



1979	Phi Beta Kappa, Purdue University
1979-82	NSF Predoctoral Fellowship, University of California at Berkeley
1982	Distinguished Teaching Assistant Award from the Faculty Senate, University of California at Berkeley
1984-87	Jane Coffin Childs Memorial Fund Postdoctoral Fellowship
1987-88	Selected participant, UK-USSR Cooperative Exchange Program in Oncology (All-Union Oncological Research Centre, Moscow, USSR)
1990-92	March of Dimes Basil O'Connor Starter Scholar Award
1992, 95-97	Nominee, Harvard Medical School Prize for Excellence in First Year Teaching
1995	Awarded Harvard Medical School Prize for Excellence in First Year Teaching
1995	R. R. Bensley Award for Young Investigator in Cell Biology from the American Association of Anatomists
1996	Inducted into Aesculapian Society of Harvard Medical School
2004	Chiscon Undergraduate Teaching Award, Purdue University
2004	Purdue Seeds for Success award, for grants in excess of \$1,000,000
2005	Top Ten Teacher in College of Science, Purdue University
2006	Top Ten Teacher in College of Science, Purdue University
2006	Fellow of the Purdue Teaching Academy
2007	Top Ten Teacher in College of Science, Purdue University
2008	The Top Teacher in the College of Science, Purdue University
2010	Purdue Seeds for Success award, for grants in excess of \$1,000,000
2010	Purdue Club Sport Faculty Advisor of the Year
2011	Honorable Mention for Top Teacher in the College of Science
2011	Biological Sciences Graduate Student Mentoring Award
2013	Charles B. Murphy Outstanding Undergraduate Teaching Award (university-wide)
2014	Purdue Club Sport Faculty Advisor of the Year
2015	Purdue Club Sport Faculty Advisor of the Year

#### Meetings organization:

2003	Session Chairman, Neuronal Cytoskeleton, Gordon Conference on Contractile and Motile Systems, Colby-Sawyer College, New London, NH
2004	Program Director, TSA Young Investigators Forum, Atlanta, GA
2004	Steering Committee, 4 <sup>th</sup> International Scientific and Clinical Symposium on Tourette Syndrome, Cleveland OH
2008	Program Director, TSA 2 <sup>nd</sup> Young Investigators Forum, Atlanta, GA
2008	Steering Committee, 5 <sup>th</sup> International Scientific and Clinical Symposium on Tourette Syndrome, NY, NY
2010	Session co-chair, Axonal Transport at the Nexus of Development, Signaling and Disease, American Society for Cell Biology meeting, Philadelphia PA

#### Major committee and administrative assignments:

1990-93	Member and Vice-Chairman, Standing Preliminary Qualifying
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	Examination Committee, Program in Cell and Developmental Biology, Harvard Medical School
1992-96	Supervisor, Multi-user confocal microscopy facility, Harvard Medical School
1993-97	Division of Medical Sciences Curriculum Committee, Harvard Medical School
1994-97	Graduate Student Advisor, Neuroscience Program, Harvard Medical School
1998-2002	Graduate Student Admissions & Appointments Committee, Biological Sciences, Purdue University
1998-pres	Graduate and Advanced Studies Committee, Biological Sciences, Purdue University
1999-2005	GAANN training grant executive committee, Biological Sciences, Purdue University
2000, '03, '04 '16	Department Head Search Committee, Biological Sciences, Purdue University
2001-2004	School of Science Faculty Council, Purdue University
2004-2014	Associate Head of Department, for Research and Graduate Affairs
2005	Birck Nanotechnology Center Director Search Committee, Purdue University
2008	Department Head Search Committee, Chemistry, Purdue University
2012-15	Integrative Imaging cluster hires, faculty search committee
2013-15	University Advisory Committee on Equity (grievance panel)
2013-14	Joint Electron Microscopy Facility advisory committee
2013-14	Autism Cluster hire, master search committee
2013-14	Speech Language and Hearing Science Dept Autism Cluster hire, faculty search committee
2013-14	Biological Sciences Sensory Neurobiology Autism Cluster hire faculty search committee, chair
2014-2016	Associate Vice Provost for Faculty Affairs
2016-pres	Vice Provost for Faculty Affairs

**Other scientific activities:**

**Scientific Advisory Boards:**

Tourette Syndrome Association Scientific Advisory Board, 1997-2012, and its co-Chairman, 2005-2011

NIMH National Advisory Mental Health Council, 2005-08

**Ad hoc member:** NIH Neurology B1 study section (1992), NIH study section MDCN-7 (2002), NIH study section NDBG (2004) American Cancer Society study section (2008), NIMH T34 study section (2009), NIH ARRA Core Center study section (2009), Chair, NIMH R25 Special Emphasis Panel (2010), NINDS/NIMH R25 Special Emphasis Panel (2011), NIH CSR Molecular and Cellular Substrates of Complex Brain Disorders Special

Emphasis Panel (2012), United Mitochondrial Disease Foundation review panel (2012-3), Tourette Syndrome Association Centers of Excellence Review Committee (2014-present); ZRG1 F03A-N (20) L - Fellowships: Neurodevelopment, Synaptic Plasticity and Neurodegeneration (2015); NIH CSR Molecular and Cellular Substrates of Complex Brain Disorders Special Emphasis Panel ZRG1 MDCN-P57 (2015); NIH ZRG1 F03A-N 20 L Panel on Fellowships: Neurodevelopment, Synaptic Plasticity and Neurodegeneration (2016); NIH CSR Molecular and Cellular Substrates of Complex Brain Disorders Special Emphasis Panel ZRG1 MDCN-P57 (2016)

External promotion and tenure review -- Dickinson College (1994), Northwestern University Medical School (1995), University of Michigan School of Medicine (1996), New York State Dept of Health Wadsworth Center (1997), Ohio University (1998); National Institute of Neurological Disorder and Stroke, 2007; Rochester Polytechnic University (2007); University of California Irvine (2008); University of Rochester (2010); Simon Fraser University (2010); Temple University (2012); University of California San Diego School of Medicine (2012); University of Texas, Austin (2012); Michigan State University (2012); University of Michigan (2013); University of Illinois School of Medicine (2013); University of Pittsburgh School of Medicine (2014); University of Rochester (2014); Johns Hopkins School of Medicine (2016); University of Minnesota (2016); Simon Fraser University (2016); University of Leuven (2017)

