

1. Interacting with Visualizations of Mitotic hiPS Cells in a Virtual Reality Game

B. Lyons, L. Schaeftbauer, M. Riel-Mehan, D. Toloudis, T. Do, G. Johnson, Allen Institute for Cell Science

2. Single-Cell Live Imaging of Differentiation

K. Abadie, M. Wither, S. Nguyen, W. White, K. Ng, H.Y. Kueh, University of Washington

3. Cell type specificity of thyroid hormone signaling on melanophore and xanthophore lineages in zebrafish

L. Saunders, University of Washington; A. Mishra, University of Virginia; A. Aman, University of Virginia; C. Trapnell, University of Washington; D. Parichy, University of Virginia

4. Elucidating the molecular pathways that control daughter cell-size during cell division

L. Mei, M. Connell, C. Kuan, P. Lange, CA. Maxwell, BC Children's Hospital Research Institute, Department of Pediatrics

5. The mechanome of asymmetric cell division

T. Pham, University of Washington; A. Monnard, University of Washington; J. Helenius, D-BSSE, ETH Zürich; N. Lee, University of Washington; E. Lund, University of Washington; D., Müller, D-BSSE, ETH Zürich, C. Cabernard, University of Washington

6. Aurora kinase A coordinates collective migration by determining leader cells via centrosome front-polarization

TLH. Chu, Z. He, CA. Maxwell, University of British Columbia

7. Stat3 regulates inheritance of CD49f during asymmetric mammary cell division

E. Morris, BC Children's Hospital Research Institute; J. Gillespie, BC Cancer Research Centre; S. Dedhar, BC Cancer Research Centre; C. Maxwell, BC Children's Hospital Research Institute

8. EMRE Dependence of the Mammalian Mitochondrial Uniplex

M. MacEwen, F. Bradford, Y. Sancak, University of Washington

9. Migratory "start" and "stop" signals during wound healing in vivo

A. Kennard, J. Theriot, University of Washington

10. CyTOF plus DISCOV-R analysis link the phenotype of rare autoreactive T cells with disease outcome in type 1 diabetes

*A.E. Wiedeman¹; V.S. Muir¹; M.G. Rosasco¹; H.A. DeBerg¹; S. Presnell¹; B. Haas¹; M.J. Dufort¹; C. Speake¹; C.J. Greenbaum¹; E. Serti²; G. Nepom²; G. Blahnik¹; A.M. Kus¹; E.A. James¹; P.S. Linsley¹; S.A. Long¹;
¹Benaroya Research Institute, ²Immune Tolerance Network*

11. Intracellular Excitation-Contraction Coupling in Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes

K. Beussman, A. Leonard, N. Sniadecki, University of Washington Department of Mechanical Engineering, Department of Bioengineering, Center for Cardiovascular Biology, and Institute for Stem Cell and Regenerative Medicine

12. Deficiencies in Mitochondrial Metabolism in Human Pluripotent Stem Cells and Kidney Organoids with Polycystic Kidney Disease Mutations

*Ivan G. Gomez¹, Nelly M. Cruz¹, Julie Mathieu², Hannele Ruohola-Baker², Benjamin S. Freedman¹
¹Department of Medicine, Division of Nephrology, Kidney Research Institute, and Institute for Stem Cell and Regenerative Medicine, University of Washington; ²Department of Biochemistry, University of Washington*

13. Developing a Visual Model and Genomic Map for Cardiomyocyte Differentiation

K. Gerbin, M. Hendershott, T. Grancharova, A. Nelson, B. Roberts, H. Malik, S. Dinh, C. Hookway, J. Gehring, S. Ludmann, R. Yang, C. Yan, C. Ounkomol, S. Rafelski, R. Gunawardane, Allen Institute for Cell Science

14. Learning Models in the Data-poor but Experiment-Rich Regime: Sparse linear models for time-series++

R. Donovan-Maiye, G. Johnson, M. Maleckar, Allen Institute for Cell Science

15. Genomic characterization of fluorescently tagged human induced pluripotent stem cells

T. Grancharova, R. Gunawardane, Allen Institute for Cell Science

16. Development of a CRISPR/Cas9-mediated gene editing and quality control pipeline to illuminate organization and dynamics in hiPSCs

A. Haupt, J. Smith, A. Tucker, J. Arakaki, S. Dinh, M. Fuqua, K. Gerbin, J. Gehring, T. Grancharova, M. Hendershott, C. Hookway, S. Ludmann, H. Malik, I. Mueller, A. Nelson, S. Nelson, B. Roberts, R. Yang, S. Rafelski, R. Gunawardane, Allen Institute for Cell Science

