

February 1, 2013

**CURRICULUM VITAE**

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**EDUCATION:**

Fayetteville State University  
Fayetteville, North Carolina  
BS, Biology, 1966

Illinois Institute of Technology  
Chicago, Illinois  
MS, Cell Biology, 1966-1969  
PhD, Cell Biology, 1969-1971  
Dr. William Danforth, Thesis Advisor

University of Pennsylvania  
Philadelphia, Pennsylvania  
Postdoctoral Fellow, 1971-1973  
Biophysical Cell Biology Program, Biology Department  
Dr. Shinya Inoue, Postdoctoral Mentor

**HONORARY DEGREES:**

Beloit College  
Doctor of Humane Letters, 2001

## EMPLOYMENT HISTORY:

### **Current Position:**

2008- present    Syracuse University  
Dean, The College of Arts and Sciences  
Professor of Biology

### **Former Positions:**

2005 - 2008    University of Massachusetts Amherst  
Dean, College of Natural Sciences & Mathematics  
Distinguished Professor, Dept. Biology

1991-2005    Dartmouth College  
Ernest Everett Just Professor of Natural Sciences and  
Professor of Biological Sciences  
Adjunct Professor of Physiology, Dartmouth Medical School

1988-1991    University of North Carolina at Chapel Hill  
Professor  
Department of Physiology  
School of Medicine

1979-1988    University of North Carolina at Chapel Hill  
Associate Professor Department of Physiology  
School of Medicine

1977-79    Howard University, Washington, DC  
Assistant Professor  
Department of Anatomy  
College of Medicine

1973-76    University of Massachusetts - Boston  
Assistant Professor  
Department of Biology

1971-73    University of Pennsylvania, Philadelphia  
Postdoctoral Fellow  
Program in Biophysical Cell Biology  
Biology Department Professor Shinya  
Inoue

1988-1989    National Science Foundation  
Program Director Cell  
Biology Program

1976            Marine Biological Laboratory, Woods Hole, MA  
Josiah Macy Scholar Dr. Raymond E. Stephens  
Laboratory

1969-71        Argonne National Laboratory, Argonne, Illinois  
Graduate Research Fellow  
Dr. Robert Webb Laboratory

#### PROFESSIONAL SOCIETIES:

American Society for Cell Biology  
American Association for the Advancement of Science  
Corporation of the Marine Biological Laboratory, Woods Hole, MA  
Society of Sigma Xi  
North Carolina Society for Electron Microscopy and Microbeam Analysis

#### SERVICE ON THE NATIONAL SCIENCE BOARD:

Member, National Science Board (NSB) 1998-2004  
Chair NSB Education and Human Resources Committee 2000-2004  
Chair NSB Vannevar Bush Award Committee 1999-2003  
Vice-Chair NSB National Workforce Taskforce Subcommittee 1999-2004

#### SERVICE ON EDITORIAL BOARDS:

Cell Motility and the Cytoskeleton 1995-2002  
Biological Bulletin 1987-1995

#### REVIEWER OF JOURNAL ARTICLES:

Journal of Neuroscience  
Journal of Neurobiology  
Traffic  
Journal of Cell Science  
Journal of Cell Biology  
Biological Bulletin  
Cell Motility and the Cytoskeleton  
Molecular Biology of the Cell

#### FEDERAL AGENCY GRANT REVIEW PANELS:

National Institute of Child Health and Human Development (NICHD) 2004-present

AAAS – Kansas INBRE Program Review panel  
January 2009

National Science Foundation ad hoc reviewer

National Institutes of Health SYN Study Section 2002-2006

## SCIENTIFIC ADVISORY BOARDS AND BOARDS OF TRUSTEES:

Burroughs-Wellcome Fund – Chair, Board of Directors (present)  
National Nanofabrication Infrastructure Network (NNIN) Scientific Advisory Board (present)  
National Research Council of the National Academies Committee on Enhancing the Master's Degree in the Natural Sciences (present)  
National Science Board of the National Science Foundation (former 1998 - 2004)  
Sherman Fairchild Foundation Scientific Advisor Board (former) American Cancer Society Scientific Advisor Board (former) Howard Hughes Medical Institute Scientific Advisor Board (former) The Whitney Laboratory for Marine Biosciences, University of Florida Scientific Advisor Board (former)

