Current Positions

Investigator, Howard Hughes Medical Institute
Professor, Genome Sciences, University of Washington
Director, Allen Discovery Center for Cell Lineage
Director, Brotman Baty Institute for Precision Medicine

Contact Information

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Office phone: (206) 685-8543

Education and Training (chronological)

• 1992 – 1996	Undergraduate studies	Princeton University
• 1996	A.B., *summa cum laude* (advisor: Lee Silver)	Princeton University
• 1996 – 1997	Fulbright Scholar to India (advisor: Mrudula Phadke)	Sassoon General Hospital
• 1997 – 1998	Research Scientist, Vaccine Division	Merck Research Labs
• 1998 – 2007	Medical Scientist Training Program (MSTP) Candidate	Harvard Medical School
• 2005	Ph.D. (advisor: George Church; Dept. of Genetics)	Harvard University
• 2007	M.D.	Harvard Medical School

Post-Training Positions (reverse chronological)

• 2017 – present	Scientific Director	Allen Discovery Center for Cell Lineage Tracing
• 2017 – present	Scientific Director	Brotman Baty Institute for Precision Medicine
• 2015 – present	Investigator	Howard Hughes Medical Institute
• 2015 – present	Full Professor w/ tenure	Dept. of Genome Sciences, University of Washington
• 2010 – present	Affiliate Professor w/ tenure	Div. of Human Biology, Fred Hutch Cancer Res. Center
• 2011 – 2015	Associate Professor	Dept. of Genome Sciences, University of Washington
• 2007 – 2011	Assistant Professor	Dept. of Genome Sciences, University of Washington

Honors & Named Lectures (reverse chronological)

• 2022	Mendel Lecture	European Society of Human Genetics
• 2022	Election to Membership	National Academy of Sciences
• 2022	Election to Membership	National Academy of Inventors
• 2022	Election to Membership	Washington Academy of Sciences
• 2019	Richard Lounsbery Award	National Academy of Sciences
• 2019	AAAS Fellow	American Assc. Advancement of Science
• 2019	Jeffrey M. Trent Lectureship in Cancer Research	National Human Genome Research Institute
• 2019	Paul D. Gottlieb Distinguished Lectureship	University of Texas, Austin
• 2018	Allan C. Wilson Memorial Lectureship	University of California, Berkeley

- 2018 Richard and Carol Hertzberg Prize — University of California, San Diego
- 2018 Nancy Andrews Physician-Scientist Lectureship — Duke University
- 2017 British Society of Genetic Medicine Lectureship — British Society of Genetic Medicine
- 2014 Cell "40 under 40", Cell 40th Anniversary — Cell Press
- 2014 7th Annual Scripps Genomic Medicine Award — Scripps Health
- 2014 HudsonAlpha Prize for Life Sciences — HudsonAlpha Institute for Biotechnology
- 2013 FEDERAprijs — Fed. of Dutch Medical Scientific Societies
- 2013 NIH Director's Pioneer Award — National Institutes of Health
- 2012 Curt Stern Award — American Society of Human Genetics
- 2010 Lowell Milken Young Investigator — Prostate Cancer Foundation
- 2008 Science in Medicine New Investigator Lecture — University of Washington
- 2008 3rd Annual Tomorrow's PIs — Genome Technology Magazine
- 2007 James Tolbert Shipley Prize — Harvard Medical School
- 2006 TR35 Young Innovator Award — M.I.T. Technology Review
- 1998 Medical Science Training Program Fellowship — National Institutes of Health
- 1996 Fulbright Scholarship — U.S. State Department
- 1996 *summa cum laude* — Princeton University
- 1996 Honorary Major in Anthropology — Princeton University
- 1996 Sigma Chi Thesis Award for Molecular Biology — Princeton University
- 1996 Senior Prize for Best Thesis in Anthropology — Princeton University

Service (reverse chronological)

Pandemic Response

- 2020 – 2022 Co-Lead Investigator — Seattle Coronavirus Assessment Network (SCAN)
- 2018 – 2022 Co-Lead Investigator — Seattle Flu Study (SFS)

