fate in engineered liver tissue
    Sarah Saxton, Alexander DB Ross, Ludovic Vallier, Kelly R. Stevens

11. Expression of B2M is regulated by differentiation
    Adelle D. Kanan and Alvin Y. Liu

12. Chromatin Dynamics During In Vitro Human Endothelial Cell Differentiation.
    Katie Mitzelfelt, Giancarlo Bonora, Paul Fields, Xiulan Yang, Lil Pabon, Nathan Palpant, William Noble, Charles Murry
13. Tracking Dynamic Behaviors of Pluripotent and Differentiated Induced Pluripotent Stem Cells with a Rainbow Lineage Reporter
Danny El-Nachef, Kevin Shi, Darrian Bugg, Kevin Beussman, Refugio Martinez, Mary Regier, Guy Everett, Amy Martinson, Charles Murry, Kelly Stevens, Jessica Young, Nathan J. Sniadecki, Jennifer Davis

14. Tracking Diastolic and Systolic Tension Development in Engineered Heart Tissues using Magnetic Sensing
Ty Higashi, Daniel Moskowitz, Nathan J. Sniadecki

15. High Throughput Functional Screening of Leukemia Stem Cells Reveals Resistance to Standard Therapies in Acute Myeloid Leukemia

16. Probing the role of SORL1 and endocytic network dysfunction in Alzheimer's disease pathogenesis using human neuronal models
Allison Knupp, Refugio Martinez, Suman Jayadev, Jessica E. Young

17. Investigating the role of mechanosensing during hair cell regeneration
Madeleine Hewitt and David Raible

18. Human pluripotent stem cells lacking kinesin 2 isoforms reveal a specific pathway of exosome release from primary cilia
Nelly Cruz, Raghava Reddy, Ramilla Gulieva, Benjamin S. Freedman

19. Thick human cardiac tissue constructs containing patterned, perfusable human microvessels from pluripotent stem cells
Nicole Zeinstra, Meredith Redd, Wan Qin, Wei Wei, Amy Martinson, Yuliang Wang, Ruikang Wang, Charles Murry, Ying Zheng

20. Investigating the role of sortilin-related receptor (SORLA) in human induced pluripotent stem cells derived neural cells as a therapeutic target for Alzheimer's Disease
Swati Mishra and Jessica Young

21. Connexin 43 functions as a positive regulator of stem cell differentiation into definitive endoderm and pancreatic progenitors
Wendy Yang, Paul D. Lampe, Patricia Kensel-Hammes, Jennifer L. Hesson, Carol B. Ware, Laura Crisa, Vincenzo Cirulli

22. Improving Human model of Duchenne Muscular Dystrophy through in vitro mechanical Stimulations of iPSC-derived Myotubes
Maryam Fayazi and David Lee Mack

23. Utilizing novel computer-designed protein scaffolds to cluster and precisely regulate Ang1/Tie2 pathway

24. Metabolic control over mTOR dependent entry and exit from diapause-like state
25. Are there more retractions in stem cell biology than other disciplines?
Al-Ekaili OA, McCanta L, Melesse T, Ramirez A, Sun L, Tadmori A, Thom N, White BD

26. What does the public think about gene-editing in embryos?
Adan N, Kirk LC, Sheykho LS, Thomas A, White BD

27. Amino acid priming of mTOR is essential for heart regeneration
Jason W. Miklas, Peter Hofsteen, Elisa Clark, Shiri Levy, Jeanot Muster, Aaron M. Robitaille, Lauren Abell, Jamie M. Goodson, Nicholas Strash, Inez Pranoto, Anup Madan, Michael T. Chin, Rong Tian, Charles E. Murry, Randall T. Moon, Yuliang Wang, Hannele Ruohola-Baker

