Lucy Erin O'Brien

Curriculum vitae • **Apr 28, 2020**

I. Personal Information

Department of Molecular and Cellular Physiology www.stemdynamics.org
Stanford University School of Medicine lucye@stanford.edu
279 Campus Drive, Beckman B141 415.260.6579 (cell)
Stanford, California USA 94305-5345

II. Education

Ph.D. in Biomedical Sciences Sep 1993 - Aug 2001

University of California, San Francisco, California
Keith Mostov Lab, Department of Anatomy

B.A. in Biochemistry, *magna cum laude* with high honors Sep 1988 - Jun 1992

Harvard University, Cambridge, Massachusetts

III. Professional Appointments

Assistant Professor Mar 1 2013 - Feb 28 2021

Stanford University School of Medicine, Stanford, California *(present appointment)*
Department of Molecular and Cellular Physiology

Member:
Stanford Institute for Stem Cell Biology and Regenerative Medicine
Stanford Cancer Institute
Bio-X

Staff Research Associate Jul 2010 - Jan 2013

University of California, Berkeley, California
David Bilder Lab, Department of Molecular and Cellular Biology

Postdoctoral Fellow Jul 2005 - Jun 2010

University of California, Berkeley, California
David Bilder Lab, Department of Molecular and Cellular Biology

Postdoctoral Fellow Jan 2002

University of California, San Francisco, California
Keith Mostov Lab, Department of Anatomy

IV. Honors & Awards

International Society for Stem Cell Research, Next Generation Leader	2020
Gabilan Junior Faculty Fellow, Stanford University	2017, 2013
FASEB Gastrointestinal XIV Conference, Distinguished Poster Award	2011
International Society for Stem Cell Research Annual Meeting, Best Poster Award	2010
Life Sciences Research Foundation, Genentech Foundation Fellow	2007-2009
American Heart Association Postdoctoral Fellowship	2006
American Heart Association Predoctoral Fellowship	1998-2001
American Society for Cell Biology, Worthington Travel Award	1999
Department of Defense Science and Engineering Predoctoral Fellowship	1993-1996
Harvard College Detur Prize	1989
International Science and Engineering Fair, First Place Category Award	1988
Westinghouse *(now Intel)* Science Talent Search, National Scholarship Winner	1988

V. Scholarly Publications

A. Peer-reviewed journal articles - *original research*

*Co-first authors ‖Co-corresponding authors †O'Brien lab postdoc
‡O'Brien lab doctoral student §O'Brien lab undergraduate

15 Ngo, S.§*, Liang, J.‡*, Su, Y.H., & **O'Brien, L.E.** (2020) Disruption of EGF feedback by intestinal tumors and neighboring cells in *Drosophila*. *Current Biology* ***30***:1537.

14 Koyama, L.A.J.‡, Aranda-Dias, A., Su, Y.H., Balachandra, S., Martin, J.L., Ludington, W.B., Huang, K.C., & **O'Brien, L.E.** (2020) Bellymount enables longitudinal, intravital imaging of abdominal organs and the gut microbiota in adult *Drosophila*. *PLOS Biology* **18**:e3000567.

Highlighted in:
- AAAS EurekaAlert! What can you learn by peering into a fruit fly's gut? It turns out a lot! (Mar 2, 2020)
- Medical & Life Science News. New tool allows researchers to peer into live tissue of the fruit fly gut. (Mar 2020)
- Carnegie Science. Eavesdropping on "conversations" between gut stem cells and gut bacteria. (Mar 2, 2020)

13 Martin, J.L., Sanders, E.N.‡, Moreno-Roman, P.‡, Koyama, L.A.J.‡, Balachandra, S., Du, X.†, & **O'Brien, L.E.** (2018) Long-term live imaging of the *Drosophila* adult midgut reveals real-time dynamics of division, differentiation and loss. *eLife* **7**:e36248.

Highlighted in:
- Drosophila Image Award, Runner-Up, Video category (2019)
- Lewis, A. Freshen up: Detailed and direct observation of organ development. MRC Biomedical Picture of the Day (Jan 28, 2019)
- Dye, N. A new method captures the dynamics of tissue homeostasis in the stem-cell based organ of the adult fly midgut. preLights (Company of Biologists preprint reviews), Mar 20, 2018.

