JAN M. SKOTHEIM
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PROFESSIONAL POSITIONS

Professor 2020-present	**Dept. of Biology, Stanford University**
Associate Professor 2015-2019	**Dept. of Biology, Stanford University**
Assistant Professor 2008-2015	**Dept. of Biology, Stanford University**
Faculty by courtesy 2009-present	**Chemical and Systems Biology, Stanford University**

Affiliated faculty, Stanford University Bio-X (2008-present)**, Biophysics (**2008-present)**, Stanford Cancer Institute** (2013-present)

EDUCATION

PhD 2004	**Applied Mathematics and Theoretical Physics, University of Cambridge, UK**
CASM 2001	**Part III Mathematics Tripos, University of Cambridge, UK** Result: First
BS 1999	**Physics, MIT**
BS 1999	**Mathematics, MIT** GPA 5.0/5.0

RESEARCH EXPERIENCE

Postdoctoral Scholar 2005-2008	**The Rockefeller University** Cell cycle control Advisors: Dr. Eric D. Siggia & Dr. Frederick R. Cross
PhD research 2001-2004	**University of Cambridge, UK** Some problems in elastohydrodynamics and poroelasticity Advisor: Dr. L. Mahadevan
Fulbright scholar 1999-2000	**Universidad Complutense Madrid, Spain** Dynamics of thin heated fluid films Advisors: Dr. Uwe Thiele & Dr. Manuel G. Velarde
Undergraduate 1995-1999	**Massachusetts Institute of Technology** Dynamics of draining soap films Advisor: Dr. John W. M. Bush

HONORS, AWARDS AND FELLOWSHIPS

2026	Named American Association for the Advancement of Science (AAAS) Fellow
2022	Named Chan Zuckerberg Biohub Investigator
2016	HHMI, Gates Foundation & Simons Foundation Faculty Scholar Award
2016	Trends in Cell Biology, Young and Trending
2012	Named David Hunington Dean's Faculty Scholar
2011	Recipient of an NSF CAREER Award
2009	Recipient of the Hellman Faculty Scholar Award
2008	Recipient of the Burroughs Wellcome Fund Career Award at the Scientific Interface
2008-present	Frederick E.Terman Fellowship
2006-2008	National Institutes of Health – Ruth L. Kirschstein Postdoctoral Fellowship
2006	The François Naftali Frenkiel Award from the American Physical Society for a significant contribution to Fluid Mechanics by a researcher under 40.
2000-2003	National Science Foundation Graduate Fellowship
2003	Rayleigh-Knight Prize, University of Cambridge
2001	Foundation Scholarship from Queens' College, University of Cambridge
2001	Bachelor Scholarship from Queens' College, University of Cambridge
1999-2000	Fulbright Grant to study in Spain
1999-Present	Member of the Phi Betta Kappa, Sigma Xi and Sigma Pi Sigma honor societies

ORIGINAL RESEARCH PAPERS (SUBMITTED)

X Gao, M Lanz, R Grosely, J Cremer, J Puglisi & JM Skotheim, "Yeast growth is controlled by the proportional scaling of mRNA and ribosome concentrations" *submitted arXiv https://arxiv.org/abs/2508.14997*

T Uenaka, S Jung, I Kumar, K Vodehnal, M Rastogi, Y Yoo, M Koontz, C Thome, W Li, T Chan, EM Green, K Chesnov, Z Sun, S Zhang, J Wang, A Venida, A Mellier, M Atkins, M Jackrel, JM Skotheim, T Wyss-Coray, M Abu-Remaileh, H Lashuel, MC Bassik, TC Südhof, A Sol, E Ullian & M Wernig, "Defined human tri-lineage brain microtissues" *submitted*. https://doi.org/10.1101/2025.08.05.668605

BR Topacio, C Fleming, M Lanz, S Zhang, S Xie, J Tuvikene, A Weaver, I Sanidas, J Sage, S Rubin, M Koivomagi & JM Skotheim, "Identification and inhibition of the Cyclin D Rb-docking interface that drives cell division, " *submitted* doi**:** https://doi.org/10.64898/2026.01.14.699544

MC Lanz, M Hotz, R Kroll-Ling, E Wang, J Kim, JE Elias, DE Gottschling & JM Skotheim, "Cell enlargement drives aging-associated proteome remodeling and shortens replicative lifespan, *submitted* doi: https://doi.org/10.64898/2026.02.15.706013

H Zheng, AP Gutierrez Alejandre, M Shafieidarabi, MP Swaffer, Z El-Hajj, M Vera, JM Skotheim & R Reyes-Lamothe, "Cell Size Modulates SBF and Whi5 Chromatin Binding to Regulate the *Start* of the Budding Yeast Cell Cycle" *submitted* doi: https://doi.org/10.64898/2026.02.15.705999

ORIGINAL RESEARCH PAPERS (PEER REVIEWED)

https://orcid.org/0000-0001-8420-6820

DS You, CH Bohrer, PH Rumde, I Sanidas, MP Swaffer, DR Larson, JE Elias, MC Lanz*, JM Skotheim*, "Cell size-dependent mRNA transcription drives proteome remodeling", *to appear in Cell Reports* https://doi.org/10.1101/2025.10.30.685141 (2026).

F Proulx-Giraldeau, X Gao, Y Chadha, J Xiao, KM Schmoller, JM Skotheim* & P Francois*, “Division Asymmetry Drives Cell Size Variability in Budding Yeast”, *to appear in eLife* https://doi.org/10.1101/2025.10.22.683920 (2026).

E Zatulovskiy*, MB Murray, S Zhang, SJ Dixon & JM Skotheim*, “Cell size modulates ferroptosis susceptibility” *eLife* https://doi.org/10.7554/eLife.111544.2.sa0 (2026).

J Kim, S Xie, L Fuentes Valenzuela, J Xiao, M Lanz, X Gao, M Swaffer, C Mitchell, S Rubin, K Schmoller & JM Skotheim, “A Fkh1/2 binding site array in the *WHI5* promoter drives sub-scaling transcription” *Cell Reports* https://doi.org/10.1016/j.celrep.2026.117304 (2026).

T Hammond, JB Choi, MW Membreño, J Demeter, R Ng, D Bhattacharya, TN Nguyen, GG Hartmann, CI Colón, C Bossard, JM Skotheim, PK Jackson, A Pasca, SM Rubin & J Sage, “THE FAM53C/DYRK1A axis regulates the G1/S transition of the cell cycle” *eLife*14:RP109708 https://doi.org/10.7554/eLife.109708.2 (2025).

S Xie, S Zhang, G de Medeiros, P Liberali & JM Skotheim, “The G1/S transition in mammalian stem cells *in vivo* is autonomously regulated by cell size” *Nature Communications* doi: https://doi.org/10.1101/2024.04.09.588781 (2025).

AT Lessenger, JM Skotheim, MP Swaffer & JL Feldman, “Somatic polyploidy supports biosynthesis and tissue function by increasing transcriptional output” *J Cell Biol.* Mar 3;224(3):e202403154. doi: 10.1083/jcb.202403154 (2025).

L Fuentes Valenzuela, P Francois & JM Skotheim, “The Product neutrality function defining genetic interactions emerges from mechanistic models of cell growth” *eLife* https://doi.org/10.7554/eLife.105265.3 (2025).

C Tan, M Lanz, M Swaffer, JM Skotheim & Fred Chang, “Intracellular diffusion in the cytoplasm increases with cell size in fission yeast” *Molecular Biology of the Cell* https://doi.org/10.1091/mbc.E24-11-0488 (2025).

S Zhang, L Fuentes Valenzuela, E Zatulovskiy & JM Skotheim, “The G1/S transition is promoted by Rb degradation via the E3 ligase UBR5” *Science Advances 10 (43), eadq6858* (2024).

J Makela, A Papagiannakis, W Lin, MC Lanz, S Glenn, M Swaffer, GK Marinov, JM Skotheim & C Jacobs-Wagner, “Genome concentration limits cell growth and modulates proteome composition in *Escherichia coli*” https://doi.org/10.7554/eLife.97465.1 *eLife* (2024).