## OTHER PROFESSIONAL ACTIVITIES:

Howard Hughes Medical Institute, Reviewer, Undergraduate Science Education Competition (present)  
Howard Hughes Medical Institute, Science Education Advisory Board, (present)  
MedTech Science and Technology Committee (present)  
National Institutes of Health Director's Pioneer Award Review Panel (present)  
National Science Foundation Site Visit to McMurdo and South Pole Stations, Antarctica December 2-8, 2002  
Organizer: Symposium for the 2002 annual meeting of the American Society for Neurochemistry - Symposium Title: Dynamics of the neuronal cytoskeleton

## PAST PROFESSIONAL ACTIVITIES:

Marine Biological Laboratory, Woods Hole, Board of Trustees, 1984-1992, 2000 -2004  
American Society for Cell Biology Executive Committee 1993-1999  
American Society for Cell Biology Secretary 1993-1999  
Sixth International Congress on Cell Biology meeting Organizer, 1996  
Sixth International Congress of Cell Biology meeting, Vice-President, 1996  
NIH NIGMS MARC Review Subcommittee 1997-2001  
NSF Alan T. Waterman Award Committee 1997-2000  
National Research Council Associateship Programs Advisory Committee 1997-2006  
Cold Spring Harbor Laboratory meeting on the Cytoskeleton, Organizer, 1995  
American Association for the Advancement of Science Nominating Committee 1994-1996  
NSF Biological Sciences Directorate Advisory Committee 1992-1996  
NSF Peer Review Advisory Team (PRAT) 1996-97  
NASA Life and Microgravity Sciences and Applications Advisory Committee 1994-1997  
Marine Biological Laboratory, Woods Hole, Chairman, Science Council, 1992-1995  
Marine Biological Laboratory, Woods Hole, Research Fellowships Committee, 1986 - 98

## SPECIAL AWARDS AND HONORS:

2009 Illinois Institute of Technology Professional Achievement Award  
Guest Scientist/Lecturer NIH Undergraduate Scholarship Program, Summer 2004  
Keynote Speaker, The Ninth Annual John W. Diggs Lecture, NIH July 2004  
2004 keynote speaker for the Annual Marine Biomedicine and Environmental Sciences  
Center Student Research Day, Medical University of South Carolina  
2003 Distinguished Scholar, SPIRE - UNC-Chapel Hill April 2003  
Featured Cell Biologist in the CAMPBELL & REECE textbook: Biology Sixth Edition,  
Neil Campbell and Jane Reece, Benjamin Cummings, New York 2002 pages 106-107  
Guest Lecturer, Ernest Everett Just Symposium, Medical University of South Carolina,  
February 2001  
American Society for Cell Biology Ernest Everett Just Lectureship Award, 1994  
Friday Evening Lecturer, Marine Biological Laboratory, Woods Hole, MA, 1994  
Sigma Xi National Lecturer, 1991-1993  
Ernest Everett Just Professorship, Dartmouth College, Hanover, NH, July, 1991.  
Research featured in public television (PBS) documentary entitled Breakthrough: The  
changing face of science 1995-1996.  
Research featured in article in Carolina Alumni Review, Spring 1990 issue. Title: "On  
becoming a scientist: two profiles". Written by Walter Kaufman, pp. 34-39. Research  
featured in article in Mosaic, a publication of the National Science Foundation. Title: "The  
engines within cells". Written by Mort LaBreque, Vol. 20, No. 3< Fall 1989, pp. 34-43.  
Teaching Award for the best course in the first year medical curriculum 1986-1987.  
Program Chairman, General Scientific Meetings, Marine Biological Laboratory, Woods  
Hole, MA. 1981-1982  
Steps Towards Independence, Summer Research Fellowship, Marine Biological  
Laboratory, Woods Hole, Massachusetts 1978  
Josiah Macy Summer Research Fellowship, Marine Biological Laboratory, Woods Hole,  
Massachusetts 1976-1977  
Neurobiology Course Summer Fellowship, funded by the National Institute of Neurological  
Diseases and Stroke, of NIH and the Marine Biological Laboratory, Woods Hole,  
Massachusetts 1974.  
Physiology course Summer Postdoctoral Fellowship, Marine Biological Laboratory,  
Woods Hole, Massachusetts 1972  
Postdoctoral Fellowship, National Institutes of General Medical Sciences, University of  
Pennsylvania, Philadelphia, Pennsylvania 1971-1973 Graduate Fellowship, National  
Science Foundation 1966-1971

## EXTERNAL RESEARCH SUPPORT:

NSFINS-0131470 (Langford, PI) 06/01/02-09/31/06  
Project Title: Vesicle Associated Myosin-V Motor Complex

## ELECTRONIC PUBLICATION:

LANGFORD, G. 2004. The Science and Engineering Workforce: The Long-Term View.  
<http://nextwave.sciencemag.Org/cgi/content/full/2004/05/05/4>

## PUBLICATIONS:

Hernandez, A.G., Langford, G.M., Martinez, Jr., J.L., and Dowdall, J.J. 1976. Protein synthesis by synaptosomes from the head ganglion of the squid *Loligo pealli*. *Acta Cient. Venezuelana* 27: 120-123.