Advisory Roles

- 2017 – present Board of Reviewing Editors — Science / AAAS
- 2017 – present Advisory Council — Allen Institute for Cell Science
- 2018 – present Scientific Advisory Board — Chan Zuckerberg Initiative (Single Cell Biology)
- 2020 – present Scientific Advisory Board — New York Genome Center
- 2021 – 2022 Scientific Advisory Board — Open Targets
- 2018 – 2022 Scientific Advisory Board — Allen Institute for Immunology
- 2017 – 2020 Advisory Committee to NIH Director — National Institutes of Health
- 2014 – 2018 National Advisory Council — National Human Genome Research Institute
- 2015 NIH ACD Working Group — AllOfUs / US Precision Medicine Initiative
- 2012 – 2014 Scientific Advisory Board — Joint Genome Institute, Department of Energy
- 2012 – 2015 Steering Committee — NIH/NHGRI Centers for Mendelian Genomics
- 2009 – 2012 Steering Committee — NIH/NHLBI Exome Sequencing Project

Scientific Meetings & Symposia

- 2022 Co-organizer 20th Anniversary Symposium (UW Genome Sciences)
- 2019 – 2022 Co-organizer Biology of Genomes (Cold Spring Harbor Labs)
- 2020 – 2021 Co-organizer Hindsight 2020 Series (Allen Institute)
- 2015 – 2019 Co-organizer Genomics of Rare Diseases (Wellcome / Sanger)
- 2018 Co-organizer Symposium: The Personal Genome (UW Genome Sciences / BBI)
- 2014 Co-organizer Symposium: Genetic Networds (UW Genome Sciences)
- 2010 Co-organizer Symposium: Healthcare Implications of Medical Discoveries (UW)

Peer or Program Review

Note: my roles as an advisor on the NIH ACD and/or NACHGR precluded NIH CSR service from 2014-2020. The sole exception below was due to an oversight.

- 2022 Chair, NHGRI Single Molecule Protein Sequencing Special Emphasis Panel, NIH
- 2021 Reviewer, Investigator Competition, Howard Hughes Medical Institute
- 2021 Reviewer, Investigator Competition, Chan Zuckerberg Biohub
- 2020 Reviewer, Wellcome Sanger Quinquennial Review
- 2018 Reviewer, Investigator Competition, Howard Hughes Medical Institute
- 2017 Reviewer, International Scholars Competition, Howard Hughes Medical Institute
- 2017 Reviewer, Advanced Genomic Technology Development Special Emphasis Panel, NIH
- 2016 Reviewer, Faculty Scholars Competition, Howard Hughes Medical Institute
- 2014 Reviewer, Paul G. Allen Family Foundation ADI 2014 Life Science Focus
- 2014 Reviewer, TEDDY Whole Genome Sequencing Lab RFP, NIH
- 2014 Reviewer, NIDDK Special Emphasis Panel, NIH
- 2013 Reviewer, NICHD Special Emphasis Panel, NIH
- 2013 Reviewer, 63th Annual Meeting of American Society of Human Genetics
- 2013 Reviewer, The Wellcome Trust
- 2011 Reviewer, W. M. Keck Foundation
- 2011 Reviewer, Lasker Clinical Research Scholars Program
- 2010 Reviewer, UK Medical Research Council, Molecular and Cellular Medicine Board
- 2009 Reviewer, National Science Foundation
- 2009 Reviewer, NIH ARRA Challenge Grants (Genes, Genomes and Genetics IRG), NIH
- 2009 Reviewer, Ontario Research Fund (GL2 Competition)
- 2008 Reviewer, Genome BritishColumbia

Teaching

- 2008 – present Co-Lead “Methods and Logic in Genetics” (UW, graduate seminar)
- 2017, 2019, 2021 Co-Lead “Genomics & Proteomics” (UW, undergraduate lecture course)
- 2012 – 2016 Co-Lead “Genetics” (UW, pre-clinical med school requirement)
- 2012 – 2015 Co-Lead “Genetic Anatomy” (UW, pre-clinical med school elective)
- 2010 – 2012 Co-Lead “Genome Informatics” (UW, undergraduate lecture course)

- 2001 – 2003 TA "Principles of Pharmacology" (HMS, pre-clinical med school requirement)