POSTERS

SEATTLE CELL SCIENCE SYMPOSIUM 2018

17. A new open source toolkit for segmenting 3D intracellular structures in microscopy images

Jianxu Chen, Liya Ding, Matheus P. Viana, Melissa C. Hendershott, Ruian Yang, Irina A. Mueller, Susanne M. Rafelski, and the Allen Institute for Cell Science Team

18. A Platform for Investigating Nuclear Organization and its Change During Human iPS Cell Differentiation

Ruian Yang, Matheus P. Viana, Caroline Hookway, Jianxu Chen, Liya Ding, Jamie Gehring, Melissa Hendershott, Susan A. Ludmann, Sara Nelson, Irina A. Mueller, Susanne M. Rafelski, and the Allen Institute for Cell Science

19. Loss of a Chromatin Modifying Gene Results in Abnormal Heart Development

S. Jamet, C. Muxen, S. Ha, S. Houghtaling, D. Beier, Seattle Children's Research Institute

20. The Cell Biological Problem of Huntington's Disease: Novel Nuclear Roles for HTT

S. Coffey, Western Washington University; J. Cantle Western Washington University; R. Bragg, Western Washington University; J. Pearl, Altius Institute; R. Mouro-Pinto, Massachusetts General Hospital/Harvard Medical School; M. Andrew, Massachusetts General Hospital/Harvard Medical School; C. Schaab, Evotec; S. Ament, University of Maryland; H. Kordasiewicz, Ionis Pharmaceuticals; V. Wheeler, Massachusetts General Hospital/Harvard Medical School; J. Carroll, Western Washington University

21. Agents that decluster centrosomes are effective against aneuploid B-cell precursor ALL cells

M.Y. Guo¹; S. Jo², G. Reid^{1,2}, C. A. Maxwell^{1,2}, ¹Department of Pediatrics, University of British Columbia, BC Children's Hospital Research Institute, ²Michael Cuccione Childhood Cancer Research Program, BC Children's Hospital Research Institute

22. Chromatin Dynamics During In Vitro Human Endothelial Cell Differentiation.

K. Mitzelfelt^{1,2}, G. Bonora³, P. Fields^{2,4}, X. Yang^{2,4}, L. Pabon^{2,4}, N. Palpant⁵, J. Shendure³, W. Noble³, C. Murry^{2,4}; ¹Department of Pathology, University of Washington, ²Institute for Stem Cell and Regenerative Medicine, University of Washington, ³Department of Genome Sciences, University of Washington, ⁴Department of Pathology, University of Washington, ⁵Institute for Molecular Bioscience, The University of Queensland

23. Mechanism of micronuclei disruption and its role in cancer

H.Z. Huang, E. Hatch, Fred Hutchinson Cancer Research Center

24. Translation is required for the initial stages of single cell wound repair

A, Dominguez¹, M, Nakamura¹, J. Verboon¹, R. Liu¹, MT, Abreu-Blanco¹, J. Delrow², S. Parkhurst¹, Fred Hutchinson Cancer Research Center

25. Identification of blood-based RNA biomarkers that predict the efficacy of checkpoint immunotherapy in non-small cell lung cancer patients

V. Ghai, Institute for Systems Biology; T. Shukuya, The Ohio State University Medical Center; J. Amman, The Ohio State University Medical Center; D. Carbone, The Ohio State University Medical Center; K. Wang, Institute for Systems Biology

26. A genome-wide framework for mapping gene regulation via massively parallel CRISPR screens

M. Gasperini¹; A. Hill¹; J. McFaline-Figueroa¹; C. Trapnell^{1,2}; J. Shendure^{1,2,3}; ¹Department of Genome Sciences, University of Washington, ²Brotman Baty Institute for Precision Medicine, University of Washington, ³Howard Hughes Medical Institute

27. Single-cell RNA-seq reveals expanded clones of islet antigen-reactive CD4+ T cells in peripheral blood of subjects with type 1 diabetes

H. DeBerg, E. Balmas, J. Chen, F. Barahmand-pour-Whitman, K. Flynn, V. Gersuk, K. Cerosaletti, P. Linsley, Benaroya Research Institute

28. GLR-1 build up in C. elegans with E2 and E3 ERAD mutations

R. Urich, D. Hassell, L. Dahlberg, Western Washington University

29. Integrated measurement of intracellular proteins and transcripts in single cells

A. Xu, Institute for Systems Biology; Q. Liu, Caltech; K. Takata, Caltech; S. Jeoung, Caltech; Y. Su, Caltech; I. Antoshechkin, Caltech; S. Chen, Caltech; M. Thomson, Caltech, J. Heath, Institute for Systems Biology