**Ad hoc grant reviewer for:** NIH, National Science Foundation, United Mitochondrial Disease Foundation, Tourette Syndrome Association, CIBA Foundation, Science and Engineering Research Council (UK), Spinal Cord Research Foundation, Wellcome Trust, International Human Frontier Science Program, International Science Foundation

**Regular reviewer** (>300 reviews 1990-2018) for: *Cell*, *Cell Reports*, *Neuron*, *Nature*, *Nature Neuroscience*, *Nature Cell Biology*, *Science*, *Current Biology*, *Journal of Neuroscience*, *Journal of Cell Biology*, *Journal of Cell Science*, *Proceedings of the National Academy of Science*, *PLOS ONE*, *Molecular Biology of the Cell*, *Cell Motility & the Cytoskeleton*, *EMBO Journal*, *Human Molecular Genetics*, *Journal of Molecular Biology*, *Trends in Cell Biology*, *Trends in Biochemical Sciences*, *Neuroscience*, *Journal of Neurochemistry*, *Neuroscience Research*, *Brain Research*, *European Journal of Neuroscience*, *Neurobiology of Disease*, *Cell Regulation*, *Journal of Structural Biology*, *American Journal of Physiology*, *Biochimica Biophysica Acta*, *Traffic*

**Professional societies:** American Society for Cell Biology, Society for Neuroscience, British Society for Cell Biology, American Association for the Advancement of Science

**Member:** Congressional Biomedical Liaison Committee to Congressman Barney Frank, Massachusetts Fourth Congressional District, 1993-1997

**Teaching experience:****Medical School**

- 1989-96 Human Gross Anatomy & Histology - Harvard Medical School
- 1998-99 Molecular Biology and Biochemistry, Indiana University School of Medicine, Lafayette Center for Medical Education
- 1998-2010 Concepts in Health and Disease, Indiana University School of Medicine, Lafayette Center for Medical Education

**Graduate**

- 1989-94 Molecular & Cellular Biology, Harvard Medical School
- 1990 Conduct of Science, Harvard Medical School
- 1992 Molecular Neurobiology, Harvard Medical School
- 2001-02, 05 Cell Biology, Purdue University
- 2005 The Cytoskeleton in Human Disease, Purdue University
- 2009 Special Lectures in Neuroscience, Purdue University

**Undergraduate**

- 1990-97 Tutor in Biochemistry & Molecular Biology, Harvard College
- 1998-2018 Cell Biology, Purdue University
- 2008 Junior Seminar, Purdue University
- 2011-15 Senior Seminar in Neuroscience, Purdue University

**Mentoring**

- 1998-2014 Mentor in Horizons Program for first generation college students, Purdue University
- 1998-pres Faculty advisor and coach, Purdue University Running Club

**Curriculum design**

- 1989-90 Graduate Cell Biology tutorial curriculum, Harvard Medical School
- 1990-92 Conduct of Science curriculum, Harvard Medical School

**Case writing**

- 1990 Authored cases used in Harvard Medical School and elsewhere for medical and graduate courses: "The Case of the Fish of Many Colors©" and "The Case of the Rocky Postdoc©"

**Consulting**

- 1991 Consultant on tutorial, case-based medical teaching to the SUNY Downstate Medical Center at Brooklyn

**Outreach Activities:**

- 1996-pres Regular public speaking and writing on behalf of the Tourette Syndrome Association to TS patients, patient families, health professionals and educators. Publications relevant to this activity are listed below.
- 2007 Speaker, Congressional Reception on Health Care Parity, Capitol Building, Washington DC
- 2013 Keynote speaker, Congressional Briefing on Child Mental Health, Capitol Building, Washington, DC, 03/21/2013
- 2017-pres member, Board of Directors, Tourette Association of America

## RESEARCH ACTIVITY

### Current extramural research support:

None – laboratory was wound down in 2018 after assuming a 100% role as vice provost

### Past extramural research support:

National Institutes of Health award R21 AI117205-01, "The Response of Mitochondria to Legionella Infection of Macrophages", 2/01/16 – 1/31/18

National Institutes of Health Award RO1 NS27073-25, "Control of Neuronal Organelle Transport", 6/01/90 - 5/31/16

### Research training

During the lifetime of my independent research laboratory (1989-2017), I have: supervised 4 postdoctoral fellows; supervised and graduated 12 PhD students; served on the thesis committees of an additional 68 PhD students; supervised 29 undergraduate project students.

### Bibliography:

Authorship note: In accordance with policies of the NIH and major scientific journals, I have neither requested nor accepted "honorary" authorship as a condition of sharing reagents or technical expertise.

### Original refereed articles

**Hollenbeck, P. J.** & C. L. Chrisman. 1981. Kidney preparations for chromosomal analyses of Ictaluridae. *Copeia* 1981:216-217.

**Hollenbeck, P. J.**, F. Supryniewicz & W. Z. Cande. 1984. Cytoplasmic dynein-like ATPase cross- links microtubules in an ATP-sensitive manner. *Journal of Cell Biology* 99:1251-1258. [PMID: 6237113](#)

**Hollenbeck, P. J.** & W. Z. Cande. 1985. Microtubule distribution and reorganization during the first cell cycle in fertilized eggs of *Lytechinus pictus*. *European Journal of Cell Biology* 39:140-149. [PMID: 3896803](#)

**Hollenbeck, P. J.**, D. Bray & R. J. Adams. 1985. Effects of the uncoupling agents FCCP & CCCP on the saltatory movements of cytoplasmic organelles. *Cell Biology International Reports* 9:193-199. [PMID: 3156678](#)

