

Samara L. Reck-Peterson, Ph.D.

9500 Gilman Drive, La Jolla, CA, 92093
sreckpeterson@ucsd.edu
<http://reck-peterson.ucsd.edu>

Education and Training

UCSF School of Medicine, San Francisco, CA

Postdoctoral Fellowship, 2001 – 2007
Laboratory of Ronald Vale

Yale University, New Haven, CT

Ph.D. Cell Biology, 2000
Laboratories of Mark Mooseker and Peter Novick

Carleton College, Northfield, MN

B.A. Biology, 1993
Honors in Independent Study, Laboratory of Susan Singer

Professional Positions

Investigator: 2018 – present

Howard Hughes Medical Institute

Professor: 2015 – present

University of California San Diego, La Jolla, CA
Department of Cellular and Molecular Medicine, School of Medicine, and
Department of Cell and Developmental Biology, School of Biological Sciences

Associate Professor: 2013 – 2015

Assistant Professor: 2007 – 2013

Harvard Medical School, Boston, MA
Department of Cell Biology

Major Leadership Positions

UC San Diego Foundation, Board of Trustees: 2022 – present

University of California San Diego, La Jolla, CA

Co-Director, Goeddel Family Technology Sandbox at UC San Diego: 2021 – present

University of California San Diego, La Jolla, CA

Faculty Director and Founder, Nikon Imaging Center at UC San Diego: 2017 – present

University of California San Diego, La Jolla, CA

Associate Director, Biological and Biomedical Sciences Graduate Program: 2011 – 2014

Harvard Medical School, Boston, MA

Director of Postdoctoral Education: 2005 – 2006

UCSF School of Medicine, San Francisco, CA

Honors

- American Society of Cell Biology Fellow 2023
- Howard Hughes Medical Institute-Simons Faculty Scholar 2016
- Bjorkman-Strominger-Wiley Prize for Collaboration, Harvard University 2014
- American Society for Cell Biology (ASCB) WICB Junior Award for Excellence in Research 2013
- Carolyn and Peter Lynch Endowed Research Fund Awardee 2009, 2013
- John and Virginia Kaneb Fellow 2012
- Young Mentor Award, Harvard Medical School 2012
- Armenise-Harvard Foundation Junior Faculty Grant 2010
- Rita Allen and Milton Cassel Scholar 2009
- New Innovator Award, NIH 2008
- Ruth L. Kirschstein National Research Service Award, Postdoctoral Fellowship 2002
- Teaching Assistant of the Year, Molecular Cellular and Developmental Biology Department, Yale University 1999
- Prize Teaching Fellow, Yale College and the Graduate School of Arts and Sciences, Yale University 1998
- Student, Physiology Course Marine Biological Laboratories 1994

Equity, Diversity, and Inclusion

- HHMI Freeman Hrabowski Scholars Program, reviewer 2023
- HHMI Gilliam Fellow, mentor and mentor training 2019 – 2023
- Initiated the ASCB Task Force to reform the nomination process for society awards, and the types of awards to make it more inclusive 2020 – 2022
- NIH inaugural class of MOSAIC Fellows, mentor 2021
- With the Reck-Peterson lab, raised awareness and funding for the Henrietta Lacks Foundation 2020
 - *The Wall Street Journal: Henrietta Lacks and Her Remarkable Cells Will Finally See Some Payback*
 - *Nature: Wealthy funder pays reparations for use of HeLa cells*
- Hosted, with Donte Alexander Stevens, Lacks family members for a symposium at UCSD 2020
- Internal UCSD HHMI Gilliam Fellowship, selection committee 2020
- HHMI Hannah Gray Fellowship, reviewer 2019, 2020
- Organizer, hfp Leadership and Mentoring training for PhD students, Harvard 2014
- Quad Faculty Diversity and Development Committee, Harvard Medical School 2011
- hfp Faculty Leadership and Mentoring training, participant 2008
- Pew Charitable Trusts Science and Society Institute's workshop, participant 2005

Leadership, Service, and Consulting (National and International)

- Schrödinger Inc., consultant 2023
- Carleton College (Northfield MN), Biochemistry Program Review 2023
- HHMI Freeman Hrabowski Scholars Program, reviewer 2022 –
- Jane Coffin Childs Fund, Board of Scientific Advisors 2022 –
- Annual Reviews Cell and Developmental Biology, Editorial board 2022 –
- Scientific Advisory Board, Division of Basic Sciences, Fred Hutchinson Cancer Research Center 2020 –
- NIGMS RM1, reviewer 2020
- NSERC Discovery Award (Canada), reviewer 2020