28. The human disease gene TFPa/HADHA is required for fatty acid beta-oxidation and cardiolipin remodeling in human cardiomyocytes
Jason W. Miklas, Elisa Clark, Shiri Levy, Damien Detraux, Andrea Leonard, Kevin Beussman, Megan R. Showalter, Peter Hofsteen, Xiulan Yang, Jesse Macadangdang, Daniel Raftery, Anup Madan, Deok-Ho Kim, Charles E. Murry, Oliver Fiehn, Nathan J. Sniadecki, Yuliang Wang, Hannele Ruohola-Baker

29. Understanding the role of the fibroblast and myofibroblast in heart regeneration
Darrian Bugg, Ambika Gunaje, Farid Moussavi-Harami, Jennifer Davis

30. Deficiencies in Mitochondrial Metabolism in Human Pluripotent Stem Cells and Kidney Organoids with Polycystic Kidney Disease Mutations
Ivan G. Gomez, Laura Islas, Nelly M. Cruz, Julie Mathieu, Hannele Ruohola-Baker, Benjamin S. Freedman

31. High Throughput Protein Engineering of Genetically Encoded Indicators
Michael Rappleye, Justin Lee, Vanessa Nguyen, Netta Smith, Amanda Nguyen, Jamison Siebart, Yihan Wang, Jeanot Muster, Andre Berndt

32. Isogenic models of X chromosome aneuploidy
Gala N Filippova, Joel B Berletch, Refugio Martinez, Wenxiu Ma, Giancarlo Bonora, David W Russell, Daniel L VanDyke, Jessica E Young, Xinxian Deng, Christine M Disteche

33. Folliculin regulates mTORC1/2 and WNT pathways in early human pluripotency

34. Open chromatin dynamics in prosensory cells of the embryonic mouse cochlea
Brent A. Wilkerson, Alex D. Chitsazan, Leah S. VandenBosch, Matthew S. Wilken, Thomas Reh, Olivia Bermingham-McDonogh

35. Towards Tooth Organoids: Designing a novel protocol to differentiate human iPSCs into ameloblasts for enamel regeneration
Ammar Alghadeer, Yan Ting Zhao, Sesha Hanson-Drury, Julie Mathieu, Hai Zhang, Hannele Ruohola-Baker

36. Knock-down of HDAC2 promotes expression of a unique neuronal Endophilin-B1 isoform and contributes to neuronal maturity, neuroprotection and reduction of cellular AD phenotypes in hiPSC-derived neurons
Bonnie J. Berry, Harald Frankowski, Chizuru Kinoshita, Richard S. Morrison, Jessica E. Young

37. A human fetal tissue resource for biomedical research
Kimberly Aldinger, Diana O’Day, Branden Nelson, Kathleen Millen, Dan Doherty, Ian Glass

38. Hedgehog pathway activity in six widely available cell lines
Arianna Gomez, Julie Craft Van De Weghe, Dan Doherty
39. Tunable control of developmental timing by a stochastic polycomb switch.
Phuc H.B. Nguyen*, Nicholas Pease*, Kenneth K.H. Ng, Blythe Irwin, Hao Yuan Kueh

40. Reprogramming identifies functionally distinct stages of clonal evolution in myelodysplastic syndromes
Jasper Hsu, Andreea Reilly, Courtnee A. Clough, Brian J. Hayes, Eric Q. Konnick, Beverly Torok-Storb, Suleyman Gulsuner, David Wu, Pamela S. Becker, Sioban B. Keel, Janis L. Abkowitz, Sergei Doulatov

41. Elucidating the role of autism gene TAOK2 kinase in neurodevelopment and disease
Kimya Nourbakhsh and Smita Yadav

42. Mapping signaling defects in 16p11.2 associated autism
Amy Ferreccio and Smita Yadav

43. Engineering human cardiac ventricle models with controllable architecture
Nisa Penland, Alex Jiao, Marcus Rhodehamel, Alec S.T. Smith, Charles E. Murry, Deok-Ho Kim

44. Engineering Human Kidney Microvasculature in Native Matrices

45. In vivo correction of dystrophin expression in old dystrophic dogs
Niclas E. Bengtsson, Julie Crudele, Jordan Klaiman, Jeffrey S. Chamberlain