

CURRICULUM VITAE

Erik Mathias Jorgensen

University of Utah
School of Biological Sciences
257 South 1400 East
Salt Lake City, UT 84112-0840
Tel. (801) 585-3517
jorgensen@biology.utah.edu



Professional Experience

- 2013-pres **Distinguished Professor**, School of Biological Sciences, University of Utah. Genetic analysis of neurotransmission in the nematode *C. elegans*.
- 2013 -2015 **Visiting Scientist**, Neurocure Crossover, Charité Universitätsmedizin, Berlin, Germany. Postsynaptic endocytosis of AMPA receptors.
- 2012 -2013 **Sabbatical**, Charité Universitätsmedizin, Berlin, Germany. Synaptic vesicle endocytosis. Host: Christian Rosenmund.
- 2011 **Director**, Advanced Microscopy Facility, University of Utah
- 2005-pres **Investigator**, Howard Hughes Medical Institute.
- 2005-pres **Adjunct Professor**, Department of Human Genetics, University of Utah.
- 2004-pres **Adjunct Professor**, Department of Biomedical Engineering, University of Utah.
- 2003 -2013 **Professor**, Dept of Biology, University of Utah. Genetic analysis of neurotransmission in the nematode *C. elegans*.
- 2003 -2010 **Scientific Director**, Brain Institute, University of Utah.
- 2000 -2003 **Associate Professor**, Dept of Biology, University of Utah. Genetic analysis of neurotransmission in the nematode *C. elegans*.
- 2001 -2002 **Sabbatical, Associate Professor**, Dept of Biology, Ecole Normale Supérieure, Paris, France. Double-strand break repair in the nematode *C. elegans*. Host: Professeur Antoine Triller.
- 1994 -2000 **Assistant Professor**, Dept of Biology, University of Utah. Genetic analysis of neurotransmission in the nematode *C. elegans*.
- 1989 - 1994 **Postdoctoral Fellow**, MIT, Advisor: Dr. H. Robert Horvitz. Genetic analysis of GABA function in the nematode *C. elegans*.
- 1984 - 1989 **Graduate Student**, University of Washington, Advisor: Dr. Richard Garber. Transcriptional regulation of the *Antennapedia* gene in *Drosophila*.
- 1982 - 1983 **Technician**, University of Heidelberg, Advisor: Dr. Heinz Shaller. Epitopes of the Hepatitis B core protein.
- 1981 - 1982 **Undergraduate Researcher**, University of California at Berkeley, Advisor: Dr. Seymour Fogel. Stability of centromere-containing plasmids in the yeast *Saccharomyces cerevisiae*.

Education

- 1983-1989 University of Washington, Seattle, Washington; Department of Genetics, Ph.D.
- 1982-1983 University of Heidelberg, Heidelberg, West Germany; Department of Biology, Major: Molecular Biology.
- 1981-1982 University of California at Berkeley, Department of Genetics, Major: Genetics.
- 1976-1979 University of California at Berkeley, Bachelor's of Science Degree from the College of Natural Resources, Major: Animal Resources.
- 1974-1976 West Valley Junior College. Saratoga, CA.

Awards

2016	NIH NINDS Robert Whitney Newcomb Memorial Lecture
2015	Utah Governor's Medal for Science and Technology
2015	Roger Eckert Memorial Award, Goettingen University
2014-2015	Frank Lillie Innovation Award, Univ of Chicago & Marine Biological Lab
2014	Allen Harmon Endowed Lecture, Oklahoma Medical Research Foundation
2013	Distinguished Professor, University of Utah
2012	Humboldt Prize, Alexander von Humboldt Foundation, Germany
2011	Distinguished Scholarly and Creative Research Award, University of Utah
2010	College of Science Professor, University of Utah

Current Funding

2020-2025	NSF, subcontract from University of Texas at Austin, (Jorgensen et al) NeuroNex: Enabling Identification and Impact of Synaptic Weight in Functional Networks
2020-2021	University of Utah 1U4U (Jorgensen, Hammond, Stanfield) "Development of Beta-lactamase as a self-labeling protein tag"
2011-2021	NIH NIGMS 2R01GM095817 (Jorgensen) "Engineering the <i>C. elegans</i> Genome"
2015-2020	NSF FO-1533611, (Menon, Shepherd; Jorgensen) "Imaging synaptic activity deep in the brain using super-resolution cannula microscopy"
2013-2019* (*estimated)	ECCS-1309041 (Menon, Gerton; Jorgensen) "Coherent Super-Resolution Optical Microscopy for Enhance Image Resolution and Speed"
2005-2022	Howard Hughes Medical Institute Investigator
1995-2025	NIH NINDS 5R01NS034307 (Jorgensen) "Synaptic Function in the Nematode <i>C. elegans</i> ."