- NIH New Innovator (DP2) Award, reviewer 2019, 2020
- HHMI Hannah Gray Fellowship, reviewer 2019, 2020
- MSFC NIH Study Section, *Ad hoc* reviewer 2019
- European Research Council, Grant reviewer 2018
- Chair, Cytoskeletal Motors, Gordon Research Conference 2018
- Program Chair, ASCB Annual Meeting 2018 2017, 2018
- Co-chair, Engineering Approaches to Biomolecular Motors: From in vitro to in vivo, Biophysics Society Thematic Meeting, Vancouver, Canada 2016
- Vice-chair, Muscle and Molecular Motors, Gordon Research Conference 2016
- Editorial Board, *Journal of Cell Biology* 2016 –
- NSF Graduate Fellowship, reviewer 2016
- Board of Reviewing Editors, *eLife* 2015 –
- Associate Editor, *Molecular Biology of the Cell* 2014 – 2017
- Council Member, ASCB 2014 – 2017
- Charles A. King Trust Scientific Fellowship, Review Committee 2014
- NCSF NIH Study Section, *Ad hoc* reviewer 2013, 2014
- Organizing Committee, “Dynein 2013”, an international workshop in Kobe, Japan 2013
- Program Committee, ASCB Annual Meeting 2012 2011, 2012

Leadership and Service (Regional)

UC San Diego

- Executive Vice Chancellor Simmons 5-year review committee, member 2023
- School of Medicine Strategic Plan Committee, member 2021 – 2022
- Cellular and Molecular Medicine/ Physics Joint Faculty Search, Search Committee 2021 – 2022
- MSTP Program Admissions Committee 2019 – 2021
- Vice Dean for Research, School of Medicine, Search Committee 2020
- Multi-scale Biology Training Program, Steering Committee 2019
- Pharmacology and Chem/BioChem Joint Faculty Search, Search Committee 2019
- Dean of Biological Sciences, Search Committee 2018
- Health Sciences Strategic Planning Committee for Imaging, Co-chair and Member 2017
- Health Sciences Strategic Planning Committee for Graduate Education, Member 2017
- Admissions Committee, Biomedical Sciences Graduate Program 2016
- Cellular and Molecular Medicine Faculty Search Committee 2015

Harvard University and Harvard Medical School

- Nikon Imaging Center Microscopy Committee 2007 – 2015
- Faculty Council, Cell Biology Department 2008 – 2015
- Seminar Committee, Cell Biology Department 2008 – 2015
- Harvard Medical School Master Plan Steering Committee 2013
- Cell Biology Department Faculty Search Committee 2013
- Biological Chemistry and Molecular Pharmacology Department Faculty Search Committee (searches in 2010, 2011, 2012, and 2013) 2010 – 2013
- Cell Biology Training Grant Executive Committee 2012
- Program Advisor, Biological and Biomedical Sciences Graduate Program 2011
- Cell Biology Department Faculty/ Postdoctoral Fellow Representative 2007 – 2011
- Liaison Committee on Medical Education (LCME), Faculty Committee 2010
- Co-organizer of the Boston area “Single Molecule Club” 2008 – 2010
- BBS Graduate Program Admissions Committee 2009

Peer-reviewed Publications

(a full list can also be found at: <https://pubmed.ncbi.nlm.nih.gov/?term=reck-peterson+s>)

*co-first authorship; **co-second authorship, ‡co-corresponding authorship, **Reck-Peterson lab members**