12 Liang, J.‡, Balachandra, S., Ngo, S.§, & **O'Brien, L.E.** (2017) Feedback regulation of steady-state epithelial turnover and organ size. *Nature* (Cover article) **548**:588-591.

Highlighted in:
- Principles of Systems Biology, No. 21. Liang, J. & O'Brien, L.E. (2017) Organ Size: Act Locally to Control Globally. Cell Systems 5, 158-160 (2017)
- Ferrarelli, L.K. (2017) A life-death relay in the gut. Science Signaling 10:495
- Dubnicoff, T. Stories that caught our eye last week: Dying cells trigger stem cells. The Stem Cellar (CIRM Blog), Sep 5, 2017.
- Conger, K. "The Goldilocks Effect: Dying cells signal to keep organ size 'just right'" *Stanford Medicine Scope*, Aug 31, 2017.
- Faculty of 1000 F1000Prime.com/729075065

11 Du, X.†, **O'Brien, L.E.**‖& Riedel-Kruse, I.‖(2017) A model for adult organ resizing demonstrates stem cell scaling through a tunable commitment rate. *Biophys. J.* **113**:174-184.

10 **O'Brien, L.E.**, Soliman, S., Li, X., & Bilder, D. (2011) Altered modes of stem cell division drive adaptive intestinal growth. *Cell* **147**:603-614.

Highlighted in:
- Sarkar, A. & Hochedlinger, K. (2011) A gutsy way to grow: Intestinal stem cells as nutrient sensors. *Cell* **147**:487-489.
- Baumann, K. (2011) Stem cells: Having the guts to grow. *Nat. Rev. Mol. Cell Biol.*, **12**:768-769.

- Faculty of 1000, 03 Nov 2011. F1000.com/13357359.
- Hershon, B. "How to grow a gut." *AAAS Science Podcast.* Nov 17, 2011.
- Balintfy, J. "Intestinal stem cells respond to food by supersizing the gut." *NIH Radio Interview.* Nov 29, 2011

9 Kim, M., **O'Brien, L.E.**, Kwon, S.H., & Mostov, K.E. (2010) STAT1 is required for redifferentiation during Madin-Darby canine kidney tubulogenesis. *Mol. Biol. Cell* **21**:3926-3933.

8 **O'Brien, L.E.** & Yu, W., Tang, K., Jou, T.S., Zegers, M.M., Mostov, K.E. (2006) Morphological and biochemical analysis of Rac1 in three-dimensional epithelial cell cultures. *Meth. Enzymol.* **406**:676-691.

7 Yu, W., Datta, A., Leroy, P., **O'Brien, L.E.**, Mak, G., Jou, T.S., Matlin, K.S., Mostov, K.E., & Zegers, M.M. (2005) β1-integrin orients epithelial polarity via Rac1 and laminin. *Mol. Biol. Cell* **16**:433-445.

6 Mostov, K.E., Brakeman, P., Datta, A., Gassama, A., Katz, L., Kim, M., Leroy, P., Levin, M., Liu, K., Martin, F., **O'Brien, L.E.**, Verges, M., Su, T., Tang, K., Tanimizu, N., Yamaji, T., & Yu, W. (2005) Formation of multicellular epithelial structures. *Novartis Found. Symp.* **269**:193-200.

5 **O'Brien, L.E.**, Tang, K., Kats, E.S., Schutz-Geschwender, A., Lipschutz, J.H., & Mostov, K.E. (2004) ERK and MMPs sequentially regulate distinct stages of epithelial tubule development. *Dev. Cell* **7**:21-32.

- *Highlighted in:* Rosario, M. & Birchmeier, W. (2004) Making tubes: Step by step. *Dev. Cell* **7**:3-5.

4 Yu, W., **O'Brien, L.E.**, Wang, F., Bourne, H., Mostov, K.E., & Zegers, M.M. (2003) Hepatocyte growth factor switches orientation of polarity and mode of movement during morphogenesis of multicellular epithelial structures. *Mol. Biol. Cell* **14**:748-763.

