Current Positions

Investigator, Howard Hughes Medical Institute
Professor, Genome Sciences, University of Washington
Scientific Director, Brotman Baty Institute for Precision Medicine
Lead Scientific Director, Seattle Hub for Synthetic Biology (Allen-CZI-UW)

Contact Information

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Education and Training

● 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

● 2024 – present	Lead Scientific Director	Seattle Hub for Synthetic Biology (Allen-CZI-UW)
● 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	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, Awards, Named Lectures

● 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

Pandemic Response

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

Academic, Governmental, or Non-Profit Advisory or Consortium Leadership Roles

● 2024 – present	Board of Directors	Hypothesis Fund
● 2017 – present	Board of Reviewing Editors	Science / AAAS
● 2018 – present	Scientific Advisory Board	Chan Zuckerberg Initiative (Single Cell Biology)
● 2020 – present	Scientific Advisory Board	New York Genome Center
● 2021 – present	Co-Lead, Cancer Basic Biology	Fred Hutch-UW-SCH Cancer Consortium (NCI)
● 2017 – 2022	Advisory Council	Allen Institute for Cell Science
● 2018 – 2022	Scientific Advisory Board	Allen Institute for Immunology
● 2021 – 2022	Scientific Advisory Board	Open Targets
● 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 Networks (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 2015-2020. The sole exception below was due to an oversight.

- 2023 Chair, NHGRI Multi-Omics for Health and Disease Special Emphasis Panel, NIH
- 2023 Reviewer, Investigator Competition, Howard Hughes Medical Institute
- 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

- 2023 Member, Search Committee for the Director, Office of Strategic Coordination, NIH
- 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
- 2007 – 2021 UW Faculty Search Committees: Genome Sciences (2020-21, 2017-18, 2010-12, 2008-9), Biology (2016-17), Biochemistry (2013-17), Medical Genetics (2008-13)
- 2008 – 2022 UW Genome Sciences Seminar Series Committee (2021-22, 2014-15, 2008-9)

Journal Editorial or Advisory Boards

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

Previous: *Biotechniques* (2011-2018), *American Journal of Human Genetics* (2009-2012), *Human Molecular Genetics* (2013-2023)

Commercial SAB & Consulting Roles

- 2024 – present Somite Therapeutics (Founder; Scientific Advisory Board)
- 2022 – present Sixth Street Partners (Scientific Advisory Board)
- 2022 – present Prime Medicine (Scientific Advisory Board)
- 2022 – present Pacific Biosciences (Scientific Advisory Board)
- 2021 – present Scale Biosciences (Founder; 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)
- 2020 – 2024 Cajal Neuroscience (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

- 2024 – present Mohammed Aljohani, Ph.D. (joint with Sud Pinglay)
- 2024 – present Lijia Li, Ph.D.
- 2024 – present Jonas Koeppel, Ph.D. (joint with Sud Pinglay)
- 2024 – present Zach Stevenson, Ph.D.
- 2024 – present Zukai Liu, Ph.D. (joint with Nobu Hamazaki)
- 2023 – present Yi Fu, Ph.D.
- 2022 – present Haedong Kim, Ph.D.
- 2021 – present Xiaoyi Li, Ph.D.
- 2021 – present Riddhiman Garge, Ph.D. (joint with Lea Starita)
- 2021 – present Kamen Simeonov, Ph.D. (joint with Chris Lengner)
- 2020 – present Troy McDiarmid, Ph.D.
- 2020 – present Eva Nichols, Ph.D. (joint with Brian Beliveau)
- 2020 – 2024 Jean-Benôit Lalanne, Ph.D. (Assistant Professor, University of Montreal)
- 2019 – 2024 Diego Calderon, Ph.D. (joint with Cole Trapnell; Assistant Professor, UCSF)
- 2019 – 2024 Junhong Choi, Ph.D. (Assistant Professor, Memorial Sloan Kettering Cancer Center)
- 2023 – 2024 Sudarshan (Sud) Pinglay Ph.D. (SeaHub Faculty Investigator; Research Assistant Professor, University of Washington)
- 2022 – 2023 Elizabeth Vincent, Ph.D. (joint with David Beier)
- 2021 – 2023 Sanjay Srivatsan, Ph.D. (joint with Cole Trapnell; Assistant Professor, Fred Hutch Cancer Center)
- 2020 – 2022 Nobu Hamazaki, Ph.D. (Assistant Professor, University of Washington)
- 2020 – 2022 Alexander Boulgakov, Ph.D. (Scientist, Ansa Biotechnologies)
- 2020 – 2021 Jase Gehring, Ph.D. (Technology Scientist, Arcadia Science)
- 2018 – 2022 Silvia Domcke Ph.D. (Assistant Professor, University of Zurich)
- 2018 – 2021 Jacob Tome, Ph.D. (Senior 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. (Associate Professor, University of Washington)
- 2014 – 2019 Bridget Kulasekara, Ph.D. (Research Scientist, University of Washington)
- 2014 – 2018 Jes Alexander, Ph.D. (joint with Eric Holland; Assistant Professor, UCSF)
- 2016 – 2018 Malte Spielmann, M.D. (Professor & Head, Institute for Human Genetics, University of Lübeck)