Sattelle, D.B., Langford, G.M., and Langley, K. 1977. The study of intracellular particle motion by laser light scattering. In *Photon Correlation Spectroscopy and Laser Doppler Velocimetry*. Eds. E.R. Pike and H.F. Cummins. Proceedings NATO Advanced Study Institute, Plenum Press.

Langford, G.M. 1978. *In vitro* assembly of dogfish brain tubulin and the induction of coiled ribbon polymers by calcium. *Expt'l Cell Research* 111: 139-151.

Langford, G.M., and Inoue, S. 1979. Motility of the microtubular axostyle in *Pyrrsonympha*. *J. Cell Biol.* 80: 521-538.

Langford, G.M. 1980. Arrangement of subunits in microtubules with 14 protofilaments. *J. Cell Biol.* 87:521-526.

Little, M., Luduena, R.F., Langford, G.M., Asnes, C.F., and Farrell, K. 1981. Comparison of proteolytic cleavage patterns of alpha- and beta-tubulins from taxonomically distant species. *J. Mol. Biol.* 149: 95-107.

Langford, G.M. 1981. Comparative study of dogfish shark and beef brain tubulins. *BioSystems* 14: 247-259.

Cohen, W.D., Bartelt, D., Jaeger, R., Langford, G.M., and Nemhauser, I. 1982. The cytoskeletal system of nucleated erythrocytes. I. Composition and function of major elements. *J. Cell Biol.* 93: 828-838.

Caplow, M., Langford, G.M., and Zeeberg, B. 1982. Concerning the efficiency of the treadmilling phenomenon with microtubules. *J. Biol. Chem.* 257: 15012-15021.

Langford, G.M. 1982. Temperature sensitivity, calcium lability and structure of reconstituted microtubules. In *Perspectives in Differentiation and Hypertrophy*. W.A. Anderson and W. Sadler, eds. Elsevier Science Publishing Co., Inc., New York, p. 293-308.

Langford, G.M. 1983. Length and appearance of projections on neuronal microtubules *in vitro* after negative staining: Evidence against a crosslinking function for MAPs. *J. Ultrastruc. Res.* 85: 1-10.

- Luduena, R.F., MacRae, T.H., and Langford, G.M. 1985. N,N'Ethylene-bis (iodoacetamide) as a probe for structural and functional characteristics of protostome tubulins. *Can. J. Biochem. Cell Biol.* 63: 439-447.
- Langford, G.M., Williams, E., and Peterkin, D. 1986. Microtubule-associated proteins (MAPs) of dogfish brain and squid optic ganglia. *Proc. N.Y. Acad. Sci.* 466: 440-443.
- Perez, R.A., Langford, G.M., Eckberg, W.R., and Anderson, W.A. 1986. Contractile proteins (actin, myosin) and tubulin are revealed within DNA-containing nucleocytoplasm in mature spermatozoa of *Libinia emarginata*. *J. Submicrosc. Cytol.* 18: 471-80.
- Weiss, D.G., Seitz-Tutter, D., Langford, G.M., and Allen, R.D. 1986. The native microtubule as the engine for bidirectional organelle movements. In: *Axonal Transport*. R.S. Smith and M.A. Bisby, eds., Alan Liss, New York, pp 91-111.
- Langford, G.M., Allen, R.D., and Weiss, D.G. 1987. Substructure of sidearms on squid axoplasmic vesicles and microtubules visualized by negative contrast electron microscopy. *Cell Motil. Cytoskel.* 7: 20-30.
- Weiss, D.G., Langford, G.M., and Allen, R.D. 1987. Implications of microtubules in cytomechanics: static and motile aspects. In: *Cytomechanics*. J. Berietter-Hahn, O.R. Anderson, W.E. Reif eds., Springer Verlag, Berlin, Heidelberg, pp 100-113.
- Seitz-Tutter, D., Langford, G.M., and Weiss, D.G. 1988. Dynamic instability of native microtubules from squid axons is rare and independent of gliding and vesicle transport. *Exptl Cell Res.* 178: 504-511.
- Weiss, D.G., Langford, G.M., Seitz-Tutter, D., and Keller, F. 1988. Dynamic instability and motile events of native microtubules from squid axoplasm. *Cell Motil. Cytoskel.* 10: 285-295.
- Weiss, D.G., Langford, G.M., Seitz-Tutter, D., Gulden, J., and Keller, F. 1988. Motion analysis of organelle movements and microtubule dynamics. In: *Structure and Functions of the Cytoskeleton. La Structure et Les Fonctions du Cytosquelette. Biological and phvsio pathological Aspects*. B. Rousset ed., Colloque INSERM vol. 171, INSERM-John Libbey Eurotext, Paris/London, 15 s., im Druck.
- Weiss, D.G., Meyer, M.A., and Langford, G.M. 1990. Studying axoplasmic transport by video microscopy and using the squid giant axon as model system. In: *Squid as Experimental Animals*, D.L. Gilbert, W.J. Adelman, Jr., J.M. Arnold, eds. Plenum Press. New York and London, pp. 303-321.
- Weiss, D.G., Galfe, G., Gulden, J., Seitz-Tutter, D., and Langford, G.M. 1990. Motion analysis of intracellular objects: Trajectories with and without visible tracks. In: *Biological Motion*, W. Alt and G. Hoffmann, eds. *Lecture Notes in Biomathematics*, Vol. 7, Springer-Verlag, Berlin, pp. 1-29.