MC Lanz, S Zhang, MP Swaffer, I Ziv, L Hernández Götz, F McCarty, DF Jarosz, JE Elias & JM Skotheim, “Genome dilution by cell growth drives starvation-like proteome remodeling in mammalian and yeast cells” *Nat Struct Mol Biol.* https://doi.org/10.1038/s41594-024-01353-z (2024).

J Xiao, JJ Turner, M Kõivomägi & JM Skotheim, “Whi5 hypo- and hyper-phosphorylation dynamics control cell cycle entry and progression” https://doi.org/10.1016/j.cub.2024.04.052 *Current Biology* (2024).

MP Swaffer, GK Marinov, H Zheng, AW Jones, J Greenwood, A Kundaje, AP Snijders, WJ Greenleaf, R Reyes-Lamothe & JM Skotheim, “RNA polymerase II dynamics and mRNA stability feedback determine mRNA scaling with cell size” 186 (24), 5254-5268. *Cell* (2023).

MC Lanz, L Valenzuela, JE Elias & JM Skotheim, “Cell size contributes to single-cell proteome variation” https://doi.org/10.1021/acs.jproteome.3c00441 *J. Proteome Res.* (2023).

F Proulx-Giraldeau, JM Skotheim & P Francois, “Evolution of cell size control is canalized towards adders or sizers by cell cycle structure and selective pressures” doi: https://doi.org/10.1101/2022.04.12.488093 *eLife* (2022).

E Zatulovskiy, MC Lanz, S Zhang, F McCarthy, JE Elias & JM Skotheim. **“**Delineation of proteome changes driven by cell size and growth rate” *Frontiers in Cell and Developmental Biology*;10:980721. DOI: 10.3389/fcell.2022.980721 (2022).

S Zhang, E Zatulovskiy, J Arand, J Sage & JM Skotheim, “The cell cycle inhibitor RB is diluted in G1 and contributes to controlling cell size in the mouse liver” *Frontiers in Cell and Developmental Biology* https://doi.org/10.3389/fcell.2022.965595 (2022).

MC Lanz*, E Zatulovskiy*, MP Swaffer, L Zhang, S Zhang, DS You, G Marinov, P McAlpine, JE Elias & JM Skotheim “Increasing cell size remodels the proteome and promotes senescence” *Molecular Cell* https://doi.org/10.1016/j.molcel.2022.07.017 (2022).

KM Schmoller*, MC Lanz*, J Kim, M Koivomagi, Y Qu, C Tang, IV Kukhtevich, R Schneider, F Rudolf, DF Moreno, M Aldea, R Lucena, D Kellogg, JM Skotheim, “Whi5 is diluted and protein synthesis does not dramatically increase in pre-Start G1”, *Molecular Biology of the Cell* 33:lt1, 1–9 (2022).

S Pu, S Schor, V Nicolaescu, M Koivomagi, P Cassonnet, M Robinson, G Neveu, LI Prugar, DE Dorosky, J Brannan, A Yueh, JM Dye, C Demeret, JM Skotheim, Y Jacob, G Randall & S Einav, “BIKE regulates dengue virus infection via CLINT1 phosphorylation and is a host target for broad-spectrum antivirals” *J. Biol. Chem.* 298(6) 101956 (2022).

A Doan*, J Arand*, D Gong, AP Drainas, S Zhang, DM Walter, DM Feldser, H Vogel, LE Dow, JM Skotheim & J Sage, “RB depletion is required for the continuous growth of tumors initiated by loss of RB” *PLoS Genetics* 17(12): e1009941. https://doi.org/10.1371/journal.pgen.1009941 (2021).

MP Swaffer, D Chandler-Brown, M Langhinrichs, G Marinov, W Greenleaf, A Kundaje, KM Schmoller & JM Skotheim, “Size-independent mRNA synthesis and chromatin-based partitioning mechanisms generate and maintain constant amounts of protein per cell”, *Molecular Cell* 81, 1–15 doi.org/10.1016/j.molcel.2021.10.007 (2021).

M Kõivomägi, MP Swaffer, JJ Turner & Jan M. Skotheim, “Localized phosphorylation of RNA Polymerase II by G1 cyclin-Cdk promotes cell cycle entry”, *Science* 374 (6565), 347-351 doi:10.1126/science.aba5186 (2021).

D Jukam, RR Kapoor, AF Straight*, JM Skotheim*, “The DNA-to-cytoplasm ratio broadly activates zygotic gene expression in Xenopus” *Current Biology* 31: 1–13 doi.org/10.1016/j.cub.2021.07.035 (2021).

Zatulovskiy, E., Zhang, S., Berensen, D., Topacio, B.R., Skotheim, J.M. “Cell growth dilutes the cell cycle inhibitor Rb to trigger cell division” *Science,* 369 (6502), 466-471 (2020).

S Xie & JM Skotheim, “A G1 sizer mechanism coordinates growth and division in the mouse epidermis” *Current Biology.* doi:10.1016/j.cub.2019.12.062 (2020).

S Khondker, S Kajjo, D Chandler-Brown, JM Skotheim, A Rudner & Amy Ikui, “PP2A^{Cdc55} dephosphorylates Pds1 to inhibit spindle elongation. *Journal of Cell Science* 133 (14), (2020).

Z Shipony, GK Marinov, MP Swaffer, NA Sinott-Armstrong, JM Skotheim, A Kundaje, WJ Greenleaf, “Long-range single-molecule mapping of chromatin accessibility in eukaryotes” *Nature Methods* doi: 10.1038/s41592-019-0730-2 Feb 10 (2020).

L Zhang, S Winkler, F Schlottmann, O Kohlbacher, JE Elias, JM Skotheim & JC Ewald, “Multiple layers of phospho-regulation coordinate metabolism and the cell cycle in budding yeast” *Front. Cell Dev. Biol.* 7:338. doi: 10.3389/fcell.2019.00338 (2019).

DF Berenson, E Zatulovskiy, S Xie & JM Skotheim, “Constitutive expression of a fluorescent protein reports the size of live human cells” *Molecular Biology of the Cell* 30:24 doi:10.1091/mbc.E19-03-0171 (2019).

A Shariati, A Dominguez, M Wernig, LS Qi & JM Skotheim, “Reversible Disruption of Specific Transcription Factor-DNA Interactions Using CRISPR/Cas9” *Molecular Cell* 74, 622–633 doi:10.1016/j.molcel.2019.04. (2019).

- *Selected for faculty of 1000*

BR Topacio, E Zatulovskiy, S Cristea, S Xie, CS Tambo, SM Rubin, J Sage, M Kõivomägi & JM Skotheim, “Cyclin D-Cdk4,6 drives cell cycle progression via the retinoblastoma protein’s C-terminal helix”, https://doi.org/10.1016/j.molcel.2019.03.020 *Molecular Cell* (2019).

JC Bell, D Jukam, NA Teran, VI Risca, OK Smith, WL Johnson, JM Skotheim, WJ Greenleaf & AF Straight, “Chromatin-associated RNA sequencing (ChAR-seq) maps genome-wide RNA-to-DNA contacts” *eLife* 7:e27024 (2018).

C Schwarz, A Johnson, M Koivomagi, E Zatulovskiy, C Kravitz, A Doncic & JM Skotheim, “A precise Cdk2 threshold determines passage through the restriction point” *Molecular Cell*, 69 (2), 253-264, e5 (2018).

- *Selected for faculty of 1000*

D Chandler-Brown*, K Schmoller*, Y Winetraub & JM Skotheim, “The adder phenomenon emerges from independent control of pre- and post-Start phases of the budding yeast cell cycle”, *Current Biology,* Volume 27, Issue 18, 2774-2783.e3 (2017).

U Eser*, D Chandler-Brown*, F Ay, AF Straight, Z Duan, WS Noble, JM Skotheim, “Form and function of topologically associated domains in yeast” *PNAS* E3061–E3070, doi: 10.1073/pnas.1612256114 (2017).