30. Modeling gene families to identify neurodevelopmental disorder subtypes

M.A. Gillentine, University of Washington; T. Wang, University of Washington; K. Hoekzema, University of Washington; H. Guo, University of Washington; B. Coe, University of Washington; J. Rosenfeld, Baylor Genetics; E. Torti, GeneDX; B. De Vries, Radboud University Medical Center; J. Gecz, Adelaide Medical School and the Robinson Research Institute; M. Nordenskjold, Karolinska Institutet; C. Romano, IRCCS Associazione Oaso Maria Santissima; F. Kooy, University of Antwerp; K. Xia, Central South University; H. Peters, Centre for Human Genetics, KU Leuven and Leuven Autism Research (LAuRes); C. Lajonchere, Autism Genetic Resource Exchange, Autism Speaks; R. Bernier, Seattle Children's Autism Center, Center on

POSTERS

SEATTLE CELL SCIENCE SYMPOSIUM 2018

Human Development and Disability, University of Washington; E.E. Eichler, University of Washington; T. Wang, University of Washington, Howard Hughes Medical Institute

31. High-throughput identification of dominant negative polypeptides.

M. Dorrity, C. Queitsch, S. Fields, University of Washington

32. Deep Learning for Computational Microscope Design

V. Ganapati, Y. F. Cheng, M. Strachan, Z. Weiss, A. Robey, Swarthmore College

33. Applying statistical learning to study neutrophil decision-making in symmetric directional dilemmas

A. Hadjitheodorou, Stanford University; F. Ellett, Massachusetts General Hospital Harvard Medical School; D. Irimia, Massachusetts General Hospital Harvard Medical School; R. Tibshirani, Stanford University; J. Theriot, University of Washington

34. C. elegans AMsh glia engulf AFD sensory neuron-endings

S. Raiders, University of Washington and Fred Hutch; A. Bae, Albert Einstein College of Medicine and The Rockefeller University; S. Shaham, The Rockefeller University; A. Singhvi, Fred Hutch

35. 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.

H. Frankowski, B. Berry, C. Kinoshita, R. Morrison, J. Young, University of Washington

36. Spatiotemporal regulation of neuronal topographic map development

A. Isabella, C. Moens, Fred Hutchinson Cancer Research Center

37. Probing the role of SORL1 and endocytic network dysfunction in Alzheimer's disease pathogenesis using human neuronal models

A. Knupp, R. Martinez, S. Jayadev, J. Young, University of Washington

38. Short CUREs embedded in courses increase engagement with science process

L. Dahlberg, Western Washington University; S. Lee, Western Washington University; B. Wiggins, University of Washington; A. Groat Carmona, University of Washington Tacoma; L. Lily, Western Washington University; H. Jordt, University of Washington; T. Johnson, Western Washington University; D. Leaf, Western Washington University

39. Using the Indicator Cell Assay Platform [iCAP] as an Early Diagnostic for AD and cancer

GA. Whitney, PreCyte Inc.; FJ. Duffy, Seattle Children's Research Institute; LR. Miller, Seattle Children's Research Institute; SA. Danziger, Institute for Systems Biology; JD. Berndt, PreCyte Inc.; RJ. Lipshutz, PreCyte Inc.; JD. Aitchison, Seattle Children's Research Institute; JJ. Smith, PreCyte Inc.

40. Dramatic shape change of motile zebrafish keratocytes induced by 2D confinement

EC. Norby, Biophysics Program Stanford University; AS. Kennard, Biophysics Program Stanford University; JA. Theriot, Department of Biology University of Washington

41. Characterizing Yeast CTP Synthase Filament assembly in vitro and in vivo.

A. Horowitz, J. Hansen, E. Lynch, J. Kollman, University of Washington Department of Biochemistry

42. BRCA1 supports luminal features of mammary cells through suppressing NF- κ B signaling and maintaining cell-cell contacts

P. Saraber, Z. He, C. Maxwell, BC Children's Hospital Department of Pediatrics

43. The kinesin-like protein Pavarotti functions non-canonically to regulate actin dynamics during wound repair

M. Nakamura, JM. Verboon, SM. Parkhurst, Basic Sciences Division, Fred Hutchinson Cancer Research Center

44. Changes in the biomechanics of Listeria monocytogenes infected epithelial cells limit bacterial spread through the extrusion of infected domains

E. Bastounis, J. Theriot, Department of Biology, University of Washington

45. Novel configurations of cytoskeletal regulators are implicated in wound healing in the Drosophila embryonic epidermis

A. Hull, S. Parkhurst, Fred Hutchinson Cancer Research Center

46. Effect of TPX2 C-terminal domain on microtubule dynamics

D. Fahy, A. Kostyukova, A. Smertenko, Washington State University

47. Platelet Receptor Clustering & Mechanics Using DNA Origami

M. Mollica, N. Sniadecki, W. Thomas, University of Washington