Publications**Total Published: 146**

- LaBella, M.L., E.J. Hujber, K.A. Moore, R. L. Rawson, S. A. Merrill, P.D. Allaire, M. Ailion, J. Hollien, M.J. Bastiani, E.M. **Jorgensen**. 2020. Casein Kinase 1 δ stabilizes mature axons by inhibiting transcription termination of ankyrin. *Development Cell*. 52:88-103.
- mini-review Katherine L. Thompson-Peer. 2020. Casein Kinase 1 δ triggers giant Ankyrin expression. *Dev Cell* 52, p4-5.
- *Herman R: F1000Prime Recommendation of [LaBella ML et al., *Dev Cell* 2020 52(1):88-103.e6].
In F1000Prime, 04 Feb 2020; 10.3410/f.737164126.793570455"
- Appadurai D, Gay L, Moharir A, Lang MJ, Duncan MC, Schmidt O, Teis D, Vu TN, Silva M, **Jorgensen EM**, Babst M. 2020. Plasma membrane tension regulates eisosome structure and function. *Molecular Biology of the Cell*. 31:287-303.
- Kusick, G.F., M. Chin, K. Lippmann, K.P. Adula, E.J. Hujber, T.N. Vu, M. W. Davis, E.M. **Jorgensen**, S. Watanabe. 2018. Synaptic vesicles undock and then transiently dock after an action potential. *BioRxiv* doi: <https://doi.org/10.1101/509216>.
- Kurshan, P. T., S. A. Merrill, Y. Dong, C. Ding, M. Hammarlund, J. Bai, E.M. **Jorgensen**, K. Shen. 2018. γ -Neurexin and Frizzled mediate parallel synapse assembly pathways antagonized by receptor endocytosis. *Neuron* 100, 150-166.