O Atay, A Doncic & JM Skotheim, “Switch-like transitions can modularize complex biological networks”, *Cell Systems* 3 (2), 121-132 doi:10.1016/j.cels.2016.06.010 (2016).

- *Featured on journal cover*
- *Cell Systems featured article of the month*
- *See preview by Mancuso et al* http://dx.doi.org/10.1016/j.cels.2016.08.003

B Treutlein, QY Lee, J Camp, M Mall, A Shariati, S Sim, N Neff, JM Skotheim, M Wernig, W Koh & S Quake, “Dissecting direct reprogramming from fibroblast to neuron using single-cell RNA-seq”, *Nature*, doi:10.1038/nature18323 (2016).

- *Selected for faculty of 1000*

E Medina-Tovar, JJ Turner, JM Skotheim & NE Buchler, “Punctuated evolution and transitional hybrid network in an ancestral cell cycle of fungi” *eLife,* DOI: 10.7554/eLife.09492.001 (2016).

- *Selected for faculty of 1000*

J Ewald, A Kuehne, N Zamboni & JM Skotheim, “The yeast cyclin-dependent kinase routes carbon fluxes to fuel cell cycle progression” *Molecular Cell* 62, 532-45 (2016).

- *Selected for faculty of 1000*

K Schmoller, JJ Turner, M Koivomagi & JM Skotheim, “Dilution of the cell cycle inhibitor Whi5 controls budding-yeast cell size” *Nature* doi:10.1038/nature14908 (2015).

- *Highlighted in the Stanford Report 9/28/15*

- *Selected for faculty of 1000*

A Doncic, O Atay, E Valk, A Grande, A Bush, G Vasen, A Colman-Lerner, M Loog & JM Skotheim, “Compartmentalization of a bistable switch enables memory to cross a feedback-driven transition” *Cell* 160, 1182-95 (2015).

- *Science Signaling*, Editors choice: *Sci. Signal.* 31 March 2015

A Amodeo, D Jukam, A Straight* & JM Skotheim*, “Histone titration against the genome sets the DNA-to-cytoplasm threshold for the Xenopus midblastula transition.” doi:10.1073/pnas.1413990112 *PNAS* (2015).

- *Selected for faculty of 1000*

EA Peroza, JC Ewald, G Parakkal, JM Skotheim, N Zamboni, “A genetically encoded Forster resonance energy transfer sensor for monitoring in vivo trehalose-6-phosphate dynamics”, doi:10.1016/j.ab.2014.12.019 *Analytical Biochemistry* (2015).

CA Anderson, U Eser, T Korndorf, ME Borsuk, JM Skotheim, AS Gladfelter, “Nuclear repulsion enables division autonomy in a single cytoplasm” *Current Biology* 23, 1999-2010 (2013).

F Caval-Holme, JL Payne & JM Skotheim, “Constraints on the adult-offspring size relationship in protists” *Evolution* 67, 3537-44 (2013).

A Doncic & JM Skotheim, “Feed-forward regulation ensures stability and rapid reversibility of a cellular state” *Mol. Cell* 50, 1-13 (2013).

A Doncic, U Eser, O Atay & JM Skotheim, “An algorithm to automate yeast segmentation and tracking” *PLoS ONE* 8 (3), e57970 (2013).

JL Payne, AB Jost, SC Wang & JM Skotheim, “A shift in the long-term mode of foraminiferan size evolution caused by the end-Permian mass extinction” *Evolution* 67, 816-27 (2013).

JL Payne, JR Groves, AB Jost, T Nguyen, S Myhre, TM Hills & JM Skotheim, “Late Paleozoic fusulinoidean gigantism driven by atmospheric hyperoxia” *Evolution* 66, 2929-39 (2012).

FR Cross, N Buchler & JM Skotheim, “Evolution of networks and sequences in eukaryotic cell cycle control” *Phil. Trans. Roy. Soc. B* **366**, 3532-3544 (2011).

A Doncic, M Falleur-Fettig & JM Skotheim, “Distinct interactions select and maintain a specific cell fate” *Mol. Cell* 43, 528–539 (2011).

- *Featured in Mol. Cell preview; Selected for faculty of 1000*

U Eser, M Falleur-Fettig, A Johnson & JM Skotheim, “Commitment to a cellular transition precedes genome-wide transcriptional change” *Mol. Cell* 43, 515–527 (2011).

- *Featured in Mol. Cell preview; Selected for faculty of 1000 top 7 articles of the month*

S DiTalia, H Wang, JM Skotheim, A Rosebrock, B Futcher & FR Cross, “Daughter-specific transcription factors regulate cell size control in budding yeast” to appear in *PLoS Biology* 7(10): e1000221 (2009).

- *See Nature Reviews Genetics research highlight.*

JM Skotheim, S DiTalia, ED Siggia & FR Cross, "Positive feedback of G1 cyclins ensures coherent cell cycle entry", *Nature* 454, 291-296 (2008).

- *Nature News and Views; Mol. Cell preview; Cell Leading Edge; Selected for faculty of 1000*

S DiTalia, JM Skotheim, JM Bean, ED Siggia & FR Cross, "The effects of molecular noise and size control on variability in the budding yeast cell cycle", *Nature* 448, 947-951 (2007).

- *Selected for faculty of 1000*

M Argentina, JM Skotheim & L Mahadevan, “Settling and swimming of flexible fluid-lubricated foils,” *Phys. Rev. Lett.* 99, 224503 (2007).

JM Skotheim & TW Secomb, "Red blood cells and other non-spherical capsules in shear flow: oscillatory motion and the tank-treading-to-tumbling transition", *Phys Rev. Lett.* 98, 078301 (2007).

JM Skotheim & L Mahadevan, “Soft elastohydrodynamic contacts”, *Phys. Fluids*, 17, 092101 (2005).

- *Awarded the François Frenkiel Award by the American Physical Society for significant contributions to the field of fluid mechanics by a young scientist.*

S Manley, JM Skotheim, L Mahadevan & DA Weitz, “Gravitational collapse of colloidal gels,” *Phys. Rev. Lett.*, 94, 218302 (2005)

JM Skotheim & L Mahadevan “Physical limits and design principles for plant and fungal movements,” *Science*, 308, 1308-1310 (2005).

- *Featured of the Cover; Selected for Faculty of 1000.*

Y Forterre, JM Skotheim, J Dumais & L Mahadevan, “How the Venus flytrap snaps,” *Nature*, 433, 421-425 (2005).

- *Selected for Faculty of 1000.*

JM Skotheim & L Mahadevan, “Soft lubrication,” *Phys. Rev. Lett*. 92, 245509 (2004).

JM Skotheim & L Mahadevan, “Dynamics of poroelastic filaments,” *Proc. R. Soc. London Ser. A* 460, 1995-2020 (2004).

JM Skotheim, U Thiele & B Scheid, “On the instability of a falling film due to localized heating,” *J. Fluid Mech.*, 475, 1-19, (2003).

JM Skotheim & JWM Bush, “Evaporatively driven convection in a draining soap film,” *Phys. Fluids*, S1, Sept. (2000).

- *Featured of the Cover.*

* co-corresponding authors or these authors contributed equally to this work

REVIEW ARTICLES (PEER REVIEWED UNLESS NOTED BY *

SM Rubin, J Sage & JM Skotheim, “New Ways to Inhibit the G1/S Transition for Cancer Therapy”, *Cancer Res* https://doi.org/10.1158/0008-5472.CAN-25-0916 (2026).

S Xie, M Swaffer & JM Skotheim, “Eukaryotic Cell Size Control and Its Relation to Biosynthesis and Senescence”, *Annu. Rev. Cell Dev. Biol.* 38:7.1-7.29 (2022).

SM Rubin, J Sage & JM Skotheim, “Integrating old and new paradigms for G1/S control”, *Molecular Cell* **80** (2) *183-192* doi: 10.1016/j.molcel.2020.08.020 (2020).