3 **O'Brien, L.E.**, Jou, T.S., Hansen, S.H., Pollack, A.L., Zhang, Q., Yurchenco, P.D. & Mostov, K.E. (2001) Rac1 orients epithelial apical polarity through effects on basolateral laminin assembly. *Nature Cell Biol.* **3**:831-838.

- *Featured in:* Alberts, B. *et al.* (2007) Chapter 19: Cell-cell junctions and the basal lamina govern apico-basal polarity in epithelia. *Molecular Biology of the Cell, 5th ed.*, p. 1155

2 Lipschutz J.H., **O'Brien, L.E.**, Altschuler Y., Avrahami, D., Nguyen, Y., Tang, K., & Mostov, K.E. (2001) Analysis of membrane traffic in polarized epithelial cells. *Curr. Protoc. Cell Biol.* **15**:Unit 15.5.

1 Lipschutz, J.H., Guo, W., **O'Brien, L.E.**, Nguyen, Y.H., Novick, P. & Mostov, K. E. (2000) Exocyst is involved in cystogenesis and tubulogenesis and acts by modulating synthesis and delivery of basolateral plasma membrane and secretory proteins. *Mol. Biol. Cell* **11**:4259-4275.

B. Peer-reviewed publications - *other*

4 Kim, A.A.[†], Nekimken, A.L., Fechner, S., **O'Brien, L.E.**, & Pruitt, B.L. (2018) Microfluidics for mechanobiology of model organisms. *Methods in Cell Biology* **146**:217-259.

3 **O'Brien, L.E.** & Bilder, D. (2013) Beyond the Niche: Tissue-level coordination of stem cell dynamics. *Annu. Rev. Cell Dev. Biol.* **29**:107-136.

2 Zegers, M.M., **O'Brien, L.E.**, Yu, W., Datta, A., & Mostov, K.E. (2003) Epithelial

polarity and tubulogenesis in vitro. *Trends Cell Biol.* **13**:169-176.

1 **O'Brien, L.E.**, Zegers, M.M., & Mostov, K.E. (2002) Opinion: Building epithelial architecture: Insights from three-dimensional culture models. *Nat. Rev. Mol. Cell Biol.* **3**:531-537.

C. Non-peer-reviewed articles

3 Liang, J.‡, & **O'Brien, L.E.** (2018) A gut feeling for cellular fate. *Nature* **555**:34-36.

2 **O'Brien, L.E.** (2013) Invited Preview - Regional specificity in the Drosophila midgut: setting boundaries with stem cells. *Cell Stem Cell* **13**:375-376.

1 **O'Brien, L.E.** & Mostov, K.E. (2001) Getting from here to there. *Nature Cell Biol.* **3**:E116.

VI. Grants

Current Funding

INFL-0000000720 Chan-Zuckerberg Initiative

O'Brien & KC Huang (Stanford Bio-Engineering), co-PIs 09/2020 - 08/2022

In vivo *tracking and manipulation of immune cells in gut health and disease*

This project explores the real-time, in vivo interactions between immune cells, the microbiota, and the intervening gut epithelium.

1R21 OD028273 NIH/OD

O'Brien, PI 03/2020 - 02/2022

Bellymount: A platform for ultra-long term imaging of abdominal organs in live adult Drosophila

This project aims to develop and optimize methods for long-time scale, longitudinal live imaging in the midgut and investigate epithelial recovery after injury in young vs. old flies.

Research Scholar Grant 17-167-01 American Cancer Society

O'Brien, PI 01/2018 - 12/2021

Niche control of stem cell-driven epithelial tumorigenesis

This project investigates the non-autonomous roles of differentiated intestinal epithelial cells in the initiation and progression of stem cell tumors.

1R01 GM116100 NIH/NIGMS

O'Brien, PI 04/2016 - 03/2021

Dynamic mechanisms of fate control during epithelial organ renewal

The goal of this award is to investigate the mechanisms that decide between symmetric and asymmetric fate outcomes following stem cell division.