1. Reimer JM, **Dickey AM****, Lin YX**, **Abrisch RG****, Mathea S, Chatterjee D, Fay EJ, Knapp S, Daugherty MD, **Reck-Peterson SL‡**, and Leschziner AE‡. (2023). Structure of LRRK1 and mechanisms of autoinhibition and activation. *bioRxiv*: doi.org/10.1101/2022.11.22.517582, and in press at *Nat Struct Mol Biol*.
2. **Karasmanis EP***, Reimer JM*, **Kendrick AA***, **Rodriguez JA**, **Truong JB**, Lahiri I, **Reck-Peterson SL‡**, and Leschziner AE‡. (2023) Lis1 relieves cytoplasmic dynein-1 auto-inhibition by acting as a molecular wedge. *bioRxiv*: doi.org/10.1101/2022.10.10.511666, and in press at *Nat Struct Mol Biol*.
3. **Rangan KJ‡** and **Reck-Peterson, SL‡**. (2023) RNA recoding in cephalopods tailors microtubule motor protein function. *Cell* 186: 2531-2543.
 - Highlighted by Koenig, KM. (2023) Chilling with cephalopods: Temperature-responsive RNA editing in octopus and squid. *Cell* 186: 2518-2520.
4. **Songster LD**, **Bhuyan D**, **Christensen JR‡**, **Reck-Peterson SL‡**. (2023) Woronin bodies move dynamically and bidirectionally by hitchhiking on early endosomes in *Aspergillus nidulans*. *Mol Biol Cell*: 10.1091/mbc.E23-01-0025, published ahead of print.
 - Selected for cover image: <https://www.molbiolcell.org/toc/mboc/34/7>
5. Reimer JM, **DeSantis ME**, **Reck-Peterson SL‡**, and Leschziner AE‡. (2023). Structures of human cytoplasmic dynein in complex with the lissencephaly 1 protein, LIS1. *eLife* 12: e84302.
6. Kusakci E, **Htet ZM**, **Gillies JP**, **Reck-Peterson SL**, and Yildiz A. (2022) Lis1 binding regulates force-induced detachment of cytoplasmic dynein from microtubules. *bioRxiv*: doi.org/10.1101/2022.06.02.494578.
7. **Snead DM***, Matyszewski M*, **Dickey AM***, Lin YX, Leschziner AL‡, **Reck-Peterson SL‡**. (2022) Structural basis for Parkinson's Disease-linked LRRK2's binding to microtubules. *Nat Struct Mol Biol*. 12: 1196-1207.
8. **Stevens DA***, Beierschmitt C*, **Mahesula S**, Corley MR, **Salogiannis J**, Tsu BV, Cao B, Ryan AP, Hakozaaki H, **Reck-Peterson SL‡**, and Daugherty MD‡. (2022) Antiviral function and viral antagonism of the rapidly evolving dynein activating adaptor NINL. *eLife* 11: e81606.
9. Christensen JR‡ and **Reck-Peterson SL‡**. (2022) Hitchhiking across kingdoms: co-transport of cargos in fungal, animal, and plant cells. *Ann Rev Cell Dev Biol*. 38:155-178.
10. **Gillies JP***, Reimer J*, **Karasmanis E***, Lahiri I, **Htet ZM**, Leschziner AE‡, and **Reck-Peterson SL‡**. (2022) Structural basis for cytoplasmic dynein-1 regulation by Lis1. *eLife* 11: e71229.
11. **Christensen JR***, **Kendrick AA***, **Truong JB**, **Aguilar-Maldonado A**, **Adani A**, Dzieciatkowska M, and **Reck-Peterson SL**. (2021) Cytoplasmic dynein-1 cargo diversity is mediated by the combinatorial assembly of FTS-Hook-FHIP complexes. *eLife* doi: 10.7554/eLife.74538.
12. Mogre, SS, **Christensen JR**, **Reck-Peterson SL**, and Koslover EF. (2021) Optimizing microtubule arrangements for rapid cargo capture. *Biophys J*. 120: 4918-4931.
13. Leschziner AE and **Reck-Peterson SL**. (2021) Scientific Perspectives: Structural Biology of LRRK2 and its interaction with Microtubules. *Mov. Disord*: 36: 2494-2504.
14. Triclin S*, Inoue D*, Gaillard J, **Htet ZM**, **DeSantis M**, Portran D, Derivery E, Aumeier C, Schaedel L, John K, Leterrier C, **Reck-Peterson SL**, Blanchoin L‡, and Thery M‡. (2021) Self-repair protects microtubules from destruction by molecular motors. *Nature Materials* 20: 883-891.
15. **Salogiannis J***, **Christensen JR***, **Aguilar-Maldonado A**, Shukla N, and **Reck-Peterson SL**. (2021) Regulation of peroxisome and lipid droplet hitchhiking by PxdA and the DipA phosphatase. *Mol Biol Cell* 32: 492-503.
16. Deniston CK*, **Salogiannis J***, Mathea S*, Snead DM, Lahiri I, Matyszewski M, **Donosa O**, Watanabe R, Bohning J, Shiau AK, Knapp S, Villa E, **Reck-Peterson SL‡**, and Leschziner AL‡.