E Zatulovskiy & JM Skotheim, “On the Molecular Mechanisms Regulating Animal Cell Size Homeostasis” *Trends in Genetics* **36,** (5) 360-372 (2020).

D Jukam, A Shariati & JM Skotheim, “Zygotic genome activation in vertebrates”, *Developmental Cell* **42,** 316–332 (2017).

O Atay & JM Skotheim, “Spatial and Temporal Signal Processing and Decision Making by MAPK Pathways”, *DOI: 10.1083/jcb.201609124 Journal of Cell Biology* (2017).

KM Schmoller & JM Skotheim, “The biosynthetic basis of cell size control”, doi:10.1016/j.tcb.2015.10.006 *Trends in Cell Biology* (2015).

- *Named TICB Young and Trending based on this review*

E Zatulovskiy & JM Skotheim, “Mitosis is swell”, *JCB* **211,** 733-735 (2015).

A Amodeo & JM Skotheim, “Cell Size Control”, Cold Spring Harbor Perspectives in Biology a019083 (2015).

O Atay & JM Skotheim, “Modularity and predictability in cell signaling and decision-making” *Molecular Biology of the Cell* **25**, 3445-50 (2014).

A Johnson & JM Skotheim, “Start and the Restriction Point”, *Current Opinion in Cell Biology* **25**, 717-723 (2013).

C Bertoli, JM Skotheim & RA de Bruin, “Control of cell cycle transcription during G1 and S phases”, *Nature Reviews Molecular and Cell Biology,* **14**, 518-28 (2013).
Cited in *Molecular Biology of the Cell 6th edition* by Alberts et al.

*JM Skotheim, “Cell growth and cell cycle control”, *Molecular Biology of the Cell* 24 (6), 678 (2013).

*A Doncic & JM Skotheim, “Cell cycle control: single-cell analysis”, *Encyclopedia for Systems Biology,* Dubitzky, W.; Wolkenhauer, O.; Yokota, H.; Cho, K.-H. (Eds.) (2013).

J Turner, J Ewald & JM Skotheim, “Cell size control in yeast” *Current Biology*, **22**, R350-9 (2012).
Cited in *Molecular Biology of the Cell 6th edition* by Alberts et al.

*JM Skotheim, “Cell signaling. To divide or not to divide.”, *Science* **324**, 476-7 (2009).

RESEARCH SUPPORT

NIH R35 GM134858 MIRA award Skotheim (PI) 1/1/20-2/28/30
Determining how cell growth triggers cell division
This award supports our studies of the molecular mechanisms for how human cells grown in tissue culture regulate their size.

NIH R01 AR078305 Skotheim (PI) 7/15/21-5/31/26
Determining how cell growth triggers cell division in epidermal stem cells
The major goal of this project is to understand the molecular basis of cell size control in mouse epidermal stem cells.

Chan Zuckerberg Biohub Investigator Award Skotheim (PI) 3/22-3/27
On cellular growth and form
The major goal of this project is to understand the connection between cellular growth and form. This award is unrestricted funds to support the investigator to participate in the Biohub community.

NIH P01 CA254867 Skotheim (PI) 3/22-2/27
Determining and targeting mechanisms controlling cancer cell division

The major goal of this multi-PI project grant is to determine the molecular mechanisms the cyclin D-Cdk4-Rb-E2F pathway uses to control cell proliferation.

PENDING RESEARCH SUPPORT

Stanford University Innovative Medicines Accelerator
2022 Molecular Therapeutics RFP – Full Proposal
Developing a small molecule inhibitor of cyclin D to target breast cancer

COMPLETED RESEARCH SUPPORT

NIH R01 DK128578 Skotheim (PI) 4/1/2021-3/31/2025
Determining the mechanisms linking cell growth to the cell cycle in the liver
The major goal of this project is to understand the molecular mechanisms through which primary hepatocytes control their size, and the physiological consequences of this cell size regulation.

NSF MCB 2040908 Skotheim (PI) 1/1/21-12/31/23
Determining the molecular mechanisms underlying the size-scaling of biosynthesis
The major goal of this award is to determine how cell size is a global determinant of transcription in yeast.

Cancer League Research Grant Skotheim (co-PI w/Prof. Julien Sage) 7/21-6/22
Developing a new cancer drug targeting the cyclin D oncogene
The major goal of this project is to perform an automated small molecule screen at the Stanford High Throughput Biosciences facility

Stanford Cancer Institute Skotheim (co-PI w/Prof. Julien Sage) 3/21 – 2/22
Determining and targeting mechanisms controlling cancer cell division
Major Goals: The major goals of this project are to identify a small molecule that inhibits cyclin D's ability to drive cell division for further development to target a broad spectrum of cancer therapies.

HHMI, Simons and Gates Faculty Scholar Award Skotheim (PI) 11/1/16-10/31/21
Award to support continued development of creative early career faculty.

NIH RO1 HD085135 Skotheim (PI) 4/1/16 – 1/31/20
Control and coordination of the maternal-to-zygotic transition
The major goal of this project is to determine the molecule mechanisms through which histone-DNA titration controls transcription and cell cycle duration through the maternal-to-zygotic transition. Co-PI Aaron Straight.

NIH RO1 GM115479 Skotheim (PI) 8/1/16 – 4/30/20
Determining the molecular mechanism of cell size control
The major goal of this project is to determine the molecular mechanism through which budding yeast measure and control their size.

NIH RO1 GM092925-9 Skotheim (PI) 8/1/10 – 6/30/19
Mechanisms of restriction point response to dynamic growth factor signals
The major goal of this project is to examine how the G1/S regulatory network processes dynamic growth factor signals to determine whether or not to enter the cell division cycle.

NIH P50 GM107615A (subaward) Skotheim (PI) 9/30/13 – 6/30/18
Systems Biology of Collective Cell Decisions
The major goals of this project is to use microfluidics to gain a systems level understanding of cellular decision making.

Bio-X Interdisciplinary Initiative Program Skotheim (PI) 10/1/16 – 9/30/18
The major goal of this project is to determine feedback mechanisms linking cell cycle control and stem cell pluripotency using an engineered CRISPR/dCas9 system (co-PIs Stanley Qi & Marius Wernig)

Burroughs Wellcome Fund (CASI) Skotheim (PI) 1/1/08 – 7/1/16
Career Award at the Scientific Interface
The major goal of this project is to foster the early career development of researchers with background in the physical/computational sciences whose work addresses biological questions and who are dedicated to pursuing a career in academic research.

NSF CAREER – 1054025 Skotheim (PI) 1/15/11 – 1/14/16
Cell Size Control
The major goals of this project are to define the complete set of cell size mutants using a novel automated single-cell assay for size control and build a mechanistic model of the size control circuit.

David Huntington Dean's Faculty Scholar Award 9/1/12-9/1/15

NIH R21 - HD073772 Skotheim (PI) 4/1/13 – 3/31/15
Identifying the molecular basis of the maternal to zygotic transition.
This grant aims to identify the molecular inhibitor of zygotic gene expression in *Xenopus laevis* that is titrated against DNA. Co-PI Aaron Straight.

Terman fellowship—Stanford University 9/1/08-9/1/14

NIH R21 – DK095237 Skotheim (PI) 8/1/12 – 7/31/14
Determining the mechanistic links between the metabolic and cell division cycles
The major goal of this project is to understand how metabolic shifts during slow growth are inter-related with cell cycle control.

Center for Biological Imaging at Stanford Skotheim (PI) 8/1/12 – 7/30/13
A single molecule approach to cell size control
Acquisition of an EMCCD camera to build a TIRF microscope.

NIH RO1 (subaward) GM081506 Skotheim (Co-PI) 8/1/10–12/31/12 Asynchronous mitosis in multinucleate cells
The major goal of this proposal is to understand sources of variability and asynchrony in timing in the division cycle.