- Watanabe, S., L.E. Mamer, S. Raychaudhuri, D. Luvsanjav, J. Eisen, T. Trimbuch, B. Söhl-Kielczynski, P. Fenske, I. Milosevic, C. Rosenmund, E.M. **Jorgensen**. 2018. Synaptojanin and endophilin mediate neck formation during ultrafast endocytosis. *Neuron*. 27:1184-1197.
- Martineau, JT, E.M. **Jorgensen**, R. Menon, J. Gerton. 2018. Precisely localizing wavelength sensitive point-spread functions engineered with a silicon oxide phase plate. *Microscopy and Microanalysis*. 24: 1364-1365
- Schwartz, M.L., E.M. Jorgensen. 2018. SapTrap vectors for introducing point mutations with unc-119+ selection. <https://doi.org/10.17912/DDVH-BG64>.
- Schwartz, M.L., E.M. Jorgensen. 2018. SapTrap Builder: a desktop utility for CRISPR edit design. *microPublication Biology*. <https://doi.org/10.17912/M4QQ02X02>.
- Chen, B., P. Liu, E. J. Hujber, Y. Li, E.M. **Jorgensen**, Z. W. Wang. 2017. AIP limits neurotransmitter release by inhibiting calcium bursts from the ryanodine receptor, *Nature Communications*, 8:1380.
- Palfreyman, MP, E.M. **Jorgensen**, 2017. Unc13 Aligns SNAREs and Superprimes Synaptic Vesicles. *Neuron* 85: 473-475.
- Topalidou, I, PA Chen, K. Cooper, S. Watanabe, E.M. **Jorgensen**, M. Ailion. 2017. The NCA-1 and NCA-2 Ion Channels Function Downstream of Gq and Rho to Regulate Locomotion in *Caenorhabditis elegans*. *Genetics* 206: 265-282.
- German, CL, M.V. Gudheti, A.E. Fleckenstein, E.M. **Jorgensen**. 2017. Brain Slice Staining and Preparation for Three-Dimensional Super-Resolution Microscopy. *Methods Mol Biol*, 1663:153-162.
- Hobson, R. J., K. J. Yook and E.M. **Jorgensen**, *Genetics of Neurotransmitter Release in Caenorhabditis elegans*, In Reference Module in Life Sciences, Elsevier, 2017, ISBN: 978-0-12-809633-8
- Hess, J., M. Patra, L. Rangasamy, S. Konatschnig, O. Blacque, A. Jabbar, P. Mac, E.M. **Jorgensen**, R.B. Gasser, G. Gasser. 2016. Organometallic derivatization of the nematocidal drug monepantel leads to promising antiparasitic drug candidates. *Chemistry* 22, 16602-16612.
- Geisler, F., H. Gerhardus, K. Carberry, W. Davis, E.M. **Jorgensen**, C. Richardson, O. Bossinger, and R. E. Leube. 2016. A novel function for the MAP kinase SMA-5 in intestinal tube stability. *Molecular Biology of the Cell* 27, p3855-3868.
- Edelman, T. L. B. , K. A. McCulloch, A. Barr, C. Frøkjær-Jensen, E. M. **Jorgensen**, and A. E. Rougvie. 2016. Analysis of a lin-42/period null allele implicates all three isoforms in regulation of *Caenorhabditis elegans* molting and developmental timing. *G3* 6:4077-4086.
- Wheeler, B.S., E. Anderson, C. Frøkjær-Jensen, Q. Bian, E.M. **Jorgensen**, B. J. Meyer. 2016. Chromosome-wide mechanisms to decouple gene expression from gene dose during sex-chromosome evolution. *eLife* 5:e17365. DOI: 10.7554/eLife.17365.
- Bend, E.G., Y. Si, D.A. Stevenson, P. Bayrak-Toydemir, T.M. Newcomb, E.M. Jorgensen, K.J. Swoboda. 2016. NALCN channelopathies: distinguishing gain-of-function and loss-of-function mutations. *Neurology* 87, p1131-1139.
- Mini-review: W. David Arnold. "Genotype–phenotype correlation with CRISPR-Cas9: Bedside to bench" *Neurology* 87, p1138.
- Frøkjær-Jensen, C., N. Jain, L. Hansen, M.W. Davis, Y. Li, D. Zhao, K. Rebora, JR. Millet, X. Liu, SK. Kim, D. Dupuy, E.M. Jorgensen*, and A.Z. Fire*. 2016. An abundant class of non-coding DNA can prevent stochastic gene silencing in the *C. elegans* germline. *Cell* 166, p343-357. (*co-corresponding authors).
- Commentary: Robert Herman. 2016. Faculty of 1000. <http://f1000.com/prime/726482828>.
- Li, P., S. Merrill, E.M. **Jorgensen**, and K. Shen. 2016. Two clathrin adaptor protein complexes instruct axon-dendrite polarity. *Neuron* 90, p564-580.