- (2020) Parkinson's Disease-linked LRRK2 structure and model for microtubule interaction. *Nature* 588: 344-349.
- *Hot Topics*: Olszewska and Lang (2020). "Opening" new insights into LRRK2 conformation and the microtubule". *Movement Disorders* 35: 2162-2163.
17. **Htet ZM***, **Gillies JP***, Baker RW, Leschziner AL, **DeSantis ME‡**, and **Reck-Peterson SL‡**. (2020) Lis1 promotes the formation of maximally activated cytoplasmic dynein-1 complexes. *Nature Cell Biology* 5: 518-525.
 - *News and Views*: McKenney RJ (2020). Lis1 cracks open dynein. *Nat Cell Biol.* 22: 515-517.
 18. Mogre SS, **Christensen JR**, **Reck-Peterson SL**, and Koslov EF. (2020) Hitching a Ride: Mechanics of Organelle Transport Through Linker-Mediated Hitchhiking. *Biophysical Journal* 118: 1357-1369.
 19. Cao Y, Ghabache E, Miao Y, **Niman C**, Hakozaiki H, **Reck-Peterson SL**, Devreotes PN, and Rappel WJ. (2019) A minimal computational model for three-dimensional cell migration. *J R Soc Interface* 16(161): 20190619.
 20. **Kendrick AA**, **Dickey AM****, **Redwine WB****, **Tran PT**, Pontano Vaites L, Dzieciatkowska M, Harper JW, and **Reck-Peterson SL**. (2019) HOOK3 is a scaffold for the opposite-polarity microtubule-based motors cytoplasmic dynein-1 and KIF1C. *J Cell Biol* 218: 2982-3001.
 21. **Reck-Peterson SL‡**, **Redwine WB**, Vale RD, and Carter AP‡. (2018) The cytoplasmic dynein transport machinery and its many cargoes. *Nat Rev Mol Cell Biol.* doi: 10.1038/s41580-018-0004-3.
 22. **DeSantis ME***, **Cianfrocco MA***, **Htet ZM***, **Tran PT**, **Reck-Peterson SL‡**, and Leschziner AE‡. (2017) Lis1 has two opposing modes of regulating cytoplasmic dynein. *Cell* 170: 1197-1208. PMC5625841
 23. **Redwine WB***, **DeSantis ME***, **Hollyer I**, **Htet ZM**, **Tran PT**, Swanson SK, Florens L, Washburn MP, and **Reck-Peterson SL**. (2017) The human cytoplasmic dynein interactome reveals novel activators of motility. *eLife* 6:e28257.
 24. Lippert LG, Dadosh T, Hadden JA, Karnawat V, Diroll BT, Murray CB, Holzbaur ELF, Schulten K, **Reck-Peterson SL**, and Goldman YE. (2017) Angular measurements of the dynein ring reveal a stepping mechanism dependent on a flexible stalk. *PNAS* 114: E4564-E4573.
 25. **Salogiannis J** and **Reck-Peterson SL**. (2017) Hitchhiking: A Non-Canonical Mode of Microtubule-Based Transport. *Trends Cell Biol* 27: 141-150.
 26. **Salogiannis J**, **Egan MJ**, and **Reck-Peterson SL**. (2016) Peroxisomes move by hitchhiking on early endosomes using the novel linker protein PxdA. *J Cell Biol* 212: 289-296.
 - *In this issue*: Short B. (2016) PxdA helps peroxisomes hitch a ride. *J Cell Biol* 212: 258.
 - *Research highlight*: Strzyz P. (2016) How peroxisomes hitchhike on endosomes. *Nature Reviews Mol Cell Biol.* 17: 134.
 27. **Egan MJ***, **McClintock MA***, **Hollyer IH**, Elliott HL, and **Reck-Peterson SL**. (2015) Cytoplasmic dynein is required for the spatial organization of protein aggregates in filamentous fungi. *Cell Reports* 11: 201209.
 28. **Cianfrocco M***, **DeSantis M***, Leschziner AE, and **Reck-Peterson SL**. (2015) Mechanism and regulation of cytoplasmic dynein. *Annual Review of Cell and Developmental Biology* 31:83-108.
 29. Downes DJ, **Chonofsky M**, **Tan K**, Pfannenstiel PT, **Reck-Peterson SL**, and Todd RB. (2014) Characterization of the Mutagenic Spectrum of 4-Nitroquinoline 1-Oxide (4-NQO) in *Aspergillus nidulans* by Whole Genome Sequencing. *G3*, published online October 27.
 30. Toropova K*, **Zou S***, **Roberts AJ**, Redwine WB, **Goodman BS**, **Reck-Peterson SL‡** and Leschziner AE‡. (2014). Lis1 regulates dynein by sterically blocking its mechanochemical cycle. *eLife*, 3:e03372.
 31. **Roberts AJ**, **Goodman BS**, and **Reck-Peterson SL**. (2014) Reconstitution of dynein transport to the microtubule plus end by kinesin. *eLife*, 3:e02641.
 32. **Goodman BS** and **Reck-Peterson SL**. (2014) Engineering defined motor ensembles with DNA origami. *Methods in Enzymology* 540: 169-188.
 33. Cheng L, Desai J, Miranda CJ, Duncan JS, **Qiu W**, Nugent AA, Kolpak AL, Wu CC, Drokhlyansky E, Delisle MM, Chan W, Wei Y, Propst F, **Reck-Peterson SL**, Fritsch B, and Engle EC. (2014) Human CFEOM1 mutations attenuate KIF21A autoinhibition and cause oculomotor axon stalling. *Neuron* 82: 334-349.