Faculty Administrative Responsibilities

- 2022 – 2023 Chair, Faculty Search Committee (UW Genome Sciences)
- 2013 – 2014 Chair, Seminar Series Committee (UW Genome Sciences)
- 2012 – 2013 Co-chair, UW Scientific Discovery Subcommittee for Curriculum Renewal
- 2009 Member, UW "Two Years to Two Decades" (2y2d) initiative, Discovery focus group

- UW Genome Sciences Faculty Search Committee: 2020-21, 2017-18, 2010-12, 2008-9
- UW Biology Faculty Search Committee: 2016-17
- UW Biochemistry Faculty Search Committee: 2013-17
- UW Medical Genetics Faculty Search Committee: 2008-13
- UW Genome Sciences Seminar Series Committee: 2021-22, 2014-15, 2008-9

Journal Editorial Boards

Current: *Science, Cell Genomics, Genetics, Genome Biology, Genome Medicine, Genome Research, Human Genetics, Human Molecular Genetics, Molecular Case Studies*

Previous: *Biotechniques* (2011-2018), *American Journal of Human Genetics* (2009-2012)

Commercial SAB & Consulting Roles (revierse chronological)

- 2022 – present Sixth Street Partners (Scientific Advisory Board)
- 2022 – present Prime Medicine (Scientific Advisory Board)
- 2022 – present Pacfic Biosciences (Scientific Advisory Board)
- 2020 – present Cajal Neuroscience (Scientific Advisory Board)
- 2016 – present Guardant Health (Scientific Consultant)
- 2018 – present Maze Therapeutics (Scientific Advisory Board)
- 2018 – present Camp4 Therapeutics (Scientific Advisory Board)
- 2015 – present Phase Genomics (Founder; Scientific Advisory Board)
- 2010 – present Adaptive Biotechnologies (Scientific Advisory Board)
- 2009 – 2020 Stratos Genomics (Scientific Advisory Board)
- 2016 – 2019 Nanostring (Scientific Advisory Board)
- 2016 – 2019 Bellwether Bio (Founder; Scientific Consultant)
- 2016 – 2019 Cambridge Epigenetix (Scientific Advisory Board)
- 2013 – 2018 GenePeeks (Scientific Advisory Board)
- 2009 – 2017 Good Start Genetics (Scientific Advisory Board)
- 2013 – 2017 Gen9 (Scientific Advisory Board)
- 2010 – 2015 Ariosa Diagnostics (Scientific Consultant)
- 2013 – 2015 Ingenuity Systems (Scientific Advisory Board)
- 2013 – 2015 Rubicon Genomics (Scientific Advisory Board)
- 2012 Merck Research Laboratories (Scientific Consultant)

- 2010 – 2011 Halo Genomics (Scientific Advisory Board)
- 2008 – 2009 Complete Genomics (Scientific Consultant)
- 2006 Highland Capital Partners (Scientific Consultant)
- 2004 – 2005 Agencourt Biosciences (Scientific Consultant)