- 2014 – 2018 Darren Cusanovich, Ph.D. (Assistant Professor, University of Arizona)
- 2012 – 2017 Martin Kircher, Ph.D. (Professor, University of Lübeck)
- 2014 – 2016 Ron Hause, Ph.D. (Senior Vice President, Analytics & Informatics, Shape Therapeutics)
- 2011 – 2015 Stephen Salipante, M.D., Ph.D. (Professor, University of Washington)
- 2009 – 2013 Jerrod Schwartz, Ph.D. (Vice President, Advanced Technology, ChromaCode)
- 2009 – 2013 Brian O'Roak, Ph.D. (joint with Evan Eichler; Professor, OHSU)
- 2007 – 2009 Emily Turner, Ph.D. (Senior Program Officer, Bill & Melinda Gates Foundation)

Graduate Students Trained

- 2024 – Present Sanjay Kottapalli (Genome Sciences)
- 2024 – Present Abby Mcgee (Genome Sciences)
- 2023 – Present Qi Yu (Genome Sciences)
- 2022 – Present Jenny Nathans (Medical Scientist Training Program; Genome Sciences)
- 2022 – Present David Lee (Genome Sciences; joint with David Baker)
- 2022 – Present Shruti Jain (Genome Sciences; joint with David Baker)
- 2022 – Present Connor Kubo (Genome Sciences; joint with Nobu Hamazaki)
- 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)
- 2018 – 2024 Sam Regalado (Medical Scientist Training Program; Genome Sciences; joint with Cole Trapnell; dissertation entitled "Scalable methods for genomic analysis of *in vitro* models of mammalian embryogenesis"; Medical Student @ UW)
- 2019 – 2023 Chengxiang (CX) Qiu (Genome Sciences; dissertation entitled "Single-cell Analysis Reveals the Molecular Roadmap of Mouse Embryogenesis"; Postdoctoral Fellow, Shendure Lab)
- 2018 – 2023 Florence Chardon (Genome Sciences; joint with Lea Starita; dissertation entitled "CRISPR-based functional genomics to study gene regulatory architecture and functional consequences of genetic variation"; Scientist, Seattle Hub for Synthetic Biology @ Allen-CZI-UW)
- 2018 – 2023 Xingfang (Fanny) Huang (Computer Science & Engineering; dissertation entitled "Computational methods of high-dimensional datasets derived from molecular profiling of biological systems"; Computational Biologist, Calico Life Sciences)
- 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"; Scientist, Cajal Neuroscience)
- 2016 – 2022 Wei (Will) 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"; Associate Director, Seattle Hub for Synthetic Biology @ Allen-CZI-UW)
- 2015 – 2019 Andrew Hill (Genome Sciences; joint with Cole Trapnell; dissertation entitled "Expanding the scope and utility of single-cell genomic technologies"; Scientist, Infinimmune)