34. **Tan K, Roberts AJ, Chonofsky M, Egan MJ, and Reck-Peterson SL.** (2014) A Microscopy-based Screen Employing Multiplex Genome Sequencing Identifies Cargo-Specific Requirements for Dynein Velocity. *Mol Biol Cell* 25: 669-678.
35. **Goodman BS, Derr ND, and Reck-Peterson SL.** (2012) Engineered, harnessed, and hijacked: synthetic uses for cytoskeletal systems. *Trends Cell Biol.* 22: 644-652.
36. **Derr ND*, Goodman BS*,** Jungmann R, Leschziner AE, Shih WM, and **Reck-Peterson SL.** (2012) Tug-of-war in motor protein ensembles revealed with a programmable DNA origami scaffold. *Science* 338: 662-665.
 - *Perspective:* Diehl MR. (2012). Templating a Molecular Tug-of-War. *Science* 338: 626-627.
37. Redwine WB*, Hernarndez-Lopez R*, **Zou S, Huang J, Reck-Peterson SL,** and Leschziner AE. (2012) Structural basis for microtubule binding and release by dynein. *Science* 337: 1532-1536.
38. **Huang J*, Robert A*,** Leschziner AE, and **Reck-Peterson SL.** (2012) Lis1 acts as a "clutch" between the ATPase and microtubule-binding domains of the dynein motor. *Cell* 150: 975-986.
 - *Preview:* Trokter M and Surrey T. (2012) LIS1 Clamps Dynein to the Microtubule. *Cell* 150: 877-879.
39. **Egan MJ*, McClintock MA*, and Reck-Peterson SL.** (2012) Microtubule-based transport in filamentous fungi. *Curr Op Microbiol.* 15: 637-645.
40. **Egan M, Tan K, and Reck-Peterson SL.** (2012) Lis1 is an initiation factor for dynein-driven organelle transport. *J Cell Biol.*, 197: 971-982.
 - *In this issue:* Leslie M. (2012). Lis1 cuts its work short. *J Cell Biol* 197: 852.
41. Laan L, Pavin N, Husson J, Romet-Lemonne G, van Duin M, Lopez MP, Vale RD, Julicher F, **Reck-Peterson SL,** and Dogterom M. (2012) "Cortical" dynein controls microtubule dynamics and length, generating pulling forces that reliably position microtubule asters. *Cell* 148: 502-514.
42. **Qiu W*, Derr ND*, Goodman BS,** Villa E, Wu D, Shih W, and **Reck-Peterson SL.** (2012) Dynein achieves processive motion using both stochastic and coordinated stepping. *Nat Struct Mol Biol* 19: 193-201.
 - *News & Views:* Walter W and Diez S. (2012) A staggering giant. *Nature* 482: 44, 45.
43. Zhang J, **Tan K,** Wu X, Chen G, Sun J, **Reck-Peterson SL,** Hammer J, and Xiang X. (2011) *Aspergillus* myosin-V supports polarized growth in the absence of microtubule-based transport. *PLoS One* 6: e28575.
44. Su X, **Qiu W,** Gupta ML, Pereira-Leal JB, **Reck-Peterson SL,** and Pellman D. (2011) Mechanism underlying the dual-mode regulation of microtubule dynamics by Kip3/kinesin-8. *Mol Cell* 43: 751-763.
45. **Reck-Peterson SL,** Vale RD, and Gennerich A. (2011) Motile properties of cytoplasmic dynein. In "Handbook of dynein." Pan Stanford Publishing. Editors: Keiko Hirose and Linda Amos.
46. Gennerich A, and **Reck-Peterson SL.** (2011) Probing the force generation and stepping behavior of cytoplasmic dynein. *Methods Mol Biol* 783: 63-80.
47. **Reck-Peterson SL, Derr N,** and Stuurman N. (2010) Single molecule imaging using total internal reflection microscopy. In "Live Cell Imaging: a laboratory manual", 2nd edition. Cold Spring Harbor Press.
48. Kardon J, **Reck-Peterson SL,** and Vale RD. (2009) Regulation of the processivity and intracellular localization of *S. cerevisiae* dynein by dynactin. *PNAS* 106: 5669-5674.
49. Cho C, **Reck-Peterson SL,** and Vale RD. (2008) Cytoplasmic dynein's regulatory ATPase sites affect processivity and force generation. *J Biol Chem* 283: 25839-25845.
50. Chang W, Zaarour RF, **Reck-Peterson S,** Rinn J, Singer RH, Snyder M, Novick P, and Mooseker MS. (2008) Myo2p, a class V myosin in budding yeast, associates with a large ribonucleic acid-protein complex that contains mRNAs and subunits of the RNA-processing body. *RNA* 14: 491-502.
51. Gennerich A, Carter AP, **Reck-Peterson SL,** and Vale RD. (2007) Force-induced bidirectional stepping of cytoplasmic dynein. *Cell* 131: 952-965.
52. **Reck-Peterson SL, Yildiz Y**, Carter AP**, Gennerich A, Zhang N,** and Vale RD. (2006) Single molecule analysis of dynein processivity and stepping behavior. *Cell*, 126: 335-348.
 - *Preview:* Spudich JA. Molecular motors take tension in stride. (2006) *Cell* 126: 242-244
 - *Research highlights in brief:* Molecular motors. (2006) *Nat Rev Mol Cell Biol* 7: 625.
 - *Meeting Report:* Katsnelson A. (2006) Dynein steps in line. *J Cell Biol* 172: 486.