Postdoctoral Fellows Trained

- 2022 – present Haedong Kim Ph.D.
- 2022 – present Elizabeth Vincent, Ph.D. (joint trainee with David Beier)
- 2021 – present Sanjay Srivatsan, Ph.D. (joint trainee with Cole Trapnell)
- 2021 – present Xiaoyi Li, Ph.D.
- 2021 – present Riddhiman Garge, Ph.D. (joint trainee with Lea Starita)
- 2020 – present Troy McDiarmid, Ph.D.
- 2020 – present Eva Nichols, Ph.D. (joint trainee with Brian Beliveau)
- 2020 – present Jean-Benôit Lalanne, Ph.D.
- 2019 – present Junhong Choi, Ph.D.
- 2019 – present Diego Calderon, Ph.D. (joint trainee with Cole Trapnell)
- 2020 – 2022 Nobu Hamazaki, Ph.D. (Assistant Professor, Genome Sciences & Ob/Gyn, University of Washington)
- 2020 – 2022 Alexander Boulgakov, Ph.D. (Bioinformatics Scientist, Ansa Biotechnologies)
- 2020 – 2021 Jase Gehring, Ph.D. (Investigator, Arcadia Science)
- 2018 – 2022 Silvia Domcke Ph.D. (Head of Human Genomics, Gordian Biotechnology)
- 2018 – 2021 Jacob Tome, Ph.D. (Research Scientist, Shape Therapeutics)
- 2018 – 2020 Ronnie Blecher, Ph.D. (Associate Researcher, Weizmann Institute of Science)
- 2016 – 2020 Yi Yin, Ph.D. (Assistant Professor, Human Genetics, UCLA)
- 2015 – 2019 Vikram Agarwal, Ph.D. (Head of mRNA Platform Design & Data Science, Sanofi)
- 2015 – 2017 Lea Starita, Ph.D. (Assistant Professor, Genome Sciences, University of Washington)
- 2014 – 2019 Bridget Kulasekara, Ph.D. (Senior Research Scientist, University of Washington)
- 2014 – 2018 Jes Alexander, Ph.D.
- 2016 – 2018 Malte Spielmann, M.D. (Professor & Head, Institute for Human Genetics, University of Lübeck)
- 2014 – 2018 Darren Cusanovich, Ph.D. (Assistant Professor, Cellular & Molecular Medicine, University of Arizona)
- 2012 – 2017 Martin Kircher, Ph.D. (Professor of Regulatory Genomics, University of Lübeck)
- 2014 – 2016 Ron Hause, Ph.D. (VP, Head of Analytics and Informatics, Shape Therapeutics)
- 2011 – 2015 Stephen Salipante, M.D., Ph.D. (Associate Professor, Laboratory Medicine & Pathology, University of Washington)
- 2009 – 2013 Jerrod Schwartz, Ph.D. (Vice President, Advanced Technology, ChromaCode)
- 2009 – 2013 Brian O'Roak, Ph.D. (joint trainee with Evan Eichler; Associate Professor, Molecular & Medical Genetics, Oregon Health & Science University)
- 2007 – 2009 Emily Turner, Ph.D. (Program Officer, Bill & Melinda Gates Foundation)

Graduate Students Trained

- 2022 – Present Jenny Nathans (MSTP; Genome Sciences)
- 2022 – Present David Li (Genome Sciences; joint trainee with David Baker)
- 2022 – Present Shruti Jain (Genome Sciences; joint trainee with David Baker)
- 2022 – Present Connor Kubo (Genome Sciences)
- 2021 – Present Hanna Liao (Molecular & Cellular Biology)
- 2021 – Present Tony Li (Genome Sciences)
- 2021 – Present Aidan Keith (Genome Sciences)
- 2020 – Present Wei Yang (Genome Sciences)
- 2020 – Present Chase Suiter (Molecular & Cellular Biology)
- 2019 – Present Chengxiang (CX) Qiu (Genome Sciences)
- 2018 – Present Florence Chardon (Genome Sciences; joint trainee with Lea Starita)
- 2018 – Present Sam Regalado (MSTP; Genome Sciences; joint trainee with Cole Trapnell)
- 2018 – Present Xingfang (Fanny) Huang (Computer Science & Engineering)
- 2017 – 2022 Anna Minkina (Genome Sciences; dissertation entitled “Tethering distinct molecular profiles of single cells by their lineage histories to investigate sources of cell state heterogeneity”; Research Scientist, Cajal Neuroscience)
- 2016 – 2022 Wei Chen (Molecular Engineering; dissertation entitled “"Multiplex Molecular Recording of Biological Signals and Events”; Postdoctoral Fellow, Baker Lab)
- 2015 – 2019 Molly Gasperini (Genome Sciences; dissertation entitled “Efficiently searching for enhancers and their target genes in the human genome”; Research Scientist, Cajal Neuroscience)
- 2015 – 2019 Andrew Hill (Genome Sciences; dissertation entitled “Expanding the scope and utility of single-cell genomic technologies”; Senior Computational Biologist, Tune Theraputics)
- 2014 – 2019 Seungsoo Kim (Genome Sciences; dissertation entitled “Maps and mechanisms of three-dimensional genome organization”; Postdoctoral Fellow, Wysocka Lab)
- 2016 – 2019 Junyue Cao (Molecular & Cellular Biology; dissertation entitled “Cell state and fate characterization by high-throughput single cell genomics”; Assistant Professor, Rockefeller University)
- 2015 – 2019 Hannah Pliner (Genome Sciences; joint trainee with Cole Trapnell; dissertation entitled “Algorithms for modeling gene regulation and determining cell type using single-cell molecular profiles”; Senior Scientist, Computational Biology, Bristol Myers Squibb)
- 2015 – 2018 Jason Klein (Medical Scientist Training Program, Genome Sciences; dissertation entitled “Massively Parallel Characterization of Enhancers in Evolution and Disease”; Resident Physician (dermatology), UT Southwestern)
- 2015 – 2018 Greg Findlay (Medical Scientist Training Program, Genome Sciences; dissertation entitled “High-throughput interrogation of genome function and cellular lineage"; Group Leader, Crick Institute)
- 2014 – 2017 Vijay Ramani (Genome Sciences; dissertation entitled “Massively parallel analysis of nucleic acid structure”; Assistant Professor, Biochemistry & Biophysics, Gladstone Institutes & UCSF)
- 2013 – 2017 Aaron McKenna (Genome Sciences; dissertation entitled “Whole-organism lineage tracing