- 2014 – 2019 Seungsoo Kim (Genome Sciences; dissertation entitled “Maps and mechanisms of three-dimensional genome organization”; Assistant Professor, UC Irvine)
- 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 with Cole Trapnell; dissertation entitled “Algorithms for modeling gene regulation and determining cell type using single-cell molecular profiles”; Principal Scientist, 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, Gladstone Institutes & UCSF)
- 2013 – 2017 Aaron McKenna (Genome Sciences; dissertation entitled “Whole-organism lineage tracing by combinatorial and cumulative genome editing”; Assistant Professor, Dartmouth University)
- 2012 – 2016 Matthew Snyder (Genome Sciences; dissertation entitled “Expanding the accuracy, resolution, and breadth of cell-free DNA investigation”; Research Scientist, Brotman Baty Institute for Precision Medicine)
- 2011 – 2014 Joshua Burton (Genome Sciences; dissertation entitled “New methods for de novo assembly of genomes and metagenomes”; Associate Director, Natera)
- 2010 – 2014 Akash Kumar (Medical Scientist Training Program; Genome Sciences; dissertation entitled “Mutational Heterogeneity in Cancer: Lessons from the Brain and Prostate”; Chief Medical & Scientific Officer, MyOme).
- 2010 – 2014 Andrew Adey (Molecular & Cellular Biology; dissertation entitled “Comprehensive, precision genomics”; Professor, OHSU)
- 2009 – 2013 Jacob Kitzman (Genome Sciences; dissertation entitled “New technologies for sequencing and interpreting genomes”; Associate Professor, University of Michigan)
- 2009 – 2012 Joseph Hiatt (Medical Scientist Training Program; Genome Sciences; dissertation entitled “Molecular tagging to overcome limitations of massively parallel sequencing”; Director, Bristol Myers Squibb)
- 2007 – 2012 Sarah Ng (Genome Sciences; dissertation entitled “Next Generation Mendelian Genetics”; Faculty, 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

● Ariana Farrell	Molecular & Cellular Biology	Fall 2024
● Kristian Choate	Molecular & Cellular Biology	Fall 2024
● Abby McGee	Genome Sciences	Winter 2024
● Yufei Gao	Genome Sciences	Winter 2024
● Sanjay Kottapalli	Genome Sciences	Fall 2023
● Lucas Kerr	Genome Sciences	Summer 2023

● Qi Yu	Genome Sciences	Winter 2023
● Shruti Jain	Genome Sciences	Spring 2022
● Elliott Swanson	Genome Sciences	Spring 2022
● Sydney Sattler	Genome Sciences	Winter 2022
● Connor Kubo	Genome Sciences	Winter 2022
● David Lee	Genome Sciences	Fall 2021
● Jenny Nathans	Genome Sciences	Summer 2021
● 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
● Bingie Wang	MSTP program	Summer 2017
● Joseph Janizek	MSTP program	Summer 2017
● Sam Regalado	MSTP program	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
● Aakash Sur	Biomedical & Informatics	Fall 2015
● 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)