53. Shih JL, **Reck-Peterson SL**, Newitt R, Mooseker MS, Aebersold R, and Herskowitz I. (2005) Cell polarity protein Spa2p associates with proteins involved in actin function in *Saccharomyces cerevisiae*. *Mol Biol Cell* 16: 4595-4608.
54. Gibbons IR, Garbarino JE, Tan CE, **Reck-Peterson SL**, Vale RD, and Carter AP. (2005) The affinity of the dynein microtubule-binding domain is modulated by the conformation of its coiled-coil stalk. *J Biol Chem* 280: 23960-23965.
55. **Reck-Peterson SL**, and Vale RD. (2004) Molecular dissection of the roles of nucleotide binding and hydrolysis in dynein AAA domains in *S. cerevisiae*. *Proc Natl Acad Sci* 101: 1491-1495.
56. Olave I, **Reck-Peterson SL**, and Crabtree GR. (2002) Nuclear actin and the regulation of chromatin and chromosomes. *Ann Rev Biochem* 71: 755-781.
57. **Reck-Peterson SL**, Tyska MJ, Novick PJ, and Mooseker MS. (2001) The yeast class V myosins, Myo2p and Myo4p, are non-processive actin-based motors. *J Cell Biol* 153: 1121-1126.
58. **Reck-Peterson SL**, Provance DW, Jr., Mooseker MS, and Mercer JA. (2000) Class V Myosins. *Biochem Biophys Acta* 1496: 36-51.
59. Karpova TS, **Reck-Peterson SL**, Elkind NB, Mooseker MS, Novick PJ, and Cooper JA. (2000) Role of actin and Myo2p in polarized secretion and growth of *Saccharomyces cerevisiae*. *Mol Biol Cell* 11: 1727-1737.
60. **Reck-Peterson SL**, Novick PJ, and Mooseker MS. (1999) The tail of a yeast class V myosin, Myo2p, functions as a localization domain. *Mol Biol Cell* 10: 1001-1017.

Commentary

1. **Reck-Peterson SL**. (2015) Dynactin Revealed. *Nat Struct Mol Biol*. 22: 359-360.
2. **Reck-Peterson SL**. (2014) Shifting gears with light. *Nature Nanotech* 9: 661, 662.
3. **Reck-Peterson SL**. (2013) Teaming up: from motors to people. *Mol Biol Cell* 24: 3267-3269

Teaching

UC San Diego, La Jolla, CA

Lecturer, BGGN2605	2022
Lecturer, BIOM254	2020 – 2022
Lecturer, BGGN206b	2022
UCSD/Salk Biology Graduate Program Boot Camp	2016 – 2021
Lecturer, NSF Grant Writing Workshop for Biological Sciences	2017, 2019
Lecturer, BGGN222 Graduate Cell Biology	2018, 2019
Lecturer, BGGN200	2019

Molecular Architecture, Dynamics and Function of Biomembranes, Cargese, Corsica, France

Instructor for this FEBS/EMBO Advanced Lecture Course	2017
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Harvard Medical School, Boston, MA

Lecturer, Cell Biology 201	2010 – 2015
Instructor, Cell Biology “Boot Camp”	2014
Tutor, Molecular and Cellular Basis of Medicine	2013
Instructor, Experimental Design “Boot Camp”	2010, 2012
Discussion leader, Cell Biology 201	2008 – 2011
Instructor, “Single Molecule Methods” Nanocourse	2009
Lecturer, Biochemistry and Molecular Pharmacology 201	2009

Harvard College, Cambridge, MA Lecturer in MCB293 on “Single Molecule Methods”	2009 – 2012
Harvard College, Cambridge, MA Board of Tutors in Biochemical Sciences	2008 – 2012
Physiology Course, Marine Biological Laboratories, Woods Hole, MA Instructor, “Biochemistry Boot Camp”	2008
Teaching Assistant (with Ronald Vale)	2005
Teaching Assistant (with Mark Mooseker)	1996 – 1998
Cold Spring Harbor, NY Instructor, “Quantitative Imaging: From Cells to Molecules”	2011

Chaired Meetings

• Program chair, American Society for Cell Biology-EMBO Annual Meeting	2018
• Chair, Cytoskeletal Motors, Gordon Research Conference	2018
• Organizing Committee, International Dynein Meeting	2017
• Co-chair, Engineering Approaches to Biomolecular Motors: From in vitro to in vivo, Biophysics Society Thematic Meeting, Vancouver, CA	2016
• Vice-chair, Muscle and Molecular Motors, Gordon Research Conference	2016
• Co-chair, Molecular Motors and the Cytoskeleton: Measurement, Manipulation, and Mechanics Mini-Symposium, ASCB Annual Meeting	2015
• Co-chair, Microtubule-based motility and dynamics Mini-Symp., ASCB Annual Meeting	2015
• Co-chair, Motility Subgroup, Biophysics Society Annual Meeting	2014
• Co-chair, Cytoskeleton, motors and cellular transport, Fungal Genetics Conference	2013
• Organizing Committee, International Dynein Meeting	2013
• Co-chair, Allosteric control of ring-shaped ATPases Symposium, Biophysics Society Annual Meeting	2012
• Co-chair, Unconventional Motors Symposium, Biophysics Society Annual Meeting	2010
• Co-chair, Molecular Motors Mini-Symposium, ASCB Annual Meeting	2009
• Chair, Molecular Structure and Motile Mechanism of Dynein, International Dynein Meeting	2009