Weiss, D.G., Seitz-Tutter, D., and Langford, G.M. 1991. Characteristics of the motor responsible for the gliding of native microtubules from squid axoplasm. *J. Cell Sci. Suppl.* 14: 157-161.

Weiss, D.G., Langford, G.M., Seitz-Tutter, D., and Allen, R.D. 1991. Analysis of the gliding, fishtailing and circling motions of native microtubules. *Acta Histochemica* 44: 1-16.

Kuznetsov, S.A., Langford, G.M., and Weiss, D.G. 1992. Actin-dependent organelle movement in squid axoplasm. *Nature* 356: 725-727.

Kuznetsov, S.A., Langford, G.M., and D.G. Weiss. 1992. Bidirectional gliding of microtubules from squid axoplasm. *Biol. Bull.* 183:362-363.

Kuznetsov, S.A., Rivera, D.T., Severin, F.F., Weiss, D.G., and Langford, G.M. 1994. Axoplasmic organelle motility on actin filaments from skeletal muscle. *Cell Motil. Cytoskel.* 28:231-242.

Langford, G.M., Kuznetsov, S.A., Johnson, D., Cohen, D.L., and Weiss, D.G. 1994. Movement of axoplasmic organelles on actin filaments assembled on acrosomal processes: Evidence for a barbed-end directed organelle motor. *J. Cell Sci.* 107:2291-2298.

Langford, G.M. 1995. Actin-and microtubule-dependent organelle motors: interrelationship between the two motility systems. *Current Opinion in Cell Biol.* 7:82-88.

Rivera, D.T., Langford, G.M., Weiss, D.G., and Nelson, D.J. 1995. Calmodulin regulates fast axonal transport of squid axoplasm organelles. *Brain Res Bull.* 37(1):47-52.

Tabb, J.S., Harmon, K.O., DePina, A.S., and Langford, G.M. 1996. Localization of myosin on tubulovesicular organelles in the squid giant axon by immuno-EM. *Biol. Bull.* 191:274-275.

Molyneaux, B. J. and Langford, G. M. 1997. Characterization of antibodies to the head and tail domains of squid brain myosin V. *Biol. Bull.* 193: 222-223.

Steffen, W., Langford, G. M., Weiss, D. G., and Kuznetsov, S. A. 1997. Inhibition of microtubule-dependent, minus-end directed transport of axoplasmic organelles by an antibody specific for the intermediate chain of dynein. *Biol. Bull.* 193: 221-222.

Katoh, K., Langford, G. M., Hammar, K., Smith, P. J. S. and Oldenbourg, R. 1997. Actin bundles in neuronal growth cone observed with the Pol-Scope. *Biol. Bull.* 193: 219-220.



Waterman-Storer, C.M., Karki S.B., Kuznetsov, S.A., Tabb, J.S., Weiss, D.G., Langford, G.M., and Holzbaur, E.L. 1997. The interaction between cytoplasmic dynein and dynactin is required for fast axonal transport. *Proc. Natl. Acad. Sci. USA.* 94(22): 12180-12185.