Prior Funding

Stanford Bio-X Interdisciplinary Initiatives Program

O'Brien & Beth Pruitt (Stanford Mechanical Engineering), co-PIs 01/2017 - 12/2018

Mechano- and chemo-sensory inputs controlling adaptive intestinal growth

This award funds the development of micro-scale devices to investigate mechanical and nutrient signals that control localized secretion of insulin.

Stanford Discovery Innovation Fund in the Basic Biomedical Sciences

O'Brien, PI 07/2016 - 6/2018

Deconstructing Notch-based fate decisions by combinatorial culture of stem and daughter cells

This award supports the establishment of an *in vitro* culture system to investigate Notch activation and fate decisions in primary midgut stem cells.

Beckman Technology Innovation Mini-Grant

O'Brien, PI 07/2017 - 06/2018

Image Processing Techniques for Removing Tissue Movement in Live Imaging Data

The purpose of this mini-grant is the development of improved registration algorithms to correct for X, Y, and Z movements within multichannel stacks during live imaging of peristaltic organs.

1R03 DK104027 NIH/NIDDK

O'Brien, PI 01/2015 - 12/2016

Mechano-sensitive control of intestinal stem cell divisions in Drosophila

The goal of this award is to identify mechano-sensitive mechanisms controlling intestinal epithelial renewal.

Beckman Technology Innovation Mini-Grant

O'Brien, PI 04/2014 - [no end date]

Force sensing in vivo: Measuring real-time tension forces in the Drosophila intestinal epithelium

The purpose of this mini-grant is to support the implementation of FLIM technology for real time FRET tension sensor measurements in the Drosophila gut epithelium.

1K01 DK083505 NIH/NIDDK

O'Brien, PI 02/2010 - 01/2015

Nutrient regulation of stem cell mediated intestinal renewal in Drosophila

The goals of this award were to determine the cellular and molecular mechanisms controlling nutrient-stimulated intestinal adaptation in Drosophila, and to foster the scientific training and independence of the PI.

Center for Biological Imaging at Stanford Seed Grant

O'Brien, PI 08/2013 - 08/2014 *High resolution imaging of intestinal stem cell divisions in live adult Drosophila*

The purpose of this award was to develop real time, in vivo imaging of stem cell divisions in the adult Drosophila midgut.

VII. Editorial Service

Invited Journal Referee

American Journal of Physiology *Cell* *Cell Reports* *Cell Stem Cell* *Development* *Developmental Biology* *Developmental Cell* *eLife* *EMBO Journal* *G3* *Journal of Cell Biology* *Journal of Cell Science* *Journal of Physiology* *Molecular and Cellular Biology* *Nature*

PLOS Biology *PLOS Genetics* *PLOS ONE* *Proc. National Academy of Sciences* *Science* *Scientific Reports* *Stem Cell Reports*

Editorial Board

eLife, Board of Reviewing Editors *deferred to Oct 2020*

VIII. Service as a Grant Reviewer

Grant Review

Academy of Medical Science (United Kingdom)
Carnegie Trust (Scotland)
European Research Council
German Research Foundation
Henry Dale Fellowship (United Kingdom)
Human Frontiers in Science Program, Career Development Award Program
Israel Science Foundation
Medical Research Council (United Kingdom), Program in Gut Signaling and Metabolism
Stanford Bio-X Graduate Fellowship Program

IX. University Service

Thesis Committees

Current

Theresa Logan	Neurosciences
Alex Lessenger	Biology
KC Farrell	Biology
Prathima Radhakrishnan	Biochemistry
Teni Anbarchian	Dev Bio

Past

Ellen Rim	Dev Bio
Susanna Brantley	Dev Bio
Vy Nguyen (Quals Committee)	Dev Bio
Michael Zhou	Chemical & Systems Biology
Honesty Kim	Bio E
Mary Mirvis	MCP
Kevin (KC) Hart	Biology
Natalie Chavez	Biology
Phillip Miller	MCP

Dissertation Defenses, Committee Chair

Anjali Bisaria	Chemical & Systems Biology
Emily Kolenbrander	Dev Bio
Ahmed Nabam	Biochemistry
Cameron Berry	Dev Bio
Blair Benham-Pyle	Cancer Bio
Erin Turk	Biology
Emily Abrash	Biology
Dan Van de Mark	Biology
Arjun Adhikari	Chem E