Bio-X Interdisciplinary Initiative Program Skotheim (PI) 10/1/10 – 9/30/12
Environmental control of cell and genome size: A case study of Foraminifera
The major goal of this project is to investigate environmental control on cell and genome size in single-celled eukaryotes, which represent the earliest macroscopic life forms on Earth and the progenitors of all animal and plant diversity. (co-PI Jonathan Payne)

Hellman Faculty Scholar Award Skotheim (PI) 9/1/09 – 8/31/10
Dynamical systems theory and cell fate selection
The major goal of this project is to focus on the application of dynamical systems theory to the study of the yeast cell cycle.

NIH postdoctoral Fellowship F32 GM078769-02 Skotheim (PI) 7/15/06 – 7/14/08
Stochastic Start in the Budding Yeast Cell Cycle
Using mathematical modeling in conjunction with time-lapse fluorescent microscopy, I investigated the G1/S transition in budding yeast.

SKOTHEIM LABORATORY TRAINEES

Postdoctoral scholars		**Current position**
Dr. Andreas Doncic	2009-2015	Assistant Prof. UT Southwestern (deceased)
Dr. Jennifer Ewald	2010-2016	Assistant Prof. University of Tübingen
Dr. Kurt Schmoller	2012-2017	Assistant Prof. Helmholtz Inst., Munich Germany
Dr. David Jukam	2013-2021	Biotech
Dr. Mardo Koivomagi	2013-2022	Assistant Prof. NIH
Dr. Ali Shariati	2014-2019	Assistant Prof. UC Santa Cruz
Dr. Evgeny Zatulovskiy	2014-2023	Group leader, University of Cambridge, UK
Dr. Shicong Xie	2016-present	Postdoctoral scholar in Skotheim lab
Dr. Matthew Swaffer	2017-2023	Group leader, University of Edinburgh, UK
Dr. Shuyuan Zhang	2018-present	Assistant Prof. Ohio State University
Dr. Mike Lanz	2019-present	Postdoctoral scholar in Skotheim lab
Dr. Ning Lu	2023-present	Postdoctoral scholar in Skotheim lab
Dr. Xin Gao	2023-present	Postdoctoral scholar in Skotheim lab
Dr. Julie Nielsen	2024-present	Postdoctoral scholar in Skotheim lab
Dr. Julius Palme	2024-present	Postdoctoral scholar in Skotheim lab

Graduate students			**Position after lab**
Umut Eser	Applied Physics	2008-2012	Postdoc at Harvard Medical School / now Director of Data Science at Cellarity
Amy Johnson	Biology	2009-2014	Scientist at Regeneron, Inc.
Amanda Amodeo	Biology	2009-2014	Lewis-Sigler fellow (PI) at Princeton
Oguzhan Atay	Biology	2012-2016	Billiontoone Biotech company founder
Jonathan Turner	Biology	2011-2018	Scientist at evEvolve
Clayton Schwarz	Biology	2012-2018	Postdoc at Rockefeller University
Devon Chandler-Brown	Biology	2013-2018	Scientist Billiontoone
Daniel Berenson	MD PhD	2015-2019	Completing MD training
Ben Reyes Topacio	Cancer Biology	2015-2020	NIH IRACDA fellow at UCSC
Jacob Kim	CSB	2019-2025	Biotech
Cecelia Brown	Biology	2019-2025	Biotech
Chris You	Biology	2020-2026	Patent Law
Jordan Xiao	Biophysics	2020-2025	Biotech
Crystal Yee Tsui	Bioengineering	2021-2023	Masters degree (health reasons)
Lucas Valenzuela	Electrical Eng.	2022-2024	Postdoc at Stanford
Alice Lam	Biophysics	2025-present	
Shifu Wu	Material Sci.	2025-present	
Drish Chakraborty	Biology	2026-present	

Undergraduate students (*indicates supervised honors thesis)			**Position after lab**
*Phil Shiu	Biology	2008-2010	Graduate Student, Harvard MCB
*Elena Kassianidou	Biomechanics	2009-2011	Graduate Student, Berkeley Bioengineering
*Taryn Sumabat	Biology	2009-2011	Graduate Student, Berkeley Biology
*Thienan Nguyen	Biology	2010-2011	Undergraduate Stanford
Elliot Lui	Bioengineering	2010-2012	Masters student Stanford
*Franklin Caval-Holme	Biology	2010-2013	Graduate Student, Berkeley Neuroscience
Hnin Ookhin	Bioengineering	2011-2012	Undergraduate Stanford
XiaoSong Mu	Biology	2012	Undergraduate Stanford

Ryoko Hamaguchi	Biology	2012	Undergraduate Stanford
Devon King	Biology	2012	Grad. Student, Stanford
Preethi Pallegar	Chemistry	2013-2015	Undergraduate Stanford
Anthony Ma	Comp. Science	2013-2015	Undergraduate Stanford
Claire Robinson	Biology	2015-2016	Undergraduate Stanford
Carolyn Kravitz	Biology	2015-2017	Graduate student, Yale MCB
Sylvia Choo	Biology	2017	Undergraduate Stanford
*Ryan Hseih	Biology	2019	Undergraduate Stanford
Ingrid Vallee	Biology	2019	Grad. Student, Scripps Research Inst.
David Godinez	Biochemistry	2020	Grad. Student, UCSF
*Rishabh Kapoor	Biology	2021	Grad. Student, Harvard University
Christian Wright	Biology	2021	Undergraduate Stanford
Ilayda Ilerten	Biology	2022	Grad. Student, Stanford
Luisa Gotz	Biology	2022	Grad. Student, Munich/Edinburgh
Julia Vu	Biology	2022	Undergraduate Stanford
Aliya Fisher	Biology	2023	Grad. Student, Rockefeller University
Masaru Shimasawa	Medicine	2023	Grad. Student, Stanford
Christian Gutierrez	Biology	2024	Rochester University Medical School
Josh Konschnik	Mathematics	2024	Life Sciences Researcher
Blair Schooling	Human Bio.	2024	Undergraduate Stanford
Asia Chen	Biology	2025	Undergraduate Stanford

Underrepresented minority high school students		**Summer in lab**	**Position after lab**
Jackson Campbell	Redwood City High School	2010-2011	Occidental College Student
Robeto Pimienta	Redwood City High School	2011	Stanford University Student
Victoria Tran	Lowell High School	2014	Unknown
Karina Castillo	Newark Memorial High School	2014	UC Berkeley student
Alexander Velasquez	San Mateo High School	2016-7	High school student
Corinna Martinez Luna	Gunn High School	2018, 2019	High school student
Guadalupe Sahagun	Eastside College Preparatory School	2018, 2019	High school student

STUDENT AND POSTDOCS AWARDS AND ACHIEVEMENTS (year awarded)

Chris You – Charles Yanofsky Prize for best thesis in Molecular Biology, Stanford Dept. of Biology (2026)
Shicong Xie – Santa Cruz Developmental Biology Young Investigator Award (2024)
Mike Lanz – Biohub Collaborative Postdoctoral Fellowship (2022)
Shuyuan Zhang – K99/R00 NIH Pathway to independence award (2022)
Rishabh Kapoor – Firestone Medal for Excellence in Undergraduate Research, Stanford (2021)
Rishabh Kapoor – Wallace Stirling Scholastic Award for top 25 graduating seniors, Stanford (2021)
Mimi Xie – K99/R00 NIH Pathway to independence award (2020)
Devon Chandler-Brown – Charles Yanofsky Prize for best thesis in Molecular Biology, Stanford Dept. of Biology (2018)
Ali Shariati – K99/R00 NIH Pathway to independence award (2017)
Devon Chandler-Brown – Genentech predoctoral fellowship (2016)
Jennifer Ewald – EMBL conference in Fungal Systems Biology best short talk award (2014)
Devon Chandler-Brown – Stanford excellence in teaching award (2014)
Amanda Amodeo – Kallman Award for excellence in teaching, coursework and research (2014)
Mardo Koivomagi - Human Frontier Science Program postdoctoral fellowship (2014)
David Jukam – NIH Postdoctoral Fellowship F32 (2013)
Kurt Schmoller – Human Frontier Science Program postdoctoral fellowship (2013)
Franklin Caval-Holme – Stanford Dean's Award for Academic Excellence (2013)
Amy Johnson – ARCS Graduate Fellowship (2012)