Moyer, B.D., Loffing, J., Schwiebert, E.M., Loffing-Cueni, D., Halpin, P.A., Karlson, K. H., Ismailov, I.I., Guggino, W.B., Langford, G.M. and Stanton, B.A. 1998. Membrane trafficking of the cystic fibrosis gene product, cystic fibrosis transmembrane conductance regulator, tagged with green fluorescent protein in Madin-Darby canine kidney cells. *J. Biol. Chem.* 273:21759-21768 (Published erratum appears in *J Biol Chem* 273:26256).

Langford, G.M., and Molyneaux, B.J. 1998. Myosin V in the brain: mutations lead to neurological defects. *Brain Research* 28:1-8.

Tabb, J.S., Molyneaux, B.J., Cohen, D.L., Kuznetsov, S.A., and Langford, G.M. 1998. Transport of ER vesicles on actin filaments in neurons by myosin V. *J. Cell Sci.* 111:3221-3234.

DePina, A.S., and Langford, G.M. 1999. Vesicle transport: The role of actin filaments and myosin motors. *Microscopy Res. Technique* 47:93-106.

Langford, G.M. 1999. ER muscles its way around neurons. *News Physiol. Sci.* 14:175-175.

Wöllert, T. DePina, A.S., and Langford, G.M. 1999. The effects of vanadate on actin-dependent vesicle motility in extracts of clam oocytes. *Biol. Bull.* 197:41-42.

Langford, G.M. 1999. ER transport on actin filaments in squid giant axon: implications for signal transduction at synapse. *FASEB J. (Suppl.)* 13:S248-S250.

Molyneaux, B.J., Mulcahey, M.K., Stafford, P., and Langford, G.M. 2000. Sequence and phylogenetic analysis of squid myosin V: A vesicle motor in nerve cells. *Cell Motil. Cytoskel.* 46:108-115.

Stafford, P., Brown, J., and Langford, G.M. 2000. Interaction of actin- and microtubule-based motors in squid axoplasm probed with antibodies to myosin V and kinesin. *Biol. Bull.* 199:203-205.

Sandberg, L., Stafford, P., and Langford, G.M. 2000. Effects of myosin-II antibody on actin-dependent vesicle transport in extracts of clam oocytes. *Biol. Bull.* 199:202-203.

Langford, G.M. 2000. Video-enhanced microscopy for analysis of cytoskeleton structure and function. In: *Methods in Molecular Biology*, vol. 161 *Cytoskeleton Methods and Protocols*. Ed. Ray H. Gavin, Humana Press Inc., pages 31-43.

Prahlad, V., Helfand, B.T., Langford, G.M., Vale, R.D., and Goldman, R.D. 2000. Fast transport of neurofilament protein along microtubules in squid axoplasm. *J. Cell Sci.* 113:3939-3946.

Brown, J.R., Simonetta, K.R., Sandberg, L.A., Stafford, P., and Langford, G.M. 2001. Recombinant globular tail fragment of myosin-V blocks vesicle transport in squid nerve cell extracts. *Biol. Bull.* 201:240-241.

Wöllert, T., DePina, A.S., Sandberg, L.A., and Langford, G.M. 2001. Reconstitution of active pseudo-contractile rings and myosin-II-mediated vesicle transport in extracts of clam oocytes. *Biol. Bull.* 201:241-243.

Thompson, R.F., and Langford, G.M. 2002. Myosin superfamily evolutionary history. *Anatomical Record* 268:276-289.

Brown, J.R., Peacock-Villada E.M., and Langford, G.M. 2002. Globular tail fragment of myosin-V displaces vesicle-associated motor and blocks vesicle transport in squid nerve cell extracts. *Biol. Bull.* 203:210-211.

Wöllert, T., DePina, A.S, Thompson, R.F, and Langford, G.M. 2002.  $Ca^{2+}$  Effects on myosin-II-mediated contraction of pseudo-contractile rings and transport of vesicles in extracts of clam oocytes. *Biol. Bull.* 203:206-208.

Wöllert, T., DePina, A.S, Thompson, R.F, and Langford, G.M. 2002. GTPase Rho is involved in myosin-II-mediated contraction of pseudo-contractile rings and transport of vesicles in extracts of clam oocytes. *Biol. Bull.* 203:208-210.

Langford, G.M. 2002. Myosin-V, a versatile motor for short-range vesicle transport. *Traffic* 3:859-865.