Classroom Teaching

MCP 207 MCP Bootcamp — *3 units*
- Course Co-organizer (with Feng) & Instructor — Sep 2019, 2018, 2017, 2016
  3-4 MCP first-year students, 1 week

HUMBIO 157 The Biology of Stem Cells — *4 units*
- Course Lecture, "Dynamics of stem cell populations" — Apr 11, 2019
  9 undergraduate students, 1.5 hours

BIOS-200 Foundations in Experimental Biology — *6 units*
- Discussion Leader — Fall 2016, Fall 2014
- Substitute Discussion Leader — Fall 2019, Fall 2017

BIO-214/BIOC-224/MCP-221 Advanced Cell Biology — *4 units*
- Section Leader — Winter 2016
  9 graduate students, 2 hours

Graduate Recruitment Activities

Biosciences Graduate Program recruitment interviews	2019, 2017, 2016, 2014, 2013
MCP graduate recruitment dinner - hosted at home	2017, 2016
Oral presentations to prospective MCP students	2019, 2016, 2014
Poster presentation, Biosciences Recruitment Poster Session	2014

Other University Service

Stanford Leadership Development Program - Invited participant	2019-20
Frontiers in Quantitative Biology Seminar Series - Organizing committee	Apr 2017-date
Beckman Cell Sciences Imaging Facility - Advisory committee	Feb 2017-date
Stanford PRISM (Postdoctoral Recruitment in Sciences and Medicine) Dinner	Feb 2019
Stanford Biosciences Grant Writing Academy - Faculty volunteer	Oct 2018
Bio-X Interdisciplinary Initiatives Seed Grants Program - Donor dinner speaker	Apr 2017
March for Science - Faculty facilitator, Beckman sign-making event	Apr 2017
Henzl-Gabor Postdoctoral Travel Grant - Selection committee	Sep 2016-Nov 2017
Cell and Molecular Biology Training Grant	Jul 2013-date
Ethics Training - Discussion leader	May 2015
CMB Symposium - Poster judge	May 2014

X. Service to the field

Service to Scientific Societies

International Society for Stem Cell Research	2010-date
Annual Meeting - Chair, Tissue Homeostasis session	Jun 2019
Annual Meeting - Organizer, Diversity and Inclusion Meetup	Jun 2019
Special Task Force on Annual Meeting Programming	2019
• Co-chair	
Junior Investigators' Committee	2016-2019
• Co-chair	2017-2019
Annual Meeting - Abstract selection committee	2016-date
American Society for Cell Biology	1994-date

Annual Meeting - Chair, Minisymposium on Patterning Tissue Morphogenesis	Dec 2018
Women in Cell Biology Mentoring Theater	Dec 2013
ASCB Membership Committee	2006-2012
Genetics Society of America	2005-date
Annual Drosophila Conference - Chair, Platform Session on Stem Cells	Mar 2019
Annual Drosophila Conference - Chair, Platform Session on Intercellular Signaling	Jul 2016
Society for Developmental Biology	2018-date
West Coast Regional Meeting - Chair, Poster Judging Committee	Apr 2019
Annual Meeting - Chair, Concurrent Session on Stem Cells	Aug 2018

Leadership and Other Service

Fly Cell Atlas Initiative - Lead for Midgut Cell Atlas	2019-date
Fly Meeting Gut PI Dinners - Organizer	2013-date
European Drosophila Research Conference - Chair, Stem Cell Session	Sep 2019
American Cancer Society, Silicon Valley Board of Directors	
ACS ResearcHER Scientist Ambassador	2019-20
Dinner talk and lab crawl	Nov 2018
Neuwrite West's "Brains and Bourbon" Science Radio Show	Jul 2014
Association of Women in Science - Career Discussion Panel	May 2014
Faculty of 1000, Stem Cells and Regeneration Section	2016-date