**Hollenbeck, P. J.** & K. Chapman. 1986. A novel microtubule-associated protein from

- mammalian nerve shows ATP-sensitive binding to microtubules. *Journal of Cell Biology* 103:1539-1545. [PMID: 3639885](#)
- Geerts, H., M. DeBrabander, R. Nuydens, S. Geuens, M. Moeremans, J. DeMey & **P. Hollenbeck**. 1987. Nanovid tracking: a new automatic method for the study of motility in living cells based on colloidal gold & video microscopy. *Biophysical Journal* 52:775-82. [PMCID: PMC1330181](#)
- Hollenbeck, P. J.** & D. Bray. 1987. Rapidly-transported organelles containing membrane and cytoskeletal components: their relation to axonal growth. *Journal of Cell Biology* 105:2827-2835. [PMID: 3693400](#)
- Bray, D. & **P. J. Hollenbeck**. 1988. Growth cone motility and guidance. *Annual Review of Cell Biology* 4:43-61. [PMID: 2461722](#)
- Hollenbeck, P. J.** 1989. The distribution, abundance and subcellular localization of kinesin. *Journal of Cell Biology* 108:2335-2342. [PMID: 2525563](#)
- Hollenbeck, P. J.**, A. D. Bershadsky, O. Y. Pletjushkina, I. S. Tint & J. M. Vasiliev. 1989. Collapse of intermediate filaments in fibroblasts is an ATP-dependent and actin-dependent process. *Journal of Cell Science* 92:621-631. [PMID: 2689463](#)
- Hollenbeck, P. J.** & J. A. Swanson. 1990. Radial extension of macrophage tubular lysosomes supported by kinesin. *Nature* 346:864-866. [PMID: 1697403](#)
- Tint, I.S., **P. J. Hollenbeck**, A. B. Verkhovskiy, I. G. Surgucheva & A. D. Bershadsky. 1991. Evidence that intermediate filament reorganization is induced by ATP-dependent contraction of the actomyosin cortex in permeabilized fibroblasts. *Journal of Cell Science* 98:375-384. [PMID: 1647400](#)
- Swanson, J. A., P. Ansel, Locke, A. & **P. J. Hollenbeck**. 1992. Radial movement of lysosomes along microtubules in permeabilized macrophages. *Journal of Cell Science* 103:201-209. [PMID: 1429905](#)
- Hollenbeck, P. J.** 1993. Products of endocytosis and autophagy are retrieved from axons by regulated bidirectional organelle transport. *Journal of Cell Biology* 121:305-315. [PMID: 7682217](#)
- Morris, R. L. & **P. J. Hollenbeck**. 1993. Bidirectional transport of mitochondria in neurons is coordinated with axonal outgrowth. *Journal of Cell Science* 104:917-927. [PMID: 8314882](#)
- Hollenbeck, P. J.** 1993. Phosphorylation of neuronal kinesin heavy and light chains *in vivo*. *Journal of Neurochemistry* 60:2265-2275. [PMID: 8492130](#)
- Lee, K.-D. & **P. J. Hollenbeck**. 1995. Phosphorylation of kinesin *in vivo* correlates with organelle association and neurite outgrowth. *Journal of Biological Chemistry* 270:5600-5605. [PMID: 7890679](#)
- Overly, C. C., K.-D. Lee, E. Berthiaume & **P. J. Hollenbeck**. 1995. Quantitative measurement of intraorganelle pH in the endosomal-lysosomal pathway in neurons using ratiometric imaging with pyranine. *Proceedings of the National Academy of Sciences U.S.A.* 92:3156-3160. [PMCID: PMC42124](#)
- Morris, R. L. & **P. J. Hollenbeck**. 1995. Axonal transport of mitochondria along

- microtubules and F-actin in living vertebrate neurons. *Journal of Cell Biology* 131:1315-1326. [PMID: 8522592](#)
- Olink-Coux, M. & **P. J. Hollenbeck**. 1996. Localization and active transport of mRNA in axons of sympathetic neurons in culture. *Journal of Neuroscience* 16:1346-1358. [PMID: 8778286](#)
- Overly, C. C., H. I. Rieff & **P. J. Hollenbeck**. 1996. Organelle motility and metabolism in axons vs dendrites of cultured hippocampal neurons. *Journal of Cell Science* 109:971-80. [PMID: 8743944](#)
- Overly, C. C. & **P. J. Hollenbeck**. 1996. Dynamic organization of endocytic pathways in axons of cultured sympathetic neurons. *Journal of Neuroscience* 16:6056-6064. [PMID: 8815888](#)
- Ruthel, G. and **P. J. Hollenbeck**. 2000. Growth cones are not required for initial establishment of polarity or differential axon branch growth in cultured hippocampal neurons. *Journal of Neuroscience* 20:2266-2274. [PMID: 10704502](#)
- Chada, S. and **P. J. Hollenbeck**. 2003. Mitochondrial movement and positioning in axons: the role of growth factor signaling. *Journal of Experimental Biology* 206:1985-1992.
- Lee, S.-K. and **P. J. Hollenbeck**. 2003. Organization and translation of mRNA in sympathetic axons. *Journal of Cell Science* 116:4467-4478. [PMID: 13130093](#)
- Ruthel, G. & **P. J. Hollenbeck**. 2003. Response of mitochondrial traffic to axon determination and differential branch growth. *Journal of Neuroscience* 23:8618-8624. [PMID: 13679431](#)
- Chada, S. R. and **P. J. Hollenbeck**. 2004. Nerve growth factor signaling regulates motility and docking of axonal mitochondria. *Current Biology* 14:1272-1276. [PMID: 12756280](#)
- Verburg, J. L. & **P. J. Hollenbeck**. 2008. Mitochondrial membrane potential in axons increases with local NGF or semaphorin signaling. *Journal of Neuroscience* 28:8306-8315. [PMCID: PMC2597466](#)
- Amiri, M. & **P. J. Hollenbeck**. 2008. Mitochondrial biogenesis in the axons of vertebrate peripheral neurons. *Developmental Neurobiology* 68:1348-1361. [PMCID: PMC2538952](#)
- Pathak, D., Sepp, K. & **P. J. Hollenbeck**. 2010. Evidence that myosin opposes microtubule-based axonal transport of mitochondria. *Journal of Neuroscience* 30:8984-8992. [PMCID: PMC2904968](#)
- Shidara, Y. & **P. J. Hollenbeck**. 2010. Defects in mitochondrial axonal transport and membrane potential without increased ROS production in a *Drosophila* model of Friedreich ataxia. *Journal of Neuroscience* 30:11369-11378. [PMCID: PMC2943153](#)
- Sun, E. W., Wagner, M. L., Maize, A., Kemler, D., Garland-Kuntz, E., Xu, L., Luo, Z.-Q.