- Jang, S., J.C. Nelson, E.G. Bend, L. Rodríguez-Laureano, F.G. Tueros, L. Cartagena, K. Underwood, E.M. **Jorgensen** and D.A. Colón-Ramos. 2016. Glycolytic enzymes localize to synapses under energy stress to support synaptic function. *Neuron* 90, p278-291.
- Commentary: Lewis, S 2016 Nat Rev Neuroscience doi:10.1038/nrn.2016.55
- Schwartz, M.L., E.M. **Jorgensen**. 2016. SapTrap, a Toolkit for High-Throughput CRISPR/Cas9 Gene Modification in *C. elegans*. *Genetics* 202, p1277-1288.
- Alqadah, A., Y.-W. Hsieh, J.A. Schumacher, X. Wang, S.A. Merrill, G. Millington, B. Bayne, E.M. **Jorgensen**, C.-F. Chuang. 2016. SLO BK potassium channels couple gap junctions to inhibition of calcium signaling in olfactory neuron diversification. *PLoS Genetics* 12, e1005654-e1005654.
- Jobson, M.A., C.M. Valdez, J. Gardner, L.R. Garcia, E.M. **Jorgensen**, and A.A. Beg. 2015. Spillover transmission is regulated by the excitatory GABA receptor LGC-35 in *C. elegans*. *J. Neurosci.* 35, p2803-2816.
- Watanabe, S., T. Trimbuch, M. Camacho-Pérez, B.R. Rost, B. Brokowski, B. Söhl-Kielczynski, A. Felies, M.W. Davis, C. Rosenmund, and E.M. **Jorgensen**. 2014. Clathrin regenerates synaptic vesicles from endosomes. *Nature* 515, p228-233.
- Mini-review: Vladan Lucic 2014. *Nature* 515, p207-208.
- Hollopeter, G.H., J.J. Lange, Y. Zhang, T.N. Vu, M. Gu, M. Ailion, E.J. Lambie, B.D. Slaughter, J.R. Unruh, L. Florens, and E.M. **Jorgensen**. The membrane-associated proteins FCHO and SGIP are allosteric activators of the AP2 clathrin adaptor complex. *eLife* (2014) Oct 10; 3 doi:10.7554/eLife.03648.
- Jorgensen**, E.M. 2014. Animal evolution: looking for the first nervous system. *Current Biology* 24, pR655-R658. Review.
- Frøkjær-Jensen, C., M.W. Davis, M. Sarov, J. Taylor, S. Flibotte, M. LaBella, A. Pozniakovski, D.G. Moerman, and E.M. **Jorgensen**. 2014. Random and targeted transgene insertion in *C. elegans* using a modified Mos1 transposon. *Nature Methods* 11, p529-534.
- Liu Q, Frerck M.J., Holman H.A., **Jorgensen E.M.**, and R.D. Rabbitt. 2014. Exciting cell membranes with a blustering heat shock. *Biophys J.* 106, p1570-1577.
- Ailion, M., M. Hannemann, S. Dalton, A. Pappas, S. Watanabe, J. Hegermann, H.F. Han, M. Gu, K. Schuske, P. Hullett, S. Eimer, and E.M. **Jorgensen**. 2014. Two Rab2 interactors regulate dense-core vesicle maturation. *Neuron* 82, p167-180.
- Rawson, R.L., L. Yam, R.M. Weimer, E.G. Bend, E. Hartwig, H.R. Horvitz, S.G. Clark, E.M. **Jorgensen**. 2014. Axons degenerate in the absence of mitochondria. *Current Biology* 24, p760-765.
- Ilovitsh, T., A. Meiri, C. Ebeling, R. Menon, J.M. Gerton, E.M. **Jorgensen**, and Z. Zalevsky. 2014. Improved localization accuracy in stochastic super-resolution fluorescence microscopy by K-factor Image deshadowing. *Biomedical Optics Express* 5, p244–258.
- Nix P., M. Hammarlund, L. Hauth, M. Lachnit, E.M. **Jorgensen**, and M. Bastiani. Axon regeneration genes identified by RNAi screening in *C. elegans*. 2014. *J Neurosci.* 34, p629-645.
- Watanabe, S. M.W. Davis, and E.M. **Jorgensen**. 2014. Flash-and-freeze electron microscopy: coupling optogenetics with high-pressure freezing. In *Imaging nanoscale dynamics at synapses*. Ed. V. Nägerl and A. Triller. Springer Verlag. *Neuromethods* 84, p43-57. Book chapter.
- Watanabe, S., M. Lehmann, E. Hujber, R.D. Fetter, J. Richards, B. Söhl-Kielczynski, A. Felies, C. Rosenmund, J. Schmoranz, and E.M. **Jorgensen**. 2014. Nanometer-resolution fluorescence electron microscopy (nano-fEM) in cultured cells. Ed. J. Kuo. Humana Press. In *Methods in Molecular Biology: Electron Microscopy* 1117, p. Book chapter.
- Kavalali, E., and E.M. **Jorgensen**. 2014. Visualizing Presynaptic Function. *Nature Neuroscience* 17, p10-16. Review.