XI. Presentations

Invited Campus Seminars ** denotes student-invited speaker*

30	University of California, Irvine*		*Apr 2020 - cancelled, COVID-19*
29	IRCCS Ospedale San Raffaele, Milan, Italy		*Mar 2020 - cancelled, COVID-19*
28	Hubrecht Institute, Utrecht, Netherlands		Mar 2020
27	Harvard University		Feb 2020
26	University of Utah		Dec 2019
25	Columbia University		Nov 2019
24	Institut Pasteur, Paris		Oct 2019
23	Stanford University, Frontiers in Biology (hosted by Dev Bio)		Oct 2019
22	New York University-Skirball Institute*		May 2019
21	MD Anderson Cancer Center - Blaffer Lectureship		Apr 2019
20	University of British Columbia		Apr 2019
19	University of Chicago*		Jan 2019
18	University of Calgary		May 2017
17	San Jose State University		Apr 2017
16	National Institute of Biological Sciences	Beijing, China	Aug 2016
15	University of Glasgow/Beatson Institute		Sep 2015
14	Imperial College London	MRC Clinical Sciences Centre	Sep 2015
13	Buck Institute for Research on Aging		Apr 2015
12	University of Pennsylvania		Mar 2015
11	USC Keck School of Medicine		Mar 2015

Eleven faculty candidate seminars, January-April 2012:

10	University of California, San Francisco	Cardiovascular Research Institute	Apr 2012

9 Oregon Health Sciences University Center for Spatial Systems Biomedicine Apr 2012

8 Stanford University Department of Molecular and Cellular Physiology and Department of Developmental Biology Mar 2012

7 University of California, Berkeley Deparment of Molecular and Cellular Biology Mar 2012

6 University of Colorado, Denver Department of Pediatrics Feb 2012

5 University of California, Berkeley Department of Nutritional Science Feb 2012

4 University of California, San Diego Dept of Cell and Developmental Biology Feb 2012

3 Princeton University Department of Molecular Biology Jan 2012

2 University of California, Santa Barbara Dept of Molecular, Cellular, and Developmental Biology Jan 2012

1 University of Michigan Department of Cell and Developmental Biology Jan 2012

Talks at International and National Meetings

28 Gordon Research Symposium on Cell Adhesion Hooksett, New Hampshire
• *Keynote speaker* *Jun 2020 - cancelled, COVID-19*

27 Digestive Disease Week Chicago *May 2020 - cancelled, COVID-19*

26 Champalimaud Symposium Lisbon, Portugal Oct 2019

25 European Drosophila Research Conference Lausanne, Switzerland Sep 2019

24 International Society for Stem Cell Research Los Angeles Jun 2019

23 Gordon Conference on Cell Contact & Adhesion Les Diablerets, Switzerland Jun 2019

22 UCSF Developmental Biology Symposium May 2019

21 Digestive Disease Week San Diego *May19 - declined*

20 American Society for Cell Biology San Diego Dec 2018
Doorstep Meeting, "Stem Cells Under Stress"

19 Society for Developmental Biology Annual Meeting Portland Aug 2018

18 Santa Cruz Developmental Biology Meeting Santa Cruz, California Aug 2018

17 Drosophila Crete Meeting Crete, Greece Jun 2018

16 Gordon Conference on Cell Polarity Signaling Dover, Vermont Jun 2018

15 Keystone Symposia on Endoderm Taos, New Mexico Feb 2018

14 European Drosophila Research Conference London Sep 2017

13 International Society for Stem Cell Research Boston Jun 2017

12 US Drosophila Research Conference San Diego Mar 2017

11 Gordon Conference on Tissue Niches & Resident Stem Cells in Adult Epithelia Hong Kong Aug 2016

10 Cold Spring Harbor Meeting on Stem Cell Biology Cold Spring Harbor Oct 2015

9 European Drosophila Research Conference Heidelburg Sep 2015

8 Society for Developmental Biology Annual Meeting Seattle Jul 2014
• *Plenary speaker*

7 International Congress of Endocrinology Annual Meeting San Diego Jun 2014

6 FASEB Experimental Biology Annual Meeting Chicago Apr 2014

5 American Society for Cell Biology Annual Meeting Philadelphia Dec 2010

4 Life Sciences Research Foundation Annual Meeting Baltimore Oct 2010

3 Santa Cruz Developmental Biology Meeting Santa Cruz, California Jul 2010

2	Cold Spring Harbor Meeting on Stem Cell Biology	Cold Spring Harbor	Sep 2009
1	American Society for Cell Biology Annual Meeting	San Francisco	Dec 2002