- and **P. J. Hollenbeck**. 2013. Legionella pneumophila infection of Drosophila S2 cells induces only minor changes in mitochondrial dynamics. *PLoS ONE* 8(4):e62972. [PMCID: PMC3640039](#)
- Devireddy, S., Sung, H., Liao, P.C., Garland-Kuntz, E. and **P. J. Hollenbeck**. 2014. Analysis of mitochondrial traffic in Drosophila. *Methods in Enzymology* 547:131-150. [PMID: 25416356](#)
- Devireddy, S., Liu, A., Lampe, T. and **P. J. Hollenbeck**. 2015. The organization of mitochondrial quality control and life cycle in the nervous system in vivo in the absence of PINK1. *Journal of Neuroscience* 35:9391-9401. [PMCID: PMC4478254](#)
- Sung, H., K. Nguyen, L Tandarich and **P. J. Hollenbeck**. 2016. Compartmentalized in vivo regulation of Parkin-mediated mitochondrial quality control in Drosophila nervous system. *Journal of Neuroscience* 36:7375-7391. [PMCID: PMC4945662](#)
- Liao, P-C, L. C. Tandarich and **P. J. Hollenbeck**. 2017. ROS regulation of axonal mitochondrial transport is mediated by Ca<sup>2+</sup> and JNK in *Drosophila*. *PLoS ONE* 12(5): e0178105 [<https://doi.org/10.1371/journal.pone.0178105>].
- Gan, N., Nakayasu. E. S., **Hollenbeck, P. J.**, and Z.-Q. Luo. 2019. Legionella pneumophila inhibits immune signaling via MavC-mediated transglutaminase-induced ubiquitination of UBE2N. *Nature Microbiology* 4:134-43.

#### Reviews and other invited commentary:

- Hollenbeck, P. J.** 1985. Mitotic spindles in isolation. News & Views. *Nature* 316:393-394.
- Hollenbeck, P. J.** 1985. Organelle transport: A third front for cell motility. News & Views. *Nature* 317:17-18. [PMID: 4033785](#)
- Hollenbeck, P. J.** 1986. Organelle transport: Moving in different directions. News & Views. *Nature* 319:724-725. [PMID: 2419759](#)
- Hollenbeck, P. J.** 1988. Kinesin: its properties and possible functions. *Protoplasma* 145:145-152.
- Hollenbeck, P. J.** 1989. The transport and assembly of the neuronal cytoskeleton. *Journal of Cell Biology* 108:223-227. [PMID: 2465294](#)
- Hollenbeck, P. J.** 1989. Cell Motility: Dissecting a molecular motor. News & Views. *Nature* 338:294-295. [PMID: 2493584](#)
- Hollenbeck, P. J.** 1990. Cell biology: Cytoskeleton on the move. News & Views. *Nature* 343:408-409. [PMID: 1689014](#)
- Hollenbeck, P. J.** 1990. Cell motility: Dynamin joins the family. News & Views. *Nature* 347:229. [PMID: 2144892](#)
- Hollenbeck, P. J.** & W. L. Dentler. 1991. Cell biology: Microtubules get the chop. News

& Views. *Nature* 350:378-379. PMID: 2011187

**Hollenbeck, P. J.** 1996. The pattern and mechanism of mitochondrial transport in axons. *Frontiers in Bioscience* 1:91-102. [http://www.bioscience.org//1996/v1/d/hollenb1/htmls/list.htm] PMID: 9159217

**Hollenbeck, P.J.** & G. Ruthel. 1999. Neurobiology: Sorting out the neuron. News & Views. *Nature* 397:653-4. PMID: 10067888

**Hollenbeck, P. J.** & J. R. Bamberg. 1999. Axonal microtubules stay put. News & Views. *Nature Cell Biology* 1:E171-173. PMID: 10559993

**Hollenbeck, P. J.** 2001. Kinesin delivers: identifying receptors for motor proteins. *Journal of Cell Biology* 152:F25-F27. PMCID: PMC2198802

**Hollenbeck, P. J.** 2001. Microtubules get the signal. *Current Biology* 11:R820-823. PMID: 11676935

**Hollenbeck, P. J.** 2002. Mechanics of Motor Proteins and the Cytoskeleton (book review). *Quarterly Review of Biology* 77:317-318.

**Hollenbeck, P. J.** 2005. Mitochondria and Neurotransmission: Evacuating the Synapse. *Neuron* 47:331-333. PMCID: PMC2538582

**Hollenbeck, P. J.** and W. M. Saxton. 2005. The axonal transport of mitochondria. *Journal of Cell Science* 118:5411-5419. PMID: 16306220

Suter, D. M. & **P. J. Hollenbeck.** 2012. How to Get on the Right Track. *Nature Neuroscience* 15:7-8. PMID: 22193250

Saxton, W. M. & **P. J. Hollenbeck.** 2012. The axonal transport of mitochondria. *Journal of Cell Science* 125:1-10. PMCID: PMC3656622

Berman, S. B. & **P. J. Hollenbeck.** 2013. Exploring the life cycle of mitochondria in neuropsychiatric diseases: Mitochondrial dynamics and quality control. *Neurobiology of Disease* 51:1-2. PMID: 23159742

**Hollenbeck, P. J.** & D. M. Suter. 2013. Cell Biology: Motor protein moonlights in microtubule sliding. *Current Biology* 23:R575-R576. PMID: 23845248

**Hollenbeck, P. J.** 2014. Directing traffic and autophagy in axonal transport. *Developmental Cell* 29: 505-6. PMID: 24914557

#### Book chapters:

**Hollenbeck, P. J.** & D. Bray. 1985. A novel 330 kd protein and its possible role in axonal transport. In *Microtubules and Microtubule Inhibitors*. eds. M. De Brabander & J. De Mey, Elsevier Science Publ. Co. Inc. New York. 205-211.

**Hollenbeck, P. J.** & R. S. Weld. 1994. Axonal homeostasis and the nature of regulated retrograde organelle transport. In *Neuronal Cytoskeleton -- Morphogenesis, Transport and Synaptic Transmission*. ed. N. Hirokawa. Japan Scientific Societies Press, Tokyo. pp 111-127.