by combinatorial and cumulative genome editing"; Assistant Professor, Molecular & Systems Biology, Dartmouth University)

- 2012 – 2016 Matthew Snyder (Genome Sciences; dissertation entitled "Expanding the accuracy, resolution, and breadth of cell-free DNA investigation"; Consultant, Guardant Health)
- 2011 – 2014 Joshua Burton (Genome Sciences; dissertation entitled "New methods for de novo assembly of genomes and metagenomes"; Bioinformatics Consultant, Directed Bio)
- 2010 – 2014 Akash Kumar (Medical Scientist Training Program, Genome Sciences; dissertation entitled "Mutational Heterogeneity in Cancer: Lessons from the Brain and Prostate"; Adjunct Instructor, Stanford University).
- 2010 – 2014 Andrew Adey (Molecular & Cellular Biology; dissertation entitled "Comprehensive, precision genomics"; Associate Professor, Molecular & Medical Genetics, OHSU)
- 2009 – 2013 Jacob Kitzman (Genome Sciences; dissertation entitled "New technologies for sequencing and interpreting genomes"; Associate Professor, Genetics, University of Michigan)
- 2009 – 2012 Joseph Hiatt (Medical Scientist Training Program, Genome Sciences; dissertation entitled "Molecular tagging to overcome limitations of massively parallel sequencing"; Acting Instructor, University of Washington)
- 2007 – 2012 Sarah Ng (Genome Sciences; dissertation entitled "Next Generation Mendelian Genetics"; Head, Genome Innovation Lab, Genome Institute of Singapore)
- 2007 – 2012 Rupali Patwardhan (Genome Sciences; dissertation entitled "Massively parallel functional dissection of regulatory elements"; Software Engineer, Facebook)

Rotation Students Supervised

• Qi Yu	Genome Sciences	Winter 2023
• Shruti Jain	Genome Sciences	Spring 2022
• Elliott Swanson	Genome Sciences	Spring 2022
• Sydney Sattler	Genome Sciences	Winter 2021
• Connor Kubo	Genome Sciences	Winter 2021
• David Lee	Genome Sciences	Fall 2020
• Aidan Keith	Genome Sciences	Spring 2021
• Hanna Liao	Molecular & Cellular Biology	Spring 2021
• Tony Li	Genome Sciences	Fall 2020
• Yuzhen Li	Molecular & Cellular Biology	Spring 2020
• Conor Camplisson	Genome Sciences	Winter 2020
• Wei Yang	Genome Sciences	Winter 2020
• Andrew Mullen	MSTP program	Summer 2019
• Chase Suiter	Molecular & Cellular Biology	Summer 2019
• Shawn Fayer	Genome Sciences	Spring 2019
• Chengxiang Qiu	Genome Sciences	Winter 2019
• James Anderson	Molecular & Cellular Biology	Winter 2019
• Eliza Barkan	Molecular & Cellular Biology	Fall 2018
• Michael Goldberg	Genome Sciences	Spring 2018
• Florence Chardon	Genome Sciences	Spring 2018
• Phillip Dishuck	Genome Sciences	Winter 2018
• William DeWitt	Genome Sciences	Fall 2017
• Xingfang Huang	Computer Science & Engineering	Fall 2017
• Sam Regalado	Genome Sciences	Summer 2017