Talks at Regional Meetings

3	Southeast Regional Meeting, Society for Developmental Biology • *Keynote speaker*	Raleigh, North Carolina	*May 2020 - canceled, COVID-19*
2	West Coast Regional Meeting, Society for Developmental Biology	Cambria, California	Mar 2019
1	West Coast Salt and Water Club Meeting • *Keynote speaker*	Avila Beach, California	Mar 2015

Talks in Campus Forums

Regenerative Medicine@Stanford (ReMS), STEMREM250	Nov 2019, Jan 2018, Apr 2015, Mar 2013
Bio-X Symposium	Aug 2019, Aug 2017
Bio-X Undergraduate Research Program, Summer Seminar Series	Aug 2019
Stanford Institute for Stem Cell Biology, Annual Retreat	Nov 2018, Nov 2013
Stanford Collective Behavior in Biology - Collective Cell Motility Panel	Jan 2017
MCP Department, Annual Retreat	Sep 2016, Oct 2012
Biochemistry Department, Wednesday lunch club	Aug 2016
Collective Behavior Interest Group	May 2016
Stanford Center for Systems Biology Lunch Series	Jan 2016
Dev Bio Department, Dev Bio Data Discussion (3D)	Oct 2013
Biology Department, Think 'n Drink	Jun 2013

XII. Trainees

Current Postdoctoral Scholars

Anna Kim, Ph.D. (joint with Beth Pruitt, Univ. of Calif. Santa Barbara)	Apr 2017-date
Aparna Sherlekar, Ph.D.	Jan 2018-date
Paola Moreno-Roman, Ph.D. *(see listing under Former Doctoral Students)*	Nov 2019-date

Current Doctoral Students

Erin Sanders (Dev Bio)	Jun 2015-date

Current Undergraduate Researchers

Andrew Labott (Political Science)	Jan 2019-date

Current Medical Student Researcher

Lehi Acosta	Sep 2018-date

Former Postdoctoral Scholar

XinXin Du, Ph.D. (joint with Riedel-Kruse, Stanford Bio-E) Current: Research Scientist, Center for Computational Biology, Simons Foundation Flatiron Institute	Apr 2013-Mar 2019

Former Doctoral Students

Leslie Jaramillo Koyama (Dev Bio) Jun 2014-Aug 2019
Current: Scientist I, Akoya Biosciences

Paola Moreno-Roman (Biology) Jul 2014-Sep 2019
Current: Postdoctoral researcher, O'Brien Lab

Jackson Liang (MCP) Jul 2013-Sep 2017
Current: Postdoctoral researcher, Ciara Metcalfe Lab, Genentech

Former Undergraduate Researchers

Sang Ngo (Biology) Jan 2016-Jun 2017
Current: Clinical research coordinator, UCSF Dept of Neurology

Alexandra Crew (Hum Bio) Feb 2018-Dec 2018
Current: Undergraduate student

Guhan Ventakaraman (Bio-Engineering) Jun 2014-May 2015
Current: Doctoral student, Biomedical Informatics, Stanford School of Medicine

Joseph Malzbender (University of Colarado undergraduate researcher) Jun 2015-Sep 2015
Current: Medical student, Quinnipiac Medical School

Rotation Students

Kazuki Yoda	Biophysics
Samantha Gumbin	MCP
Carla Perez	Biophysics
Devon Harris	Dev Bio
Dania Sarfati	Biology
Jamie Jeffries	MCP
Andres Iglasias-Thome	MCP
Garrison Buss	MCP
Alice Stanton	Bio E
KC Farrell	Biology
Chase Wood	MCP
Emily Kolenbrander	Dev Bio
Brian Raftrey	Biology
Susanna Brantley	Dev Bio
Nancy Zhang	MCP