**Hollenbeck, P. J.** and J. R. Bamburg. 2003. Comparing properties of neuronal culture systems: a shopping guide for the cell biologist. *Methods in Cell Biology* 71:1-16. PMID: [12884683](#)

**Hollenbeck, P. J.** and D. M. Fekete. 2003. Expression of transgenes in primary neurons from chick PNS and CNS by retroviral infection of early embryos. *Methods in Cell Biology* 71:349-365. PMID: [12884700](#)

Martinez, C. Y. and **P. J. Hollenbeck**. 2003. Transfection of primary CNS and PNS neurons by electroporation. *Methods in Cell Biology* 71:321-332. PMID: [12884998](#)

Devireddy, S., H. Sung, P.C. Liao, E. Garland-Kuntz and **P. J. Hollenbeck**. 2014. Analysis of Mitochondrial Traffic in *Drosophila*. *Methods in Enzymology* 547:131-50. PMID: [25416356](#)

#### **Books and volumes edited:**

**Hollenbeck, P. J.** and J. R. Bamburg. 2003. Editors, "Neurons: Methods and Applications for the Cell Biologist." Academic Press.

Walkup, J., Mink, J. and **P. J. Hollenbeck**. 2006. Editors, Proceedings of the 4<sup>th</sup> International Scientific Symposium on Tourette Syndrome, *Advances in Neurology* (Lippincott), 2006.

Berman, S. B. & **P. J. Hollenbeck**. 2012. Editors, "Mitochondrial dynamics and quality control in neuropsychiatric diseases" special issue. *Neurobiology of Disease*, vol 51.

#### **Outreach articles:**

**Hollenbeck, P.J.** 1999. How life imitates Tourette Syndrome. *CNS Spectrums* 4:22-23.

**Hollenbeck, P. J.** 2000. Insight and Hindsight into Tourette Syndrome. In *Advances in Neurology* 85, eds D. Cohen, J. Jancovic. & C. Goetz, Lippincott Williams & Wilkins. Philadelphia. 363-367. PMID: [11530444](#)

**Hollenbeck, P. J.** 2003. A Jangling Journey: Life with Tourette Syndrome. *Cerebrum* 5:47-60.

Roper, L., **P. J. Hollenbeck** & H. Rickards. 2012. Tourette syndrome support organisations around the world. In *Tourette Syndrome*, Martino and Leckman, eds, New York: Oxford University Press.

#### **Abstracts:**

**Hollenbeck, P. J.** & D. Bray. 1987. Rapid Transport of a Class of Neuronal Organelles is Coordinated with Axonal Elongation. *Journal of Cell Biology* 105:262a. (ASCB Meetings, St Louis, MO, 11/20/87).

- Hollenbeck, P. J.** & J. A. Swanson. 1989. Kinesin Contributes to the Radial Extension of Macrophage Tubular Lysosomes. *Journal of Cell Biology* 109:81a. (ASCB Meetings, Houston, TX, 11/6/89).
- Hollenbeck, P. J.** & R. L. Morris. 1990. Bidirectional Organelle Transport in Axons is Coordinated with Axonal Outgrowth and Regulated by Agents which Alter Intracellular cAMP Levels. *Journal of Cell Biology* 111:414a. (ASCB Meetings, San Diego, CA, 12/9/90).
- Tint, I. S., A. D. Bershadsky & **P. J. Hollenbeck**. 1990. Intermediate Filament Reorganization is Induced by the Contraction of the Actin Cortex in Permeabilized Fibroblasts. *Journal of Cell Biology* 111:414a. (ASCB Meetings, San Diego, CA, 12/9/90).
- Hollenbeck, P. J.** 1991. Kinesin Heavy and Light Chains Are Phosphorylated In Vivo in Neurons. *Journal of Cell Biology* 115:390a. (ASCB Meetings, Boston, MA, 12/12/91).
- Swanson, J. A., A. Locke, G. Rosania & **P. J. Hollenbeck**. 1991. Radial Movement of Lysosomes in Permeabilized Macrophages. *Journal of Cell Biology* 115:38a. (ASCB Meetings, Boston, MA, 12/9/91).
- Hollenbeck, P. J.** 1992 Retrograde Axonal Transport of Organelles That Result From Fusion of the Endocytic and Autophagic Pathways. *Molecular Biology of the Cell* 3:172a. (ASCB Meetings, Denver, CO, 11/17/92)
- Morris, R. L. & **P. J. Hollenbeck**. 1992. Bidirectional Axonal Transport of Mitochondria is Coordinated with Axonal Outgrowth. *Molecular Biology of the Cell* 4:172a. (ASCB Meetings, Denver, CO, 11/17/92).
- Lee, K.-D. & **P. J. Hollenbeck**. 1993. Kinesin Phosphorylation Correlate With Its Association with Organelle Membranes. *Molecular Biology of the Cell* 4:276a. (ASCB Meetings, New Orleans, LA, 12/14/93).
- Overly, C. C. & **P. J. Hollenbeck**. 1993. Motility and Distribution of Organelles in Axons vs Dendrites of Hippocampal Neurons in Culture. *Molecular Biology of the Cell* 4:274a. (ASCB Meetings, New Orleans, LA, 12/14/93).
- Morris, R. L, K.-D. Lee, R. S. Weld & **P. J. Hollenbeck**. 1993. The Tracks and Motors for Mitochondrial Transport in Axons. *Molecular Biology of the Cell* 4:274a. (ASCB Meetings, New Orleans, LA, 12/14/93).
- Morris, R. L. & **P. J. Hollenbeck**. 1994. Axonal Transport of Mitochondria on Microtubules and F-actin *In Vivo*. *Molecular Biology of the Cell* 5:42a. (ASCB Meetings, San Francisco, 12/11/94)
- Overly, C. C. & **P. J. Hollenbeck**. 1994. Regional Differences in the Endocytic Pathway in Cultured Neurons. *Molecular Biology of the Cell* 5:111a. (ASCB Meetings, San Francisco, 12/11/94)
- Olink-Coux, M. & **P. J. Hollenbeck**. 1994. Localization of Specific mRNAs in Peripheral Axons. (FASEB Conference on mRNA Localization, San Diego, CA, 7/15/94)
- Hollenbeck, P. J.** 1994. Mitochondrial Transport in Neurons. (Gordon Conference on