Oguzhan Atay – Stanford Graduate Fellowship (2012)
Amanda Amodeo – ARCS Graduate Fellowship (2010)
Jennifer Ewald – Swiss National Science Foundation Postdoctoral Fellowship (2010)
Amy Johnson – Stanford Graduate Fellowship (2009)

PROFESSIONAL SOCIETIES

Genetics Society of America
American Society for Cell Biology
American Association for the Advancement of Science

PROFESSIONAL SERVICE

2025 Review of the NCI Laboratory of Cancer Biology and Genetics, NIH
2024 *external:* reviewer for the Swiss National Science Foundation
2023 *external:* reviewer for European Research Council Starting Grants
2022-present reviewer for the Fulbright awards
2022-present member of the Scientific Advisory Board of the Institute of Biotechnology, University of Helsinki.
2022-present member of the editorial board Frontiers in Cell and Developmental Biology, Cell Growth and division section
2021 *external:* Medical Research Council, UK grant review
2018-present faculty member of F1000/Faculty Opinions
2017-2021 standing member NIH CSRS study section
2017-present Member of the Advisory Board for Molecular Systems Biology
2015-present Reviewer for the Simons Foundation Program for Investigators in Mathematical Modeling of Living Systems
2018 *Ad hoc:* Agence Nationale Recherche, France
2016 *Ad hoc* NSF Genetic Mechanisms section
2015 *external*: United States-Israel Binational Science Foundation
2014 & 2015 *external*: Biotechnology and Biological Sciences Research Council, UK
2014 *external*: Human Frontiers Science Program (HFSP) Career Development Award
2013 *external*: Wellcome Trust Postdoctoral Fellowship, UK
2013 *external:* NSF CAREER award
2013 *external*: Medical Research Council, UK, Senior Non-Clinical Fellowships Program
2013 *external*: Agance Recherche France, Young Researchers Program
2012 *external*: European Research Council Starting Grant
2012 *external*: NIH Director's Early Independence Award
2012 *Ad hoc*: NIH study section Cell Signaling and Regulatory Systems
2011 *external*: Human Frontiers Science Program (HFSP) postdoctoral fellowships
2010 *external*: Swiss National Science Foundation
2010 *external*: Fonds québécois de la recherche, Quebec, Canada
2010 *external*: NSF Processes, Structures and Integrity section

Guest editor for PLoS Genetics

Ad hoc reviewer for: Nature, Nature Methods, Nature Communications, Nature Protocols, Science, Cell, Molecular Cell, Cell Reports, Cell Systems, Current Biology, Genes and Development, Journal of Cell Biology, PNAS, eLife, Molecular Systems Biology, PLoS Biology, PLoS Genetics, PloS Computational Biology, PLoS One, Genome Biology, Genome Research, Genetics, G3: Genes Genomes Genetics, BMC Systems Biology, Molecular and Cellular Biology, Molecular Biology of the Cell, Cell Cycle, Oncogene, PRL, PRE, Journal of Statistical Physics, Planta, Int. J. Multiphase Flow, Briefings in Functional Genomics, Nucleic Acids Research, Microbial Cell, Plant Cell, and other journals.

CONFERENCES ORGANIZED

2025 4th Lake Tahoe Cell Size Control Meeting, Truckee, CA
Co-organizer of 12th Salk Institute Cell Cycle Meeting, La Jolla, CA

2024 Co-organizer of the International Rb Meeting, Santa Cruz, CA

2023 Co-organizer of 11th Salk Institute Cell Cycle Meeting, La Jolla, CA
NSF 3rd Lake Tahoe Cell Size Control Meeting, Truckee, CA

2021 Co-organizer of 11th Salk Institute Cell Cycle Meeting, La Jolla, CA
Scientific Advisory Committee for the EMBO Cell Size and Growth Meeting (online)

2020 Scientific Advisory Committee for the EMBO Cell Size and Growth Meeting,
Rehovot, Israel (cancelled)
2nd Lake Tahoe Cell Size Control Meeting, Truckee, CA

2019 Scientific Advisory Committee for the European International Cell Cycle meeting,
Trieste, Italy

2018 Co-organizer of 10th Salk Institute Cell Cycle Meeting, La Jolla, CA
Lake Tahoe Cell Size Control Meeting, Truckee, CA

2015 Co-organizer of 9th Salk Institute Cell Cycle Meeting, La Jolla, CA
Scientific Advisory Committee Member, 16th International Conference on Systems Biology (ICSB 2015), Singapore

INVITED SEMINARS/CONFERENCE TALKS

2026 University of Tokyo, Institute of Universal Biology, Japan
Key note speaker at the Cell Size and Growth Symposium, Grindlewald, Switzerland
Aspen Center for Physics Winter Meeting, Physics of the Cytoplasm, Aspen CO
National Institute for Theory and Mathematics in Biology, Modularity Conference, Chicago IL
Stanford BioWhy Seminar Series, Stanford CA
Department of Systems Biology Seminar, Harvard Medical School, Boston MA
MIT Department of Biology Seminar, Cambridge MA
Soft Math Symposium, Invited Speaker, Harvard, Cambridge MA

2025 University of Tokyo, Institute of Industrial Science, Japan
SciCube Symposium, Stanford CA
Lake Tahoe Cell Size and Growth Meeting, Tahoe City CA
EMBL Life Science Alliance Meeting, Heilbronn Germany
Cell Biology Seminar, University of Tubingen, Germany
Epigenetics Seminar, University of Pennsylvania, PA
Max Planck Institute, Berlin, Germany
Bio Why Seminar, Stanford CA
Chan Zuckerberg Biohub, Investigator Seminar Series, San Francisco CA
Fondation Des Treilles Size Control and Density Regulation in Living Cells Meeting, Les Treilles France
Instituto Cajal Seminar, Madrid, Spain
Institut de Biologia Molecular de Barcelona Seminar, Barcelona, Spain
Vall d'Hebron Institute of Oncology Seminar, Barcelona, Spain
Organized Cell Size subgroup session at the ASCB, Philadelphia, PA

2024 Cell Size and Growth Symposium, Preda, Switzerland
Institute of Biochemistry, ETH Zurich, Switzerland
Department of Molecular Life Sciences, Univ. of Zurich, Switzerland
Helmholtz institute, Munich, Germany
Chan-Zuckerberg SF Biohub, San Francisco CA
Dept. of Biology, Rice University, Houston TX
University of Utah, Salt Lake City UT
Key note speaker, Abcam Cell Cycle Conference, London UK
Roscoff Cell Cycle Meeting, Roscoff France
Institute Curie, Cell biology seminar, Paris, France
Stanford University Regenerative Medicines Seminar, Stanford, CA
Francis Crick Institute Genes to Cells seminar, London, UK
Organized Cell Size subgroup session at the ASCB, San Diego, CA
Hopkins Marine Station, Biophysics Day Symposium, Monterrey, CA

2023 The Rockefeller University, Center for Studies in Physics and Biology Seminar, NY
NYU Medical School, Genes, Systems and Computation Seminar Series, NY
Co-organizer, Salk Institute Cell Cycle Meeting, La Jolla, CA
Organized Cell Size session at the ASCB, Boston, MA

2022 Speaker at the Company of Biologists meeting on Cell Size Control, Sussex, United Kingdom
Weill Institute, Cornell University, Ithaca, NY
Organized Cell Size session at the ASCB, Washington DC

2021 Co-organizer, Salk Institute Cell Cycle Meeting, La Jolla, CA
Network Biology Meeting, invited speaker, Cold Spring Harbor Labs, NY
University College London, MRC Cell Biology Seminar speaker, London, UK
Middle East Technical University (ODTU), Biology Seminar speaker, Ankara, Turkey
EPFL Lausanne, Physics of Living Systems Seminar, Lausanne, Switzerland
Princeton University, Quantitative Cell Biology Seminar, Princeton, NJ
Organized session at the ASCB, online