Invited Talks: Keynotes and Named Lectures

• University of Pennsylvania, Department of Cell and Developmental Biology, Frank A. Pepe Lecture	2023
• University of Vermont, Department of Molecular Physiology & Biophysics Annual Retreat, Keynote Speaker	2022
• University of Alberta, Cell Biology Research Day, Keynote Speaker	2021
• University of Florida, Florida Translational Cell Biology Symposium, Keynote Speaker	2019
• Tufts University School of Medicine, Department of Developmental, Molecular and Chemical Biology, Schmidt Lecture	2019
• Research Triangle Cytoskeletal Meeting, Keynote speaker, North Carolina	2018
• Yale University, Keynote speaker, Cell and Molecular Biology Training Grant Annual Symposium	2013

Invited Talks: Research Seminars and Conferences

All seminars were in person, unless noted (virtual)

2023

- Department of Biochemistry, University of Utah
- Aligning Science Across Parkinson's Disease Endo-lysosomal Interest Group (virtual)
- Aligning Science Across Parkinson's Collaborative Meeting, San Diego
- Biosciences Division, UC Berkeley (09/2023)
- Annual Retreat MCDB and BMSE programs, UC Santa Barbara (10/2023)
- ASCB Annual Meeting Subgroup "Cell Biology Across Boundaries" (12/2023)

2022

- Cell Biology of Parkinson's Disease Meeting, Stanford University
- HHMI Science Meeting, Janelia Research Campus
- BBC Graduate Programs Seminar Series, University of California San Francisco
- Progress in Neuroscience Seminar Series, Weill Cornell Medicine
- Cytoskeletal Motors Gordon Research Conference
- Laboratory of Molecular Biology, Cambridge, UK
- Institute of Pharmaceutical Chemistry, Goethe University, Frankfurt, Germany
- Department of Biochemistry and Molecular Biology at the Uniformed Services University of the Health Sciences (virtual)
- Annual Conference, The Association for general and applied microbiology, Dusseldorf, Germany (virtual)
- Biophysics Society Annual Meeting, Molecular Motors Subgroup

2021

- ASCB subgroup, Microtubule Motors: Emerging Phenomena and Methods (virtual)
- Harvard Medical School, Department of Cell Biology
- National Institutes of Health, NINDS Neuroscience Seminar (virtual)
- Biophysics Society Annual Meeting, Microtubule intracellular transport symposium (virtual)

2020

- MIT, Biology Department (virtual)
- HHMI Science Meeting (virtual)
- McGill University, Department of Biochemistry (virtual)

2019

- Genentech, Neuroscience Department
- Tsinghua University, China 2019, International Conference on Neurostructural Biology
- Stanford, Biochemistry Department
- Tufts University of Medicine, Schmidt Lecture
- Skirball Symposium: Life in Motion
- University of Utah, Neuroscience Retreat
- Vanderbilt, Cell and Developmental Biology

2018

- University of California San Diego, Biomechanics Seminar
- Washington University, Department of Biochemistry and Molecular Biophysics
- Biophysics Society Annual Meeting, Motility Subgroup
- Department of Cell and Developmental Biology, University of Michigan
- The Fred Hutchinson Cancer Research Institute

- Rockefeller University, Anderson Cancer Center
- Microtubules EMBL Meeting, Heidelberg, Germany
- Fungal Biology Gordon Research Conference
- Oregon State University, Center for Genome Research and Biocomputing
- University of California, San Francisco, Department of Biochemistry
- ASCB Subgroup, Intracellular Cargo Transport by Molecular Motors

2017

- University of Arizona, Cellular Molecular Medicine
- University of California Davis, Biological Sciences
- Molecular Life Sciences Seminar Series, Ohio State University
- Joint meeting of the British Societies of Cell Biology (BSCB), Developmental Biology (BSDB) and Genetics (GenSoc), Warwick, United Kingdom
- Salk Institute, Waite Advanced Biophotonics Center Symposium
- Motile and Contractile Systems Gordon Research Conference
- Howard Hughes Medical Institute Investigator Meeting
- Dutch Biophysics Meeting, Netherlands
- International Dynein Meeting, Japan
- Nikon “Tech Talk”, American Society for Cell Biology Annual Meeting

2016

- Iowa State University, Department of Genetics, Development and Cell Biology
- Stanford University, Department of Molecular and Cellular Physiology
- University of California Los Angeles, Molecular Biology Institute
- Forces in Biomolecular Systems International Workshop, Venice Italy
- University of Pennsylvania Perelman School of Medicine, Pennsylvania Muscle Institute
- Paul Scherrer Institut, Switzerland
- ETH Zurich, Switzerland

2015

- Department of Biological Sciences, Wellesley College
- Fungal Genetics Conference, Plenary speaker
- Cellular Self-Organization Symposium, University of Warwick, United Kingdom