- Watanabe, S., B. Rost, M. Camacho, M.W. Davis, B. Söhl-Kielczynski, A. Felies, C. Rosenmund and E.M. **Jorgensen**. 2013. Ultrafast endocytosis at mouse hippocampal synapses. *Nature* 504, p242–247.
- Commentary: Thomas Wollert 2013. Faculty of 1000. DOI: 10.3410/f.718197285.793487897.
 - Mini-review: Cho and von Gersdorff. 2013. “Faster than kiss-and-run”. *Nature* 504, p220-221.
- Peden, A.S., P. Mac, Y.J. Fei, C. Castro, G. Jiang, K.J. Murfitt, E.A. Miska, V. Ganapathy, E.M. **Jorgensen**. 2013. Betaine acts on ligand-gated ion channel in the nervous system of the nematode *C. elegans*. *Nature Neuroscience* 16, p1794-1801.
- Ebeling, C. and E.M. **Jorgensen**. 2013. Two views on light sheets. *Nature Biotechnology* 31, p992–993. Review.
- Watanabe, S., Q. Liu, M.W. Davis, N. Thomas, J. Richards, G. Hollopeter, M. Gu, N.B. Jorgensen and E.M. **Jorgensen**. 2013. Ultrafast endocytosis at the *C. elegans* neuromuscular junction. *eLife* 2, e00723.
- Ritter, B., S. Murphy, M.V. Gudheti, M. Halin, J. Philie, E.M. **Jorgensen**, K. Gehring, and P.S. McPherson. 2013. NECAP 1 regulates AP-2 interactions to control vesicle size, number and cargo during clathrin-mediated endocytosis. *PLoS Biology* 11, e1001670.
- Hodges, J., X. Tang, M. Landesman, J.B. Ruedas, A. Ghimire, M.V. Gudheti, J. Perrault, E.M. **Jorgensen**, J.M. Gerton and S. Saffarian. 2013. Asymmetric packaging of polymerases within vesicular stomatitis virus. *Biochem Biophys Res Commun* 440, p271-276.
- Shao, Z., S. Watanabe, R. Christensen, E.M. **Jorgensen** and D.A. Colón-Ramos. 2013. Synapse location during growth depends on glia location. *Cell* 154, p337-350.
- LaBella, M.L., S. Sigrist, and E.M. **Jorgensen**. 2013. Putting genetics into optogenetics: knocking out proteins with light. In *Optogenetics*. Ed. Hegemann and Sigrist. Dahlem proceedings, De Gruyter Publications. p79-90. Review.
- Qi, Q.B., M.D. Po, P. Mac, T. Kawano, E.M. **Jorgensen**, M. Zhen, Y. Jin. 2013. Hyperactivation of B-type motor neurons results in aberrant synchrony of the *Caenorhabditis elegans* motor circuit. *J. Neurosci.* 33, p5319-5325.
- Gu, M., Q. Liu, S. Watanabe, L. Sun, B. Grant, and E.M. **Jorgensen**. 2013. AP2 hemicomplexes contribute independently to synaptic vesicle endocytosis. *eLife* 2, p00190.
- Commentary: Justin Taraska, Kem Sochacki. 2013. Faculty of 1000.
- Hobson, R.J., K. Yook and E.M. **Jorgensen**. 2013. Neurogenetics of Neurotransmitter Release in *Caenorhabditis elegans* neurotransmitter release. In *Brenner's Encyclopedia of Genetics, 2nd Edition*, Ed. S. Maloy, K. Hughes, Elsevier Science, San Diego, pp. 46-51.
- Jurrus, E., S. Watanabe, R. J. Giuly, A. R. C. Paiva, M. Ellisman, E.M. **Jorgensen**, T. Tasdizen. 2013. Semi-automated neuron boundary detection and nonbranching process segmentation in electron microscopy images. *Neuroinformatics* 10, p1-25.
- Watanabe, S., J. Richards, G. Hollopeter, R.J. Hobson, M.W. Davis, and **Jorgensen**, E.M. 2012. Nano-fEM: protein localization using correlative photo-activated localization microscopy and electron microscopy. *Journal of Visual Experiments* 3, e3995. doi: 10.3791/3995.
- White, J.Q. and E.M. **Jorgensen**. 2012. Sensation in a single neuron pair represses male behavior in hermaphrodites. *Neuron* 75, p593-600.
- Watanabe, S., and E.M. **Jorgensen**. 2012. Visualizing proteins in electron micrographs at nanometer resolution. In *Correlative Light and Electron Microscopy*, Academic Press. Ed. T. Müller-Reichert and P. Verkade. *Methods in Cell Biology* 111, p283-306. Book chapter.
- Mullen, G.P., K.M. Grundahl, M. Gu, S. Watanabe, R.J. Hobson, J.A. Crowell, J.R. McManus, E.A. Mathews, E.M. **Jorgensen**, and J.B. Rand. 2012. UNC-41/Stonin functions with AP2 to recycle synaptic vesicles in *Caenorhabditis elegans*. *PLoS ONE* 7, e40095.