2020 Organizer, Lake Tahoe Cell Size Control Meeting, Truckee, CA
Aspen Center for Physics Winter Conference on Cellular Growth, Aspen, CO
University of Cambridge, Developmental Biology Seminar, Cambridge UK
Stanford University Cancer Institute, Stanford CA

2019 Invited speaker, McGill University Quantitative Biology Workshop, Barbados
Invited speaker, Cell Size Meeting at MIT, Cambridge, MA
Invited speaker, Yeast Transcription workshop, Harvard Medical School, Boston, MA
University of Washington, Genome Sciences Seminar, Seattle, WA
Invited speaker, European Cell Cycle Meeting, Trieste, Italy
University of Texas Soutwestern, Dept. of Cell Biology Seminar, Dallas, TX
Invited speaker, Gordon Conference Cell Growth and Proliferation, Mt Snow, VT
International Conference on Yeast Genetics and Molecular Biology, Session organizer, chair, and speaker, Göteborg, Sweden
HHMI annual meeting, Washington, DC
Invited speaker, Retinoblastoma protein meeting, Charleston, SC

2018 Co-organizer, Salk Institute Cell Cycle Meeting, La Jolla, CA
Invited session chair, ASCB, San Diego, CA
Invited session chair, FASEB Yeast Chromosomes and Cell Cycle meeting, Steamboat Springs, CO

University of Arizona, Molecular and Cellular Biollogy, Biochemistry and Plant Sciences Seminar Series, Tucson, AZ
The Physical Basis of Cellular Memory and Adaptation Workshop, McGill Bellairs Research Institute, Barbados
HHMI meeting talk, Janelia Research Campus, VA
Carnegie Mellon-U Pittsburgh joint Computational Biology Seminar Series, Pittsburgh, PA
Distinguished Seminar Series, Genetics, Cell and Developmental Biology, University of Pennsylvania, Philadelphia, PA
Organizer, Lake Tahoe Cell Size Control Meeting, Truckee, CA

2017 Invited participant for the 27th Solvay Conference on Physics: The Physics of Living Matter: Space Time and Information in Biology, Brussels, Belgium
Hopkins Marine Station seminar, Stanford, Monterrey, CA
Winter q-Bio meeting, Kauai, HI
Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland
Invited session chair, Cold Spring Harbor Laboratories, Cellular Dynamics Meeting, NY
Regenerative Medicine Seminar series, Stanford, CA
University of Michigan, Biophysics seminar, Ann Arbor, MI
Maternal to Zygotic Transition, EMBO meeting, Dresden, Germany
Invited speaker, Gordon Conference on Growth and Proliferation, NY
BIRF workshop on Principles of Gene Circuit Design, Oaxaca, Mexico

2016 Canadian Institute for Advanced Research, Genetic Networks Meeting, Santa Cruz, CA
Invited speaker, ASCB annual meeting, San Francisco
Invited session chair & speaker, EMBO Cell Size Control Meeting, Berlin, Germany
Simons Foundation Conference on Theory and Biology, New York City, NY
Invited session chair, Cold Spring Harbor Cell Cycle Meeting, NY
Institute of Molecular Systems Biology, ETH Zurich, Switzerland
Biochemistry, Molecular Cell and Developmental biology (BMCDB), UC Davis
Institute of Molecular Life Sciences, University of Zurich, Switzerland
Integrative Biology, MRC-Imperial College, London, UK
University of Chicago, Molecular Genetics and Cell Biology Seminar, Chicago, IL
University of Chicago, Institute of Genomics and Systems Biology Seminar, Chicago, IL
Northwestern University, Biochemistry Seminar, Chicago, IL

2015 Co-organizer of 9th Salk Institute Cell Cycle Meeting, La Jolla, CA
Invited session chair, Cold Spring Harbor Cell Biology of Yeasts Meeting, NY
Invited session chair, Gordon Conference Cell Growth and Proliferation, Mount Snow, VT
The Rockefeller University, Center for Studies in Physics and Biology, NY
Stanford University, Regenerative Medicine Seminar Series, CA
Columbia University Medical School, Pathology and Cell Biology, NY
University of Arizona, Quantitative Biology Colloquium, Tucson, AZ
Invited speaker, Physics of Living Matter Symposium, Cambridge University, UK
Northwestern University, Molecular Biosciences, Evanston, IL
Chicago Symposium on Cell Signaling, Evanston, IL
Harvard Medical School, Systems Biology, Boston, MA
Crick Institute, Lincoln Fields Laboratory, London, UK
Centre for Genomic Regulation, Barcelona, Spain
Dept. of Biochemistry, Perdue University, IN

2014 USCD, Systems Biology seminar, La Jolla, CA
Burroughs Wellcome Fund, Scientific Interfaces Symposium, La Jolla, CA
Texas A&M, Dept. of Biochemistry and Biophysics

Cold Spring Harbor Cell Cycle Meeting, CSHL, NY
Invited to present and chair session at FASEB Yeast Chromosome Structure, Replication and Segregation, Steamboat Springs, CO
Invited to present at the EMBO Meeting on Yeast Transcription, Girona, Spain
UCSF, q-Bio seminar, San Francisco, CA
Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany
Selected talk Winter q-Bio meeting, Waikoloa, HI
Dartmouth College, Dept. of Biology, Hanover, NH
Institute for Genomic Sciences, UNAM, Cuernavaca, Mexico
University of Massachusetts, Worchester, Systems Biology

2013 Invited to give a talk at the 3rd International Rb Meeting, Santa Cruz, CA
American Society for Cell Biology meeting, invited speaker, New Orleans, LA
Invited to chair a session at the Salk Institute Cell Cycle Meeting, La Jolla, CA
Invited speaker for the Gordon Conference on Cell Growth and Proliferation, Biddeford, ME
University of Tartu, Estonia
Koç University, Dept. of Biology, Istanbul, Turkey.
EPFL, Physics Dept, Lausanne, Switzerland
ETH, Biochemistry, Zurich, Switzerland
Selected talk Winter q-Bio meeting, Honolulu, HI
Weizmann Institute, Systems Biology, Israel

2012 Co-chair of a session on “Cell growth and cell cycle control”
& Discussion leader for Quantitative Signaling / Systems Biology
at the American Society for Cell Biology meeting, San Francisco, CA
Universite de Montreal, Biochemistry
Cold Spring Harbor Cell Cycle Meeting, CSHL, NY
Harvard University, Systems Biology (H&S)
Harvard Medical School, Systems Biology
Harvard University, Applied Mathematics
MIT, Biology
Princeton, Lewis Sigler Center
Washington University, Genetics
Duke University, Genetics and Genomics, NC
Institute for Genomic Sciences, UNAM, Cuernavaca, Mexico
UCSC, Molecular, Cell and Developmental Biology

2011 Norwegian Cancer Symposium, Oslo, Norway
Cold Spring Harbor Yeast Cell Biology Meeting, CSHL, NY
Salk Institute Cell Cycle Meeting, La Jolla, CA
Gordon Conference on Growth and Proliferation, Biddeford, ME
Weizmann Institute, Department of Physics, Israel
University College London, MRC Cell Biology, United Kingdom
Oxford University, Biochemistry, United Kingdom
McGill University, Biology, Canada
2010 FASEB Yeast Chromosome Structure, Replication and Segregation, Carefree AZ
Yeast Genetics and Molecular Biology Meeting, Vancouver, Canada
Cold Spring Harbor Cell Cycle Meeting, CSHL, NY
q-Bio Conference, Santa Fe, NM
Institute for Genomic Sciences, UNAM, Cuernavaca, Mexico
2009 Cold Spring Harbor Laboratories Yeast Cell Biology Meeting, CSHL, NY
Salk Institute Cell Cycle Meeting, La Jolla, CA
2008 Cold Spring Harbor Cell Cycle Meeting, CSHL, NY
UCSD, Department of Physics, CA