• Ian Smith	Genome Sciences	Spring 2017
• April Lo	Genome Sciences	Spring 2017
• Anna Minkina	Genome Sciences	Fall 2016
• Wei Chen	Molecular Engineering	Spring 2016
• Eliah Overbey	Genome Sciences	Spring 2016
• Junyue Cao	Molecular & Cellular Biology	Summer 2015
• Molly Gasperini	Genome Sciences	Spring 2015
• Serena Liu	Genome Sciences	Spring 2015
• Hannah Pliner	Genome Sciences	Winter 2015
• Damon May	Genome Sciences	Winter 2015
• Andrew Hill	Genome Sciences	Fall 2014
• Vijay Ramani	Genome Sciences	Winter 2014
• Seungsoo Kim	Genome Sciences	Winter 2014
• Jason Klein	MSTP program	Summer 2013
• Hugh Haddox	Molecular & Cellular Biology	Spring 2013
• Aaron McKenna	Genome Sciences	Winter 2013
• Greg Findlay	MSTP program	Summer 2012
• Matthew Snyder	Genome Sciences	Spring 2012
• Jorgen Nelson	Genome Sciences	Winter 2012
• Elyse Hope	Genome Sciences	Winter 2012
• Meara Davies	Molecular & Cellular Biology	Fall 2011
• Josh Burton	Genome Sciences	Winter 2011
• Jenny Wagner	Genome Sciences	Winter 2011
• Andrew Adey	Molecular & Cellular Biology	Fall 2009
• David Young	MSTP program	Summer 2009
• Akash Kumar	MSTP program	Summer 2009
• Jacob Kitzman	Genome Sciences	Spring 2009
• Keisha Carlson	Genome Sciences	Winter 2009
• Jarrett Egerston	Genome Sciences	Winter 2009
• Matthew Maurano	Genome Sciences	Fall 2008
• Joseph Hiatt	MSTP program	Summer 2008
• Sayer Herrin	Genome Sciences	Winter 2008
• Rupali Patwardhan	Genome Sciences	Winter 2008
• Sarah Ng	Genome Sciences	Fall 2007

Graduate Student Committees (in addition to own trainees)

• 2022 – Present	Adam Chazin-Gray	U.W. Molecular Engineering	Advisor: David Baker
• 2022 – Present	Jack Castelli	U.W. MMM of Disease	Advisor: Jennifer Adair
• 2020 – Present	Eliza Barkan	U.W. Genome Sciences	Advisor: Cole Trapnell
• 2019 – Present	Robin Aguilar	U.W. Genome Sciences	Advisor: Bill Noble
• 2019 – Present	Gesine Cauer	U.W. Genome Sciences	Advisor: Bill Noble
• 2018 – 2022	Andria Ellis	U.W. Genome Sciences	Advisor: Cole Trapnell
• 2018 – 2022	Ian Smith	U.W. Genome Sciences	Advisor: Judit Villen
• 2018 – 2021	Sanjay Srivatsan	U.W. Genome Sciences	Advisor: Cole Trapnell
• 2016 – 2021	Nuttada Panpradist	U.W. Bioengineering	Advisor: Barry Lutz
• 2017 – 2020	Robin Kirkpatrick	U.W. Genome Sciences	Advisor: Jesse Zalatan
• 2016 – 2020	Wei Zhou	U.W. Molecular & Cellular Biology	Advisor: Stan Fields
• 2016 – 2020	Clara Amorosi	U.W. Genome Sciences	Advisor: Maitreya Dunham