- Carberry K, T. Wiesenfahrt, F. Geisler, S. Stöcker, H. Gerhardus, D. Überbach, M.W. Davis, E.M. **Jorgensen**, R.E. Leube, O. Bossinger. 2012. The novel intestinal filament organizer IFO-1 contributes to epithelial integrity in concert with ERM-1 and DLG-1. *Development* 139, p1851-1862.
- Ernstrom, G., R.M. Weimer, D. Greenstein and E.M. **Jorgensen**. 2012. The V-ATPase V1 sector is required for corpse clearance and neurotransmission in *Caenorhabditis elegans*. *Genetics* 191, p461-475.
- Frøkjær-Jensen, C., M.W. Davis, M. Ailion, E.M. **Jorgensen**. 2012. Improved *Mos1*-mediated transgenesis in *C. elegans*. *Nature Methods* 9, p117-118.
- Commentary: Thorsten Hoppe, Leena Ackermann. 2012. Faculty of 1000. <http://f1000.com/1125783>.
- Watanabe, S., G. Oikonomou, S. Shaham and E.M. **Jorgensen**. 2011. Molecular architecture of a sensory ending using correlative fluorescence and electron microscopy. *Microscopy and Microanalysis* 17 (Suppl. 2), p362-363. doi:10.1017/S1431927611002686. Conference proceedings.
- Watanabe, S., C. Ebeling, G. Oikonomou, S. Shaham, J. Gerton and E.M. **Jorgensen**. 2011. Three-dimensional reconstruction of actin in a sensory glial cell using Bi-Plane PALM. *Microscopy and Microanalysis* 17 (Suppl. 2), p16-17. doi:10.1017/S143192761100095X. Conference proceedings.
- Oikonomou, G., E.A. Perens, Y. Lu, S. Watanabe, E.M. **Jorgensen** and S. Shaham. 2011. Opposing activities of LIT-1/NLK and DAF-6/Patched-related direct sensory compartment morphogenesis in *C. elegans*. *PLoS Biology* 9, e1001121.
- Phirke, Prasad, E. Efimenko, S. Mohan, J. Burghoorn, F. Crona, M.W. Bakhoun, M. Trieb, K. Schuske, E. M. **Jorgensen**, B. P Piasecki, M. R Leroux, and P. Swoboda. 2011. Transcriptional profiling of *C. elegans* DAF-19 uncovers a ciliary base-associated protein and a CDK/CCRK/LF2p-related kinase required for intraflagellar transport. *Dev Biol.* 357, p235-247.
- Batchelder, E., G. Hollopeter, X. Mezanges, E.M. **Jorgensen** and J. Plastino. 2011. Membrane tension regulates motility by controlling lamellipodium organization. *PNAS* 108, p11429-11434.
- Zhang, H., R. Constantine, S. Vorobiev, Y. Chen, J. Seetharaman, Y.J. Huang, R. Xiao, G. T. Montelione, M.W. Davis, G. Inana, F.G. Whitby, E.M. **Jorgensen**, C. Hill, L. Tong, and W. Baehr. 2011. UNC119 is required for G protein trafficking in sensory neurons. *Nature Neuroscience* 14, 874-880.
- Commentary: Vardy E, Roth BL. 2011. Vision and olfaction say UNC-1e to G proteins. *Nat Neurosci.* 14, 805-806.
- Zeiser, E., C. Frøkjær-Jensen, E.M. **Jorgensen** and J. Ahringer. 2011. MosSCI and Gateway compatible plasmid toolkit for constitutive and inducible expression of transgenes in the *C. elegans* germline. *PLoS One* 6, e20082.
- Park, M., S. Watanabe, V.Y. Poon, C.Y. Ou, E.M. **Jorgensen**, and K. Shen. 2011. CYY-1/Cyclin Y and CDK-5 differentially regulate synapse elimination and formation for rewiring neural circuits. *Neuron* 70, p742-757.
- Liu, Q. and E.M. **Jorgensen**. 2011. Muscle memory. *J. Physiology* 589, p775-776. Review.
- Hobson, R.J., Q. Liu, S. Watanabe and E.M. **Jorgensen**. 2011. Complexin maintains vesicles in the primed state in *C. elegans*. *Current Biology* 21, p106-113.
- Commentary: Troy Littleton (2011). David Tareste (2011). Faculty of 1000. <http://f1000.com/9135956>.
- Watanabe, S., A. Punge, G. Hollopeter, K.I. Willig, R.J. Hobson, M.W. Davis, S.W. Hell, and E.M. **Jorgensen**. 2011. Protein localization in electron micrographs using fluorescence nanoscopy. *Nature Methods* 8, p80-84.
- Commentary: Monya Baker (2011). *Nature Methods* 8, p 3.
- Rathore, S.S., E.G. Bend, H. Yu, M. Hammarlund, E.M. **Jorgensen** and J. Shen. 2010. Syntaxin N-peptide motif is an initiation factor for the assembly of the SNARE-Sec1/Mun18 membrane fusion complex. *Proc. Natl. Acad. Sci.* 107, p22399-22406.
- Commentary: Bacaj, T., Z.P. Pang, and T.C. Südhof. 2010. Testing the SNARE/SM protein model of