Motile and Contractile Systems, Plymouth, NH, 7/11/94)

- Overly, C. C. & **P. J. Hollenbeck**. 1994. Differences in the Endocytic Pathways in Axons vs Dendrites of Cultured Neurons. (Gordon Conference on Cell Biology of the Neuron, Plymouth, NH, 6/15/94).
- Olink-Coux, M. & **P. J. Hollenbeck**. 1995. Localization and Active Transport of mRNA in Axons of Sympathetic Neurons in Culture. *Molecular Biology of the Cell* 6:99a. (ASCB Meetings, Washington, D.C. 12/10/95)
- Overly, C. C., H. I. Rieff & **P. J. Hollenbeck**. 1995. Axonal and Dendritic Organelle Transport in Hippocampal Neurons: Differences in Organization and Behavior. *Molecular Biology of the Cell* 6:266a. (ASCB Meetings, Washington, D.C. 12/12/95)
- Overly, C. C. & **P. J. Hollenbeck**. 1996. Dynamic Organization of Endocytic Pathways in Axons of Cultured Sympathetic Neurons. *Molecular Biology of the Cell* 7:225a. (ASCB Meetings, San Francisco, CA 12/96).
- Hollenbeck, P. J.** 1998. The Regulation of Mitochondrial Transport in Axons. *Cell Structure & Function* 23:193. (COE International Conference on Molecular Mechanisms of Intracellular Transport, Shonan Village Conference Center, Japan, 8/20/98).
- Ruthel, G. & **P. J. Hollenbeck**. 1998. Mitochondrial sorting at branch points is coordinated with differential growth of axonal branches in cultured rat hippocampal neurons. *Molecular Biology of the Cell* 9S:406a. (ASCB Meetings, San Francisco, CA, 12/98)
- Ruthel, G. & **P. J. Hollenbeck**. 1999. (Society for Neuroscience Meetings, Miami, FL 10/23/99)
- Ruthel, G. & **P. J. Hollenbeck**. 1999. Growth cones are not required for initial establishment of polarity or differential axon branch growth in cultured hippocampal neurons. *Molecular Biology of the Cell* 10S:260a. (ASCB Meetings, Wash. DC 12/11/99)
- Ruthel, G. & **P. J. Hollenbeck**. 2000. Growth cones are not required for initial establishment of polarity or differential axon branch growth in cultured hippocampal neurons. *Journal of Neurochemistry* 74:S1A. (American Society for Neurochemistry Meetings, Chicago, IL 2/26/00)
- Ruthel, G., S. R. Chada & **P. J. Hollenbeck**. 2000. Axonal transport of mitochondria is regulated by axonal growth and NGF signaling. *Molecular Biology of the Cell* 11S:145a. (ASCB Meetings, San Francisco, CA 12/14/00)
- Chada, S. R. & **P. J. Hollenbeck**. 2001. Axonal transport of mitochondria is regulated by NGF signaling via a specific kinase pathway. *Molecular Biology of the Cell* 12S:166a (ASCB Meetings, Washington, D.C.)
- Lee, S. K. & **P. J. Hollenbeck**. 2001. mRNA localization and protein synthesis in axons of chick sympathetic neurons. *Molecular Biology of the Cell* 12S:363a (ASCB Meetings, Washington, D.C.)

- Chada, S. R., R. M. Hicks & **P. J. Hollenbeck**. 2002. Mitochondrial motility in response to nerve growth factor (NGF) stimulation. *Molecular Biology of the Cell* 13S:475a (ASCB Meetings, Washington, D.C. 12/10/02)
- Chada, S. R. and **P. J. Hollenbeck**. 2002. Mitochondrial movement and positioning in axons: the role of growth factor signaling. (Company of Biologists International Conference on "Roles of Intracellular Movement and Intracellular Structure in Metabolic Regulation, Victoria, British Columbia)
- Hollenbeck, P. J.**, G. Ruthel & S. R. Chada. 2003. Regulation of mitochondrial motility in neurons in response to axonal growth and nerve growth factor signaling. (9<sup>th</sup> International Congress on Batten Disease. Chicago, IL).
- Verburg, J. L., R. L. Morris & **P. J. Hollenbeck**. 2005. Mitochondrial transport and location within axons are not associated with membrane potential. (45<sup>th</sup> annual ASCB meetings, San Francisco, 12/10/05).
- Verburg, J. L. & **P. J. Hollenbeck**. 2007. Mitochondrial Membrane Potential Does Not Vary with Transport or Location in the Axon, but is Increased Locally by NGF or Semaphorin Signaling (47<sup>th</sup> annual ASCB meetings, Washington DC, 12/03/07).
- Shidara, Y. & **P. J. Hollenbeck**. 2007. A Drosophila model of Friedreich ataxia shows disrupted mitochondrial transport and membrane potential but no increased ROS production (47<sup>th</sup> annual ASCB meetings, Washington DC, 12/03/07).
- Amiri, M. & **P. J. Hollenbeck**. 2007. Mitochondrial biogenesis can occur in the axons of vertebrate peripheral neurons. (47<sup>th</sup> annual ASCB meetings, Washington DC, 12/04/07).
- Shidara, Y & **P. J. Hollenbeck**. 2008. Mitochondrial transport, membrane potential and ROS production in a Drosophila model of Friedreich ataxia. (United Mitochondrial Disease Foundation meeting, Indianapolis IN, 06/28/08).
- Hollenbeck, P. J.** 2008. A Drosophila model of Friedreich ataxia shows disrupted mitochondrial transport and membrane potential but no increased ROS production. (Federation of European Neuroscience Societies meeting, Geneva Switzerland, 07/13/08).
- D. Pathak & **P. J. Hollenbeck**. 2008. Role of Actomyosin-based Force Generation in Mitochondrial Movement in Drosophila Neurons. (48<sup>th</sup> annual ASCB meetings, San Francisco, CA).
- Shidara, Y. & **P. J. Hollenbeck**. 2010. The Cellular Neurobiology of Friedreich Ataxia: Mitochondrial Motility, Metabolic State and ROS Production in the Drosophila Nervous System (50<sup>th</sup> annual ASCB meetings, Philadelphia, PA, 12/14/10).
- Hollenbeck, P. J.** 2011. Mitochondrial Motility, Metabolic State and ROS Production in the Normal and Pathologic Drosophila Nervous System (Conference on

Emerging Concepts in Neuronal Cytoskeleton, Santa Cruz, Chile, 04/26/11).