• 2015 – 2020	Ian Nova	U.W. Molecular Engineering	Advisor: Jens Gundlach
• 2015 – 2020	Melissa Chiasson	U.W. Genome Sciences	Advisor: Doug Fowler
• 2018 – 2019	Peter Ney	U.W. Comp. Science & Engineering	Advisor: Tadayoshi Kohno
• 2016 – 2019	Rebecca Zaunbrecher	U.W. Bioengineering	Advisor: Mike Regnier
• 2016 – 2019	Aaron Wolf	U.W. Genome Sciences	Advisor: Josh Akey
• 2014 – 2019	Piero Lamelza	U.W. Molecular & Cellular Biology	Advisor: Michael Ailion
• 2013 – 2018	Jorgen Nelson	U.W. Genome Sciences	Advisor: David Baker
• 2015 – 2018	John Crowl	U.W. Immunology	Advisor: Dan Stetson
• 2015 – 2017	Jocelynn Pearl	U.W. Molecular & Cellular Biology	Advisor: Lee Hood
• 2014 – 2017	Hugh Haddox	U.W. Molecular & Cellular Biology	Advisor: Jesse Bloom
• 2011 – 2017	Jennifer Andrie	U.W. Genome Sciences	Advisor: Josh Akey
• 2015 – 2016	Alexander Rosenberg	U.W. Electrical Engineering	Advisor: Georg Seelig
• 2013 – 2016	David Young	U.W. Genome Sciences	Advisor: Stan Fields
• 2012 – 2015	Benjamin Vernot	U.W. Genome Sciences	Advisor: Josh Akey
• 2011 – 2015	Vaughn Iverson	U.W. Oceanography	Advisor: Virginia Armbrust
• 2012 – 2014	Andrew Laszlo	U.W. Physics	Advisor: Jens Gundlach
• 2012 – 2014	Niklas Krumm	U.W. Genome Sciences	Advisor: Evan Eichler
• 2010 – 2014	Russell Berg	U.W. Molecular & Cellular Biology	Advisor: Lalita Ramakrishnan
• 2010 – 2014	Keisha Carlson	U.W. Genome Sciences	Advisor: Christine Queitsch
• 2010 – 2014	Leslie Emery	U.W. Genome Sciences	Advisor: Josh Akey
• 2010 – 2013	Peter Sudmant	U.W. Genome Sciences	Advisor: Evan Eichler
• 2010 – 2013	Thomas White	U.W. Molecular & Cellular Biology	Advisor: Peter Nelson
• 2010 – 2013	Benjamin Whiddon	U.W. Genome Sciences	Advisor: Richard Palmiter
• 2009 – 2013	Cailyn Spurrell	U.W. Genome Sciences	Advisor: Mary-Claire King
• 2008 – 2013	Alan Rubin	U.W. Genome Sciences	Advisor: Phil Green
• 2011 – 2012	Lucas Gray	U.W. Biochemistry	Advisor: Alan Weiner
• 2009 – 2012	Joshua Bishop	U.W. Electrical Engineering	Advisor: Eric Klavins
• 2009 – 2012	Kyle Minch	U.W. Molecular & Cellular Biology	Advisor: David Sherman
• 2011	Sung Hang	U.W. Neurobiology and Behavior	Advisor: William Catterall
• 2010	Carlos Araya	U.W. Genome Sciences	Advisor: Stanley Fields
• 2008 – 2010	Steven Josefowicz	U.W. Immunology	Advisor: Sasha Rudensky
• 2008 – 2010	Kevin Schutz	U.W. Genome Sciences	Advisor: Stan Fields
• 2008 – 2010	Marcia Paddock	U.W. Immunology	Advisor: Andy Scharenberg

Issued Patents

- Polony fluorescent in situ sequencing beads (7,425,431)
- Sequence tag directed subassembly of short sequencing reads into long sequencing reads (8,846,347; 8,383,345; 10,227,585)
- Error detection in sequence tag directed subassemblies of short sequencing reads (8,865,410; 10,577,601)
- Nanogrid rolling circle DNA sequencing (9,624,538)
- Methods for retrieval of sequence-verified DNA constructs (9,809,904)
- Massively parallel contiguity mapping (10,457,936)

Published Patent Applications

- High-throughput single-cell transcriptome libraries and methods of making and using (20210102194; 20220033805)

- Diagnosis of cancer or other physiological condition using circulating nucleic acid fragment sentinel endpoints (20200255905)
- High-throughput single-cell sequencing with reduced amplification bias (20190382753)
- Multiplex pairwise assembly of DNA oligonucleotides (application; 20180320166)
- Determining a physiological condition in an individual by analyzing cell-free DNA fragment endpoints in a biological sample (20190309374)
- Methods of determining tissues and/or cell types giving rise to cell-free dna, and methods of identifying a disease or disorder using same (20170211143; 20190127794)
- A framework for determining the relative effects of genetic mutations (20160357903)
- Methods and systems for large scale scaffolding of genome assemblies (20160239602)
- Multiplex homology-directed repair (20160076093)
- Systems, Algorithms, and Software for Molecular Inversion Probe (MIP) Design (20160055293)
- Highly multiplex single amino acid mutagenesis for massively parallel functional analysis (20160017410)
- Whole genome sequencing of a human fetus (20150105267)
- Multiplex decoding of sequence tags in barcodes (20080269068)
- Wobble sequencing (20070207482)
- Nucleic acid memory device (20030228611; 20100099080)