XIII. Trainee Awards and Recognition

Fellowships Awarded to Trainees

Postdoctoral Fellowships

Swedish Research Council International Fellowship - Anna Kim, Ph.D. 2019-21
Stanford Dean's Fellowship - Aparna Sherlekar, Ph.D. 2018-19
NIH F32 Kirschstein National Research Service Award - XinXin Du, Ph.D. 2015-17
Stanford Dean's Fellowship - XinXin Du, Ph.D. 2013-14

Graduate Fellowships

NIH F31 Kirschstein National Research Service Diversity Award - Leslie Koyama 2017-19
Stanford DARE Fellowship (Diversifying Academia, Recruiting Excellence) - Paola Moreno-Roman 2017-19
NSF Graduate Research Fellowship - Erin Sanders 2016-19
NSF Graduate Research Fellowship - Jackson Liang 2015-17

Stanford Bio-X Bates Fellowship - Paola Moreno-Roman 2014-17
EMBO Short-Term Exchange Fellowship - Paola Moreno-Roman 2016

Undergraduate Fellowships

Stanford Bio-X Summer Research Fellowship - Andrew Labott 2019
Stanford Human Biology Research Exploration Summer Fellowship (declined) - Alexandra Crew 2019
Stanford VPUE Research Fellowship - Sang Ngo 2017-18
Stanford Bio-X Summer Research Fellowship - Sang Ngo 2017

Abstract-selected Conference Presentations by Trainees

Platform talk, European Drosophila Research Conference (Lausanne, Switzerland)
Erin Sanders Sep 2019

Concurrent talk, International Society for Stem Cell Research (Los Angeles, CA)
Erin Sanders Jun 2019

Plenary talk, US Drosophila Research Conference (Dallas, TX)
Leslie Jaramillo Koyama Mar 2019

Platform talk, US Drosophila Research Conference (Dallas, TX)
Paola Moreno-Roman Mar 2019

Minisymposium talk, American Society for Cell Biology Annual Meeting (San Diego, CA)
Paola Moreno-Roman Dec 2018

Oral presentation, Keystone Meeting on Signaling Dynamics (Keystone, CO)
Erin Sanders Jan 2019

Oral presentation, Gordon Research Symposium on Cell Polarity Signaling
Paola Moreno-Roman Jun 2018

Oral presentation, Bay Area Cytoskeleton Meeting (San Francisco,CA)
XinXin Du, Ph.D. Jun 2018

Concurrent talk, American Physical Society March Meeting (Boston,MA)
XinXin Du, Ph.D. Mar 2017

Minisymposium talk, American Society for Cell Biology Annual Meeting (San Francisco, CA)
XinXin Du, Ph.D. Dec 2016

Minisymposium talk, American Society for Cell Biology Annual Meeting (San Francisco, CA)
Jackson Liang Dec 2016

Platform talk, US Drosophila Research Conference (Orlando, FL)
XinXin Du, Ph.D. Jul 2016

Platform talk, US Drosophila Research Conference (Orlando, FL)
Jackson Liang Jul 2016

Platform talk, US Drosophila Research Conference (Orlando, FL)
Judy Martin (LSRP) Jul 2016

Concurrent talk, International Society for Stem Cell Research (San Francisco,CA)
Jackson Liang Jun 2016

Platform talk, European Drosophila Research Conference, Heidelberg Germany
Jackson Liang Sep 2015

Other Trainee Awards

Outstanding Poster Award, Stanford Bio-X Symposium - Erin Sanders Aug 2019

Kennedy Prize - Sang Ngo Jun 2019
- *Top undergraduate Honors Thesis in the Natural Sciences at Stanford*

Firestone Medal (top 10% of Undergraduate Honors Theses) - Sang Ngo Jun 2019

International Society for Stem Cell Research Merit Award - Erin Sanders	Jun 2019
International Society for Stem Cell Research Travel Award - Erin Sanders	Jun 2019
Gordon Research Symposium Best Student Talk Award - Paola Moreno-Roman	Jun 2018
Weintraub Graduate Student Award - Jackson Liang	Feb 2018

- *National prize for outstanding graduate achievement in biology*