Devireddy, S., E. Garland-Kuntz, L. Pallanck & **P. J. Hollenbeck**. 2011. Impaired Mitochondrial Function, Axonal Transport And Morphology in the Neurons of PINK1 Mutants of *Drosophila* (51<sup>st</sup> Annual ACB meetings, Denver, CO, 12/12/11).

Liao, P. C. & **P. J. Hollenbeck**. 2013. The impact of reactive oxygen species (ROS) on the mitochondrial transport. Autophagosomal Process in Parkinson's Disease Model (53rd Annual ASCB meetings, New Orleans, LA, 12/16/13)

Sung, H., S. Devireddy and **P. J. Hollenbeck**. 2013. Mitochondrial Quality Control and Autophagosomal Process in Parkinson's Disease Model (53<sup>rd</sup> Annual ASCB meetings, New Orleans, LA, 12/16/13).

**Hollenbeck, P. J.** 2015. The Transport, Turnover and Life Cycle of Mitochondria, in sickness and health. HHMI Janelia Farm conference (Ashburn, VA 06/01/15).

**Liao, P-C and P. J. Hollenbeck**. 2015. The Impact of Reactive Oxygen Species (ROS) on Mitochondrial Transport in Neurons. (45th Annual Society for Neuroscience meetings, Chicago, IL, 10/18/15).

**Domestic and international invited research presentations and lectures:**

**1987**

American Society for Cell Biology Meetings, St Louis, MO, 11/20/87

Department of Biochemistry, Colorado State University, Ft Collins, 11/11/87

Department of Molecular and Cellular Biology, University of Colorado Health Sciences Center, Denver, 11/10/87

Department of Anatomy & Cellular Biology, Harvard Medical School, 11/5/87

Medical Research Council Laboratory, Cambridge, England, 11/3/87

All-Union Oncological Center, USSR Academy of Medical Sciences, Moscow, USSR, 9/25/87

**1988**

European Molecular Biology Organization Workshop on Assembly and Dynamics of the Cytomatrix, Maria Alm, Austria, 3/15/88

**1989**

Dept of Psychiatry, Mailman Research Center, McClean Hospital, 4/11/89

New England Medical Center, Tufts University Medical School, Boston, 3/27/89

**1990**

Marine Biological Laboratory, Woods Hole, MA, 5/9/90

Frontiers in Cell Motility Symposium, Wadsworth Center for Laboratories and Research, New York State Department of Health, Albany, NY, 4/20/90

**1992**

Dept of Anatomy & Cell Biology, University of Alberta, Edmonton, 5/19/92

Dept of Zoology, University of California, Davis, 5/12/92

John C. Davis Memorial Lecture in Physiology & Cell Biology, Annual Symposium, Dept of Physiology & Cell Biology, University of Kansas, Lawrence, 4/25/92

Neuroscience Program, Tufts University Medical School, Boston, MA, 1/22/92

Whitehead Institute & Dept of Biology, MIT, Cambridge, MA, 1/10/92

**1993**

Dept of Anatomy, University of Wisconsin School of Medicine, 11/16/93

Dept of Biochemistry, Boston University School of Medicine, 10/4/93

E. K. Shriver Research Center, Waltham, MA, 4/21/93

Renal Unit, Massachusetts General Hospital East, Charlestown, MA, 3/2/93

**1994**

Anatomy & Structural Biology, Albert Einstein College of Medicine, New York, NY. 11/10/94

Gordon Conference on Motile and Contractile Systems, Plymouth, NH, 7/11/94

Dept of Psychiatry, Mailman Research Center, McClean Hospital, 3/8/94

Dept of Biology, Boston College, Chestnut Hill, MA, 3/14/94

**1995**

Dept. of Biochemistry, Brandeis University, Waltham, MA, 12/7/95

Woods Hole Marine Biology Laboratory, Woods Hole MA, 8/7/95

Neuroscience Program, Tufts University Medical School, Boston MA, 5/3/95

Department of Anatomy, Emory University Medical School, Atlanta GA, 4/12/95

R. R. Bensley Memorial Award Lecture, FASEB Meetings, Atlanta, GA, 4/11/95

Dept of Biology, Boston College, Chestnut Hill, MA, 2/28/95

Program in Neuroscience, Colorado State University, Ft. Collins, CO, 2/14/95

Biophysical Society Meetings, San Francisco, CA, 2/12/95

**1996**

Boston Biomedical Research Institute, Boston, MA, 2/28/96

Dept. of Anatomy & Neurobiology, Colorado State University, Ft. Collins, CO, 2/5/96

Dept. of Biology, Purdue University, W. Lafayette, IN, 1/8/96

**1997**

Department of Medicine, Indiana University Medical School, Indianapolis IN, 12/1/97

Department of Biology, Illinois State University, Normal IL, 12/4/97

**1998**



TSA National Conference, Arlington VA, 10/16/98

COE International Conference on Molecular Mechanisms of Intracellular Transport, Shonan Village Conference Center, Japan, 8/20/98

National Heart, Lung & Blood Institute/NIH, Bethesda MD, 6/1/98

### **1999**

Hereditary Disease Foundation Workshop on "Huntingtin Action: Up and Down the Axon," Los Angeles, CA 6/27 - 6/28/99

Dept of Pharmacology & Physiology, University of Chicago, Chicago IL, 6/11/99

Basic Neurosciences Symposium, 3rd International Scientific Symposium on Tourette Syndrome, NYC, 6/5/99

### **2000**

American Society for Cell Biology Meetings Mini-symposium on Regulation of Cytoskeletal Motors, San Francisco, CA 12/14/00

American Society for Neurochemistry Meetings Symposium on Control of Neuronal Polarity, Chicago, IL 3/26/00

Massachusetts TSA Educators' Conference, Boston MA, 3/24/00

Dept of Cell Biology, Neurobiology, and Anatomy, University of Cincinnati College of Medicine, Cincinnati, OH, 2/9/00