Wöllert, T., DePina A.S, DeSelm C.J, and Langford, G.M. 2003. Rho-kinase is required for myosin-II-mediated vesicle transport during M-phase in extracts of clam oocytes. *Biol Bull.* 205(2): 195-197.

DeSelm, C.J., Brown J.R., Lu R., and Langford, G.M. 2003. Rab-GDI inhibits myosin V-dependent vesicle transport in squid giant axon. *Biol Bull.* 205(2): 190-191.

Delacruz, J., Brown, J.R., and Langford, G.M. 2003. Interactions between recombinant conventional squid kinesin and native myosin-V. *Biol Bull.* 205(2): 188-190.

Brown, J.R., Stafford, P., and Langford, G.M. 2004. Short-range axonal/dendritic transport by myosin-V: A model for vesicle delivery to the synapse. *J Neurobiol.* 58:175-188.

Deselm, C.J., Lu, R., Cheney, C.M., and Langford, GM. 2004. Identification of novel Myosin-v binding partners by immunoprecipitation and column chromatography. *Biol Bull.* 207(2): 164.

You, S.M., Cheney, C., Swiatecka-Urban, A., and Langford, G.M. 2004. Role of rab GTPases in recruitment of Myosin- v to vesicles of squid giant axon. *Biol Bull.* 207(2): 163.

Flores, J.P., Lee Y.L., and Langford, G.M. 2004. Isolation of the Myosin-v/kinesin heteromotor complex by sucrose gradient fractionation. *Biol Bull.* 207(2): 163.

Swiatecka-Urban, A., Boyd, C., Coutermarsh, B., Karlson, K.H., Barnaby, R., Aschenbrenner, L., Langford, G.M, Hasson, T., and Stanton, B.A. 2004. Myosin VI regulates endocytosis of the cystic fibrosis transmembrane conductance regulator. *J Biol Chem.* 279(36):38025-31.

Swiatecka-Urban, A., Brown, A., Moreau-Marquis, S., Renuka, J., Coutermarsh, B., Barnaby, R., Karlson, K.H., Flotte, T.R., Fukuda, M., Langford, G.M., and Stanton, B.A. 2005. The short apical membrane half-life of rescued {Delta} F508-cystic fibrosis transmembrane conductance regulator (CFTR) results from accelerated endocytosis of {Delta}F508-CFTR in polarized human airway epithelial cells. *J Biol Chem.* 280(44):36762-72.

DePina, A.S., Wöllert T, and Langford, GM. 2007. Membrane associated nonmuscle myosin II functions as a motor for actin-based vesicle transport in clam oocyte extracts. *Cell Motil Cytoskeleton.* 64(10):739-55.

Swiatecka-Urban, A., Talebian, L., Kanno, E., Moreau-Marquis, S., Coutermarsh, B., Hansen, K., Karlson, K.H., Barnaby, R., Cheney, R.E., Langford, G.M., Fukuda, M., and Stanton, B.A. 2007. Myosin Vb is required for trafficking of the cystic fibrosis transmembrane conductance regulator in Rab1 la-specific apical recycling endosomes in polarized human airway epithelial cells. *J Biol Chem.* 282(32):23725-36.

Stommel, E.W., van Hoff, R.M., Graber, D.J., Bercury, K.K., Langford, G.M., and Harris, B.T. 2007. Tumor necrosis factor-alpha induces changes in mitochondrial cellular distribution in motor neurons. *Neuroscience.* 146(3):1013-1019.

Wöllert, T., and Langford, G.M. 2009. High resolution light microscopy of cell migration: long-term imaging and analysis. *Methods Mol. Biol.* 586:3-21.

Rollenhagen, C., Wöllert, T., Langford, G.M., and Sundstrom, P. 2009. Stimulation of cell motility and expression of late markers of differentiation in human oral keratinocytes by *Candida albicans*. *Cell. Microbiol.* 11:946-966.

Wöllert, T., and Langford, G.M. 2009. Vesicle transport assay. *Encyclopedia of Life Sciences.* DOI: 10.1002/9780470015902.a0002611.pub2

Wöllert, T., Patel, A., Lee, Y.L., Provance D.W., Vought, V.E., Cosgrove, M.S., Mercer J.A, and Langford, G.M. Myosin5a tail associates directly with Rab3A-containing compartments in neurons. *J Biol Chem.* 2011 Apr 22; 286(16):14352-61.

Wöllert, T., Rollenhagen, C., Langford, G.M., and Sundstrom, P. Human oral keratinocytes: A model system to analyze host-pathogen interactions. *Methods Mol Biol.* 845 (*in press*).