Duke University, Department of Pharmacology and Cancer Biology, NC
Harvard, Molecular and Cellular Biology, MA
The Scripps Research Institute, CA
Harvard, FAS Systems Biology, MA
MIT, Department of Physics, MA
Stanford University, Department of Biology, CA
Caltech, Department of Biology, CA
UCSF, Quantitative Biology, CA
Columbia University, Department of Biology, NY
Duke University, Physics Department, NC

2007 Salk Institute Cell Cycle Meeting, La Jolla, CA
2006 Engineering Principles in Biological Systems Meeting, CSHL, NY
2004 American Physical Society: Division of Fluid Dynamics Meeting, Seattle, WA
New England Workshop on Complex Fluids, Cambridge, MA
Norwegian Physical Society Conference, Wadahl, Norway
Physics Winterschool: Physics of the cell, Les Houches, France
Weizmann Institute, Physics Department, Israel
Norwegian University of Science and Technology, Physics Department, Norway
University of Oslo, Physics Department, Norway
MIT, Applied Mathematics, MA
NYU, Courant Institute, NY
Harvard, Soft Matter, MA

TEACHING ACTIVITIES AT STANFORD UNIVERSITY

Primary course instructor

OSPMADRD 55M	The Science of MythBusters (revisited)	2026
OSPMADRD 199F	Independent study in scientific inquiry: Science in the context of Madrid	2026
BIO188/288 CSB 288	Systems Biology: Principles of Cell Signaling	2022-2025
BIOS200	Foundations in Exp. Biology	2014, 2017-2025
THINK 01	The science of MythBusters	2012-2016
BIO171/271 CSB 271	Cell cycle control	2009-2012, 2016-2022
BIO199	Advanced research laboratory	2009-present
BIO301	Frontiers in Biology	2008-2011

Popular press coverage of teaching

Stanford daily (http://www.stanforddaily.com/2014/11/17/classy-classes-think1-teaches-students-how-to-fail-for-science/)
Stanford news (http://news.stanford.edu/news/2012/november/science-myth-busters-111912.html)

Guest lecturer

BIOPHYS 250	Guest Lecturer	2009-present
BIOE 393	Guest Lecturer	2012-2014
BIO 301	Guest Lecturer	2019-present
CBIO 280	Guest Lecturer	2022-present

ADDITIONAL TEACHING/SUPPORT AT STANFORD UNIVERSITY

2008-2015 Career panel for grad and postdoctoral students
2010 Panel on outreach and NSF CAREER grants for CTL
2010-present Participant in the RISE summer program for under-represented minority high school students

2018-present	mentor for the Solidarity, Leadership, Inclusion, Diversity Mentorship Program to provide mentorship for graduate students in the biosciences
2024	Career panel for Stanford postdocs seeking faculty positions

DEPARTMENT AND UNIVERSITY COMMITTEES

2008-2014	Biology Department Graduate Student Admission Committees
2009-2010	Biology Department Policy Committee
2010-2014	Biology Department Undergraduate Studies Committee
2010-2015	Organizer of Biology Dept. Wednesday Faculty Talks
2011-present	Provost's Committee on Postdoctoral Affairs
2011-2023	Organizer of Biology Dept. Cell and Molecular Biology Friday Afternoon Student and Postdoc Seminar Series
2013-2020	Organizer of Frontiers in Quantitative Biology Interdisciplinary Seminar Series
2014-2016	Biology Department Undergraduate Core Redesign Committee
2017-2020	Biology Department First Year Graduate Student Advising Committee
2017-2020	Biology Department Graduate Studies Committee
2018-2019	University Long Range Planning Natural World Design Team
2018-2019	Chair Biology Department Faculty Search Committee
2020-present	Executive Committee of the Cell and Molecular Biology Training Program
2021-present	University shared facilities, equipment and platforms committee (C-ShARP)
2022-present	Limited Submissions Faculty Review Committee
2022-present	Biology Department Graduate Studies Committee
2022-present	SciCube Microscopy Facility Steering Committee
2024-present	Department of Biology Executive Committee representative for Cell Biology and Biophysics

COMPLETED GRADUATE MENTORSHIP/THESIS COMMITTEES

Student	Advisor (Program)		Completed
Debbie Lynn Burkhart	Dr. J. Sage (Cancer Biology)	Committee Chair	2009
Andy Poon	Dr. J. Ferrell (Chem&Sys Bio)	Thesis Committee Member	2012
Peter Anthony	Dr. S. Block (Biophysics)	Committee Chair	2010
Samuel Bandara	Dr. Tobias Meyer (Chemical and Systems Biology)	Committee Member	2012
Kristen Jones Holmes	Dr. M. Cyert (Biology)	Thesis Committee Member	2012
Monica Ortiz	Dr. Drew Endy (Bioengineering)	Committee Chair	2013
Tony Tsai	Dr. James Ferrell (Chem&Sys Bio)	Committee Chair	2013
Jake Hughey	Dr. Marcus Covert (Bioeng.)	Committee Chair	2013
Evan Lloyd Guiney	Dr. M. Cyert (Biology)	Thesis Committee Member	2013
Jeremy Chang	Dr. J. Ferrell (Chem&Sys Bio)	Thesis Committee Member	2013
Andy Poon	Dr. J. Ferrell (Chem&Sys Bio)	Thesis Committee Member	2013
Kyuho Han	Dr. T. Meyer (Chem&Sys Bio)	Thesis Committee Member	2013
Muneaki Nakamura	Dr. Zev Bryant (Bioengineering)	Committee Chair	2014
Amy Lam	Dr. Michael Lin (Bioengineering)	Thesis Committee Member	2014
Kirill Bersuker	Dr. R. Kopito (Biology)	Thesis Committee Member	2015
Gautam Dey	Dr. T. Meyer (Chem&Sys Bio)	Thesis Committee Member	2015
Cathy Wei	Dr. Christina Smolke (Bioengineering)	Thesis Committee Member	2015
Adam Perez	Dr. Lucy Shapiro (Dev. Bio)	Thesis Committee Member	2015
Leigh Harris	Dr. Julie Theriot (Biochemistry)	Committee Chair	2016
Sandeep Venkataram	Dr. Dmitri Petrov (Biology)	Thesis Committee Member	2016
Mia Jaffe	Dr. Gavin Sherlock (Genetics)	Thesis Committee Member	2017
Yuping Li	Dr. Gavin Sherlock (Genetics) & Dr. Dmitri Petrov (Biology)	Thesis Committee Member	2019

Ray Futia	Dr. Dan Jarosz (CSB)	Thesis Committee Member	2021
Eirini Tsekitsidou	Dr. Martha Cyert (Biology)	Thesis Committee Member	2021
Andrea Chaikovsky	Dr. Julien Sage (Cancer Bio)	Thesis Committee Member	2021
Darius Johnston	Dr. Bill Weiss (MCP)	Committee Chair	2022
Vipul Vachharajani	Dr. Alex Dunn (Biophysics)	Thesis Committee Member	2022
Heejo Choi	Dr. Marcus Covert (Bio E)	Committee Chair	2022
Ruben Land	Dr. Kang Shen (Neuroscience)	Thesis Committee Member	2022
Mike Vi Van	Dr. Lacra Bintu (Bioengineering	Thesis Committee Member	2022
Vivian Chen	Dr. Gavin Sherlock (Genetics)	Thesis Committee Member	2022
Abhijit Lavania	Dr. W.E. Moerner (App. Physics)	Committee Chair	2023
Alex Lessinger	Dr. Jessica Feldman (Biology)	Thesis Committee Member	2024
Jason Rodencal	Dr. Scott Dixon (Cancer Bio)	Thesis Committee Member	2024
Alex Adams	Dr. Joanna Wysocka (Biology)	Thesis Committee Member	2025

CURRENT GRADUATE MENTORSHIP/THESIS COMMITTEES

Student	Advisor (Program)		
Jamie Jeffries	Dr. Lynette Cegelski (Chemistry)	Thesis Committee Member	2017-present
Kathy Le	Dr. Onn Brandmann (Biophysics)	Thesis Committee Member	2022-present
Mathis Leblanc	Dr. Jonas Cremer (Biophysics)	Thesis Committee Member	2023-present