

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 TGF β

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 bipotent 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

Frances Linzee Mabrey, Timothy S Martins, Sylvia S Chien, Jin Dai, James Annis, Taylor S Sekizaki, Robert A. Beckman, Lawrence A. Loeb, Andrew Carson, Bradley Patay, Carl Anthony Blau, Vivian G. Oehler, Safiye S Celik, Su-In Lee, Raymond J. Monnat, Janis L. Abkowitz, Frederick R. Appelbaum, Elihu H. Estey, Pamela S Becker

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

Zhao YT, Somasundaram L, Zhou Z, Bottorff T, Ueda GT, Fallas J, Sellers D, Ferreccio A, Artoni F, Saini S, Carter L, Ben-Sasson A, Baker D, Ruohola-Baker H

24. Metabolic control over mTOR dependent entry and exit from diapause-like state

Hussein AM, Wang Y, Mathieu J, Margaretha L, Song C, Jones DC, Cavanaugh C, Miklas JW, Mahen E, Showalter MR, Ruzzo WL, Fiehn O, Ware CB, Blau CA, and Ruohola-Baker H

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

[Mathieu J](#), Detraux D, Kuppens D, Wang Y, Cavanaugh C, Sidhu S, Levy S, Robitaille A, Ferreccio A, Bottorff T, McAlister A, Logeshwaran S, Artoni F, Battle S, Hawkins D, Moon R, Ware CB, Paddison P, Ruohola-Baker H

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, Sessa 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

Ryan J. Nagao, Giovannie Ligresti, Jun Xue, Yoon Jung Choi, Jin Xu, Yi Wang, Xiaoyun Fu, Susan K. Anderson, Stephen M. Schwartz, Kimberly A. Muczynski, Jeremy S. Duffield, Jonathan Himmelfarb, Ying Zheng

45. *In vivo* correction of dystrophin expression in old dystrophic dogs

Niclas E. Bengtsson, Julie Crudele, Jordan Klaiman, Jeffrey S. Chamberlain