### **2001**

Illinois TSA Educators' Conference, Chicago, IL, 11/2/01

American Medical Writers Association national meetings, Norfolk, VA, 10/25/01

Dept of Biochemistry, Colorado State University, Ft. Collins, CO, 4/25/01

Dept of Basic Medical Sciences, Purdue University, West Lafayette, IN, 1/11/01

### **2002**

Company of Biologists International Conference on "Roles of Intracellular Movement and Intracellular Structure in Metabolic Regulation," Mount Newton, British Columbia, 8/31/02

American Society for Neurochemistry Meetings Symposium on Mitochondria, Palm Beach, FL, 6/22/02

Dept of Biology, Indiana University, Bloomington, IN, 4/4/02

Midwest Cytoskeleton Meeting, Northwestern University Medical School, Chicago, IL, 2/15/02

### **2003**

Dept of Biology, Wabash College, Crawfordsville IN, 10/23/03

DFG Priority Program Meeting on Molecular Motors, Schneverdingen, Germany, 9/30/03

Max-Planck-Unit for Structural Molecular Biology, Hamburg, Germany, 9/29/03

Department of Cell Biology and Physiology, Washington University School of Medicine, St Louis MO. 9/12/03

Gordon Conference on Motile and Contractile Systems, Colby-Sawyer College, New London, NH, 7/3/03

9th International Congress on Batten Disease, Chicago IL, 4/11/03.

Dept of Biological Sciences, Purdue University-Calumet, Calumet, IN, 3/27/03

**2004**

Dept of Anatomy and Cell Biology, Tufts University Medical School, Boston, MA, 4/08/04

Dept of Biology, Wheaton College, Norton, MA, 4/28/04.

4th International Scientific Symposium on Tourette Syndrome, Cleveland, OH, 6/27/04

**2005**

Seminar: Dept of Physiology and Biophysics, University of Illinois, Chicago IL, 4/5/05

**2006**

Seminar, Dept of Cell and Developmental Biology, University of Illinois, Urbana IL, 5/3/06

Platform lecture: Gordon Research Conference on Mitochondria and Chloroplasts, Magdalen College, Oxford, England, 8/14/06

Platform Lecture: Banbury Conference on Axonal Dynamics and Synaptic Junctions, Cold Spring Harbor, NY, 10/30/06.

Platform presentation: Chicago Cytoskeleton Conference, Northwestern University Medical School, Chicago, IL, 11/17/06

**2007**

Platform lecture: American Society for Cell Biology national meetings, Washington DC, 12/05/07

Platform lecture: Tourette2007 International Scientific Symposium on Tourette Syndrome, Lillehammer, Norway, 06/22/07.

**2008**

Platform lecture: United Mitochondrial Disease Foundation Symposium, Indianapolis, IN, 06/26/08.

Platform lecture: Federation of European Neuroscience Societies meeting, Geneva Switzerland, 07/13/08.

Platform lecture: Nature Genetics/IPSEN Foundation Symposium on Mitochondrial Dysfunction and Neurological Disease, Duke University, NC, 12/05/08.

Platform lecture: Subgroup on Mitochondrial Dynamics, American Society for Cell Biology national meetings, San Francisco, CA, DC, 12/13/08

**2009**

Invited lecture: Dept of Developmental Neurobiology, St Jude Children's Hospital, Memphis TN, 05/06/09

Platform lecture: Gordon Research Conference on Molecular and Cellular Bioenergetics, Andover, NH, 06/07/09

**2010**

Platform lecture: Chicago Cytoskeleton Conference, Northwestern Medical School, Chicago IL 3/26/10

**2011**

Invited lecture: Dept of Biology, University of California Santa Cruz, CA, 02/14/11

Invited lecture: Dept of Cancer and Cell Biology, University of Cincinnati School of Medicine, Cincinnati OH, 04/14/11

Platform lecture: Conference on Emerging Concepts in Neuronal Cytoskeleton, Santa Cruz, Chile, 04/26/11

## **2012**

Invited lecture: Dept of Neuroscience, University of Minnesota School of Medicine, Minneapolis MN, 2/9/12

Platform presentation: Tourette Syndrome Association National Conference, Alexandria, VA, 4/20-21/12

Invited lecture: Dept of Neurobiology and Anatomy, Drexel University School of Medicine, Philadelphia, PA 5/1/12

Platform presentation: 52nd Annual American Society for Cell Biology meeting, San Francisco, CA, 12/15/12.

## **2013**

Platform presentations: ICTS-TIFR Advanced School and Workshop on Axonal Transport and Neurodegenerative Disorders, Mumbai, India, 1/18, 1/21, 1/24/13.

Invited lecture: Samuel Colella Lecture Series in Neurodegeneration, University of Pittsburgh School of Medicine, Pittsburgh, PA, 2/20/13

## **2014**

Invited lecture: Dept of Biochemistry and Molecular Biology, Michigan State University, East Lansing, MI, 03/17/14

Invited lecture: Dept of Biological Sciences and Interdisciplinary Neuroscience Program, Simon Fraser University, Vancouver, BC, Canada, 04/10/14

Invited lecture: Dept of Anatomy and Cell Biology, University of Illinois School of Medicine, Chicago, IL, 06/17/14

Platform presentation: Cell Press-Fondation Ipsen Symposium on Biology of Size, La Jolla, CA, 10/29/14

## **2015**

Platform presentation: Howard Hughes Medical Institute conference on Neuronal Trafficking in Physiology and Disease, Janelia Farm, Ashburn, VA, 06/01/15

Platform presentation: 45th Annual Society for Neuroscience meetings, Minisymposium on "Axonal Transport Defects in Neurodegenerative Diseases II: Mechanisms and Molecular Components," Chicago IL, 10/17/15.

## **2016**

Invited lecture: Graduate Program in Molecular and Cellular Biology, Brown University, Providence, RI, 04/13/16

Platform Presentation: Molecular Biology Training Grant Symposium, Yale University, New Haven, CT, 05/18/16

## **2017:**

Invited lecture: Distinguished Lecture in College of Pharmacy, Ohio State University, Columbus OH, 01/18/17

Platform Presentation: 2017 Flies on the Beach symposium in *Drosophila* neurobiology, Florida Atlantic University, Jupiter FL, 05/12/17