2014

- NIH Heart, Blood, and Lung Institute (NHLBI)
- Membrane and Modules Meeting, Germany
- “Navigating the Cell”, Company of Biologists Workshop, United Kingdom
- “Artificial Cells” Symposium, AMOLF, Netherlands
- University of Massachusetts Medical School, Biochemistry and Molecular Pharmacology Dept.
- University of Texas Southwestern, Cell Biology Department
- Mechanisms to Molecules Symposium, Italy
- Muscle and Motors, Gordon Research Conference
- NYU Medical School, Skirball Institute
- Protein Society Meeting, San Diego CA
- University of California Berkeley, MCB Department
- Yale University, MCDB Department
- Princeton University, Molecular Biology Department
- UCSD, Department of Cellular and Molecular Medicine
- Vanderbilt University, Cell Biology Department
- University of Wisconsin Madison, Department of Biochemistry
- Harvard University, Molecular and Cellular Biology Department
- Boston Children’s Hospital, Division of Neuroscience

- ASCB Annual Meeting, Subgroup on “Unconventional functions of molecular motors”

2013

- Fungal Genetics Conference (Speaker and concurrent session co-chair)
- University of Colorado School of Medicine, Department of Biochemistry and Molecular Genetics
- University of Texas Austin, Molecular Cell and Developmental Biology Department
- Yale University, Keynote speaker, Cell and Molecular Biology Training Grant Annual Symposium
- Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany
- Albert Einstein College of Medicine, Department of Anatomy and Structural Biology
- Motile and Contractile Systems Gordon Research Conference
- International Dynein Meeting, Kobe Japan (Organizing committee and speaker)
- ASCB Annual Meeting mini-symposium speaker

2012

- Biophysical Society Annual Meeting (Mini-symposium speaker and co-chair)
- University of North Carolina at Chapel Hill, Genetics and Molecular Biology
- University of Georgia at Athens, Cellular Biology Department
- University of Massachusetts at Amherst, Biochemistry Department
- University of Connecticut Health Center, Center for Cell Analysis and Modeling
- Microtubules EMBL Meeting, Heidelberg, Germany
- Plant and Microbial Cytoskeleton, Gordon Research Conference
- Institute of Biophysics, Beijing, China
- National Institute of Biological Sciences, Beijing, China
- Henan University, Kaifeng, China

2011

- University of Chicago, Institute for Biophysical Dynamics
- Brandeis University, Biochemistry and Biophysics Program
- Muscle and Molecular Motors, Gordon Research Conference
- Marine Biological Laboratories
- Fungal Development and Pathogenesis Meeting, Exeter, UK
- Laboratory of Molecular Biology, MRC, Cambridge, UK

2010

- Boston University School of Medicine, Department of Biophysics and Physiology
- Biophysical Society Annual Meeting (Symposium speaker and co-chair)
- Massachusetts General Hospital, Nephrology Division
- Dartmouth University, Biology Department
- Asperfest 10, Lieden, Netherlands
- New England Biolabs
- Molecular and Cellular Fungal Biology, Gordon Research Conference
- Brown University, Department of Molecular Biology, Cell Biology and Biochemistry
- University of Minnesota, Department of Genetics, Cell and Developmental Biology
- American Society of Nephrology Annual Meeting
- University of Pennsylvania, Department of Biochemistry and Biophysics

2009

- Cornell University, Department of Molecular Medicine
- University of Vermont, Department of Molecular Physiology and Biophysics
- International Dynein Meeting, Kobe Japan
- ASCB Annual Meeting (Mini-symposium speaker and co-chair)

2008

- Biophysics seminar series, MIT
- Mount Holyoke College, Departments of Biology and Physics
- NIH Heart, Blood, and Lung Institute (NHLBI)
- Muscle and Molecular Motors, Gordon Research Conference

Active Funding

Investigator (PI: Reck-Peterson, 100%) Howard Hughes Medical Institute <i>The molecular mechanisms of microtubule-based intracellular transport</i>	09/01/18 – present
Aligning Science Across Parkinson's (Lead PI (17%), with co-PIs Leschziner, Villa, Knapp and Stengel) <i>Cellular mechanism of LRRK2 in health and disease</i>	10/01/20 – 09/30/23
1R35GM141825 (PI: Reck-Peterson, 100%) NIH/NIGMS <i>Mechanisms of microtubule-based transport</i>	07/14/21 – 06/30/25

Recent trainee funding (past 3 years)

Jenna Christensen, PhD (2017-2020)
NIH F32 Postdoctoral Fellowship

Alexander Stevens (2020-2023)
HHMI Gilliam Fellowship

Agnieszka Kendrick, PhD (2018-2021)
American Cancer Society Postdoctoral Fellowship

David Snead, MD/PhD (2018-2021)
A.P. Giannini Foundation

Jenna Christensen, PhD (2020-2022)
NIH MOSAIC K99/R00

Eva Karasmanis, PhD
Jane Coffin Childs Foundation Postdoctoral Fellowship (2020-2023)

Kavita Rangan, PhD
Life Sciences Research Foundation Postdoctoral Fellowship (2020-2023)

Livia Songster (2021-2024)
NSF Graduate Research Fellowship

Kavita Rangan, PhD (2023-2025)
NIH K99/R00