Preprints & Publications (* denotes equal contributors; # or ^ denotes corresponding or senior authorship; grey numbers denote primary publications, defined as those on which I and/or a member of my lab are a corresponding, senior and/or a first author)

Preprints

355. "Flexible and scalable control of T cell memory by a reversible epigenetic switch." *bioRxiv* 2022.12.31.521782 (posted 31-Dec-2022).
354. "Local-Scale phylodynamics reveal differential community impact of SARS-CoV-2 in metropolitan US county" *medRxiv* 2022.12.15.22283536 (posted 16-Dec-2022).
353. "High Density Domain-Focused CRISPR Screens Reveal Novel Epigenetic Regulators of HOX/MEIS Activation in Acute Myeloid Leukemia" *bioRxiv* 2022.12.12.519332 (posted 13-Dec-2022).
352. "Multiplex profiling of developmental enhancers with quantitative, single-cell expression reporters" *bioRxiv* 2022.12.10.519236 (posted 10-Dec-2022).
351. "A single-cell multi-omic atlas spanning the adult rhesus macaque brain" *bioRxiv* 2022.09.30.510346 (posted 03-Oct-2022).
350. "Machine-learning dissection of Human Accelerated Regions in primate neurodevelopment" *bioRxiv* 256313 (posted 28-Sep-2022).
349. "Human iPSC Derived Enamel Organoid Guided by Single-Cell Atlas of Human Tooth Development" *bioRxiv* 2022.08.09.503399 (posted 10-Aug-2022).
348. "Deep molecular, cellular and temporal phenotyping of developmental perturbations at whole organism scale" *bioRxiv* 2022.08.04.502764 (posted 05-Aug-2022).
347. "Proteostasis governs differential temperature sensitivity across embryonic cell types" *bioRxiv* 2022.08.04.502669 (posted 05-Aug-2022).
346. "Single cell, whole embryo phenotyping of pleiotropic disorders of mammalian development" *bioRxiv* 2022.08.03.500325 (posted 04-Aug-2022).

345. "Single-cell analysis of chromatin and expression reveals age- and sex-associated alterations in the human heart" *bioRxiv* 2022.07.12.496461 (posted 19-Jul-2022).

344. "Tethering distinct molecular profiles of single cells by their lineage histories to investigate sources of cell state heterogeneity" *bioRxiv* 2022.05.12.491602 (posted 12-May-2022).

343. "Interactions among 17 respiratory pathogens: a cross-sectional study using clinical and community surveillance data" medRxiv 2022.08.12.22278203 (posted 06-Feb-2022).

342. "Multiplex genomic recording of enhancer and signal transduction activity in mammalian cells." *bioRxiv* 2021.11.05.467434 (posted 5-Nov-2021).

341. "Viral genome sequencing places White House COVID-19 outbreak into phylogenetic context." *medRxiv* 2020.10.31.20223925 (posted 13-Nov-2020).

340. "TransMPRA: A framework for assaying the role of many trans-acting factors at many enhancers." *bioRxiv* 2020.09.30.321323 (posted 1-Oct-2020).

339. "Rapid cost-effective viral genome sequencing by V-seq." *bioRxiv* 2020.08.15.252510 (posted 15-Aug-2020).

Peer-Reviewed Publications

348. Hansen C, Perofsky AC, Burstein R, Famulare M, Boyle S, Prentice R, Marshall C, McCormick BJJ, Reinhart D, Capodanno B, Truong M, Schwabe-Fry K, Kuchta K, Pfau B, Acker Z, Lee J, Sibley TR, McDermot E, Rodriguez-Salas L, Stone J, Gamboa L, Han PD, Duchin JS, Waghmare A, Englund JA, **Shendure J**, Bedford T, Chu HY, Starita LM, Viboud C. Trends in Risk Factors and Symptoms Associated With SARS-CoV-2 and Rhinovirus Test Positivity in King County, Washington, June 2020 to July 2022. *JAMA Network Open* 2022 Dec 1;5(12):e2245861.

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