membrane fusion *PNAS* 107 (52) p22365-22366.

- Commentary: Robert Burgoyne. 2010. Faculty of 1000. <http://f1000.com/7138956>.

Watanabe, S., A. Punge, G. Hollopeter, R.J. Hobson, M.W. Davis, S. Hell, and E.M. **Jorgensen**. 2010. Protein localization using correlative super-resolution fluorescence microscopy and electron microscopy. *Journal of General Physiology*. 12a-13a. Conference proceedings.

Jurrus, E., A.R. Paiva, S. Watanabe, J.R. Anderson, B.W. Jones, R.T. Whitaker, E.M. **Jorgensen**, R.E. Marc, and T Tasdizen. 2010. Detection of neuron membranes in electron microscopy images using serial neural network architecture. *Medical Image Analysis* 14, 770-783.

Frøkjær-Jensen, C., M.W. Davis, G. Hollopeter, J. Taylor, T. Harris, P. Nix, R. Lofgren, M. Bastiani, D.G. Moerman, E.M. **Jorgensen**. 2010. Targeted gene deletions in *C. elegans* using transposon excision. *Nature Methods* 7, p451-453.

- Commentary: Bessereau. Knock it down, switch it on. (2010). *Nature Methods* 7, 439.

Ou, C.Y., V.Y. Poon, C. Maeder, S. Watanabe, E. Lehrman, A.K.Y. Fu, M. Park, W.Y. Fu, E.M. **Jorgensen**, N.Y. Ip, and K. Shen. 2010. Two cyclin-dependent kinase pathways are essential for polarized trafficking of presynaptic components. *Cell* 141: p846-858.

Jospin, M., Y.B. Qi, T. Stawicki, T. Boulin, K.R. Schuske, H.R. Horvitz, J.L. Bessereau, E.M. **Jorgensen** and Y. Jin. 2009. A neuronal acetylcholine receptor regulates the balance of muscle excitation and inhibition in *C. elegans*. *PLoS Biology* 7, e1000265.

- Commentary: Robert Herman (2010). Faculty of 1000. <http://f1000.com/1595964>.

Frøkjær-Jensen, C., M.W. and E.M. **Jorgensen**. 2009. Calcium: an insignificant thing. *Nature Neuroscience* 12, p1213-1214. Review. PMID:

Liu, Q., G. Hollopeter and E.M. **Jorgensen**. 2009. Graded synaptic transmission at the *Caenorhabditis elegans* neuromuscular junction. *Proc Natl Acad Sci* 106(26), p10823-10828. PMID:

Hammarlund, M, P Nix, L Hauth, EM **Jorgensen**, and M.J Bastiani. 2009. Axon regeneration requires a conserved MAP kinase pathway. *Science* 323, p802-806.

- Commentary: Aaron DiAntonio (2009). Faculty of 1000. <http://f1000.com/1147320>.

Sato, K, G Ernstrom, S Watanabe, R Weimer, CH Chen, M Sato, A. Siddiqui, E.M. **Jorgensen** and B. Grant. 2009. Differential requirements for clathrin in receptor-mediated endocytosis and maintenance of synaptic vesicle pools. *Proc Natl Acad Sci USA* 106, p1139-1144.