● 2024 –	Clara McCurdy	Biochemistry	Advisor: H. Ruohola-Baker
● 2024 –	Morgan Bean	Bioengineering	Advisor: Hao Kueh
● 2024 –	Connor Kelly	Genome Sciences	Advisor: Brian Beliveau
● 2023 –	Ashmita Rajendran	BIME	Advisor: Siobhan Pattwell
● 2023 –	Sahar Attar	Genome Sciences	Advisor: Devin Schweppe
● 2023 –	Conor Camplisson	Genome Sciences	Advisor: Brian Beliveau
● 2022 –	Elliott Swanson	Genome Sciences	Advisor: Andrew Stergachis
● 2022 –	Adam Chazin-Gray	Molecular Engineering	Advisor: David Baker
● 2022 –	Jack Castelli	LabMed & Pathology	Advisor: Jennifer Adair
● 2021 –	Maddy Duran	Genome Sciences	Advisor: Cole Trapnell
● 2020 – 2024	Eliza Barkan	Genome Sciences	Advisor: Cole Trapnell
● 2021 – 2024	Shangqing Jiang	School of Pharmacy	Advisor: David Veenstra
● 2019 – 2024	Robin Aguilar	Genome Sciences	Advisor: Bill Noble
● 2019 – 2023	Gesine Cauer	Genome Sciences	Advisor: Bill Noble
● 2019 – 2020	Jacob Schreiber	Comp. Science & Engineering	Advisor: Bill Noble
● 2018 – 2022	Andria Ellis	Genome Sciences	Advisor: Cole Trapnell
● 2018 – 2022	Ian Smith	Genome Sciences	Advisor: Judit Villen
● 2018 – 2021	Sanjay Srivatsan	Genome Sciences	Advisor: Cole Trapnell
● 2018 – 2019	Peter Ney	Comp. Science & Engineering	Advisor: Tadayoshi Kohno
● 2017 – 2021	Robin Kirkpatrick	Genome Sciences	Advisor: Jesse Zalatan
● 2016 – 2021	Nuttada Panpradist	Bioengineering	Advisor: Barry Lutz
● 2016 – 2020	Wei Zhou	Molecular & Cellular Biology	Advisor: Stan Fields
● 2016 – 2020	Clara Amorosi	Genome Sciences	Advisor: Maitreya Dunham
● 2016 – 2018	Rebecca Zaunbrecher	Bioengineering	Advisor: Mike Regnier
● 2016 – 2019	Aaron Wolf	Genome Sciences	Advisor: Josh Akey
● 2017 – 2020	Ian Nova	Molecular Engineering	Advisor: Jens Gundlach
● 2015 – 2020	Melissa Chiasson	Genome Sciences	Advisor: Doug Fowler
● 2015 – 2019	John (Ty) Crowl	Immunology	Advisor: Dan Stetson
● 2015 – 2017	Jocelynn Pearl	Molecular & Cellular Biology	Advisor: Lee Hood
● 2015 – 2016	Alexander Rosenberg	Electrical Engineering	Advisor: Georg Seelig
● 2014 – 2019	Piero Lamelza	Molecular & Cellular Biology	Advisor: Michael Ailion
● 2014 – 2017	Hugh Haddox	Molecular & Cellular Biology	Advisor: Jesse Bloom
● 2013 – 2018	Jorgen Nelson	Genome Sciences	Advisor: David Baker
● 2013 – 2016	David Young	Genome Sciences	Advisor: Stan Fields
● 2012 – 2015	Benjamin Vernot	Genome Sciences	Advisor: Josh Akey
● 2012 – 2014	Andrew Laszlo	Physics	Advisor: Jens Gundlach
● 2012 – 2014	Niklas Krumm	Genome Sciences	Advisor: Evan Eichler

● 2011 – 2017	Jennifer Andrie	Genome Sciences	Advisor: Josh Akey
● 2008 – 2015	Vaughn Iverson	Oceanography	Advisor: Virginia Armbrust
● 2012 – 2012	Lucas Gray	Biochemistry	Advisor: Alan Weiner
● 2011 – 2011	Sung Han	Neurobiology and Behavior	Advisor: William Catterall
● 2010 – 2014	Russell Berg	Molecular & Cellular Biology	Advisor: Lalita Ramakrishnan
● 2010 – 2014	Keisha Carlson	Genome Sciences	Advisor: Christine Queitsch
● 2009 – 2014	Leslie Emery	Genome Sciences	Advisor: Josh Akey
● 2010 – 2013	Peter Sudmant	Genome Sciences	Advisor: Evan Eichler
● 2010 – 2013	Thomas White	Molecular & Cellular Biology	Advisor: Peter Nelson
● 2010 – 2013	Benjamin Whiddon	Genome Sciences	Advisor: Richard Palmiter
● 2010 – 2010	Carlos Araya	Genome Sciences	Advisor: Stanley Fields
● 2009 – 2013	Cailyn Spurrell	Genome Sciences	Advisor: Mary-Claire King
● 2009 – 2012	Joshua Bishop	Electrical Engineering	Advisor: Eric Klavins
● 2009 – 2012	Kyle Minch	Molecular & Cellular Biology	Advisor: David Sherman
● 2008 – 2013	Alan Rubin	Genome Sciences	Advisor: Phil Green
● 2008 – 2010	Steven Josefowicz	Immunology	Advisor: Sasha Rudensky
● 2008 – 2010	Kevin Schutz	Genome Sciences	Advisor: Stan Fields
● 2008 – 2010	Marcia Paddock	Immunology	Advisor: Andy Scharenberg

Issued Patents

- Method for large scale scaffolding of genome assemblies (11,694,764)
- Methods of determining tissues and/or cell types giving rise to cell-free dna, and methods of identifying a disease or disorder using same (11,352,670)
- Massively parallel contiguity mapping (10,457,936; 11,299,730)
- Methods for retrieval of sequence-verified DNA constructs (9,809,904)
- Nanogrid rolling circle DNA sequencing (9,624,538)
- Error detection in sequence tag directed subassemblies of short sequencing reads (8,865,410; 10,577,601; 11,505,795)
- Sequence tag directed subassembly of short sequencing reads into long sequencing reads (8,383,345; 8,846,347; 10,227,585; 12,152,236)
- Polony fluorescent in situ sequencing beads (7,425,431)

Published Patent Applications

- Multiplex, temporally resolved molecular signal recorder and related methods (20240355418)
- Bacterial DNA cytosine deaminases for mapping DNA methylation sites (20240124867)
- Precise genome deletion and replacement method based on prime editing (20240011055)
- High-throughput single-cell transcriptome libraries and methods of making and using (20210102194)
- Diagnosis of cancer or other physiological condition using circulating nucleic acid fragment sentinel endpoints (20200255905)
- Determining a physiological condition in an individual by analyzing cell-free DNA fragment endpoints in a biological sample (20190309374)
- High-throughput single-cell sequencing with reduced amplification bias (20190382753)
- Multiplex pairwise assembly of DNA oligonucleotides (application; 20180320166)
- 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)

Preprints & Publications (* denotes equal contributors; # or ^ denotes corresponding or senior authorship; gray 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

21. "Linking candidate causal autoimmune variants to T cell networks using genetic and epigenetic screens in primary human T cells." *bioRxiv* 2024.10.07.617092 (posted-3-Oct-2024).
20. "Sciphy: A Bayesian phylogenetic framework using sequential genetic lineage tracing data." *bioRxiv* 2024.10.01.615771 (posted-12-Oct-2024).
19. "Diversified, miniaturized and ancestral parts for mammalian genome engineering and molecular recording." *bioRxiv* 2024.09.30.615957 (posted 1-Oct-2024).
18. "The proteomic landscape and temporal dynamics of mammalian gastruloid development." *bioRxiv* 2024.09.05.609098 (posted 18-Sep-2024).
17. "Multi-condition and multi-modal temporal profile inference during mouse embryonic development." *bioRxiv* 2024.03.03.583179 (posted 13-Sep-2024).
16. "Leukemia-derived apelin selects endothelial niche clones to promote tumorigenesis." *bioRxiv* 2024.09.09.612077 (posted 13-Sep-2024).
15. "Optics-free reconstruction of 2D images via DNA barcode proximity graphs." *bioRxiv* 2024.08.06.606834 (posted 8-Aug-2024).
14. "SARS-CoV-2 diversity and transmission on a university campus across two academic years during the pandemic." *medRxiv* 2024.02.29.24303285 (posted 2-Mar-2024).
13. "Multiplex generation and single cell analysis of structural variants in a mammalian genome." *bioRxiv* 2023.01.22.576756 (posted 22-Jan-2024).
12. "Cross-species imputation and comparison of single-cell transcriptomic profiles." *bioRxiv* 2023.10.19.563173 (posted 19-Oct-2023).
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