- Commentary: Tim Ryan (2009) Rik Korswagen (2009) Peter McPherson (2009). Faculty of 1000. <http://www.f1000biology.com/article/id/1145275/>

Gu, M, K. Schuske, S. Watanabe, Q. Liu, P. Baum, G. Garriga and E. M. **Jorgensen**. 2008. μ 2 adaptin facilitates but is not essential for synaptic vesicle recycling in *Caenorhabditis elegans*. *Journal of Cell Biology* 183, p881-892.

- Commentary: Volker Haucke (2008). Faculty of 1000. <http://f1000.com/1132867>.

Frøkjær-Jensen, C., M.W. Davis, C.E. Hopkins, B. Newmann, J.M. Thummel, S-P. Olesen, M. Grunnet and E.M. **Jorgensen**. 2008. Single copy insertion of transgenes in *C. elegans*. *Nature Genetics* 40, p1375-1383.

- Commentary: Michel LaBouesse (2008). Sean Ryder (2008). Andy Golden (2008). Bob Goldstein (2008). Susan Mango (2008). Thorsten Hoppe, Leena Ackermann. Faculty of 1000. <http://f1000.com/1125783>.

Palfreyman, M., and E.M. **Jorgensen**. 2009. *In vivo* analysis of membrane fusion. In Encyclopedia of Life Sciences, John Wiley & Sons. Chichester <http://www.els.net/> [DOI: 10.1002/9780470015902.a0020891]. Review.

Robert, V.J., M.W. Davis, E.M. Jorgensen and J-L Bessereau. 2008. Gene conversion and end-joining repair double-strand breaks in the *C. elegans* germline. *Genetics* 180, p673 - 679.

Palfreyman, M., and E.M. **Jorgensen**. 2008. Roles of SNARE proteins in synaptic vesicle fusion. In Molecular Mechanisms of Neurotransmitter Release, Humana Press, p35-59. Review.

- Davis, M.W., J. Morton, D. Carroll and E.M. **Jorgensen**. 2008. Gene activation using FLP recombinase in *C. elegans*. *PLoS Genetics* 4(3) e1000028.
- Commentary: Andrew Chisholm (2008). Faculty of 1000. <http://f1000.com/1103632>.
- Hammarlund, M., S. Watanabe, K. Schuske, and E.M. **Jorgensen**. 2008. CAPS and syntaxin dock dense core vesicles to the plasma membrane in neurons. *Journal of Cell Biology* 180, p483-491.
- Commentary: Nils Brose (2008). Jens Rettig (2008). Faculty of 1000. <http://f1000.com/1100261>.
- Pan, C.L, P. Baum, M. Gu, E. M. **Jorgensen**, S. Clark, and G. Garriga. 2008. *C. elegans* AP-2 and retromer control Wnt secretion by regulating MIG-14/Wntless. *Developmental Cell* 14, 132-139.
- Beg, A., P., G. Ernstrom, P. Nix, M.W. Davis and E.M. **Jorgensen**. 2008. Protons act as a transmitter for muscle contraction in *C. elegans*. *Cell* 132, p149-160.
- Commentary: Prolo and Goodman. (2008). Keeping it regular with protons. *Nature* 452 (6), 35-36.
 - Commentary: Richard Robinson. (2008). H⁺, the tiniest transmitter. *J Cell Biol.* Jan.
 - Commentary: Robert Herman (2008). Silvana Curci (2008). Faculty of 1000. <http://f1000.com/1099249>.
- Juruss, E., T. Tasdizen, S.Watanabe, M. Wayne Davis, E. M. **Jorgensen**, and R. Whitaker. 2008. Semi-automated reconstruction of the neuromuscular junctions in *C. elegans*. *MICCAI Workshop on Microscopic Image Analysis with Applications in Biology*.
- Jung, N., M. Wienisch, M. Gu, J.B. Rand, S. L Müller, G. Krause, E. M. **Jorgensen**, J. Klingauf, V. Haucke. 2007. Molecular basis of synaptic vesicle cargo recognition by the endocytic sorting adaptor stonin 2. *Journal of Cell Biology* 179, p1497-1510.
- Williams, S.L., S. Lutz, N.K. Charlie, C. Vettel, M. Ailion, C.Coco, J.J.G. Tesmer, E.M. **Jorgensen**, T. Wieland, and K.G. Miller. 2007. Trio's Rho-specific GEF domain is the missing Gq effector in *C. elegans*. *Genes and Development* 21, p2731-2746.
- White, J.Q., T.J. Nicholas, J. Gritton, L. Truong, E.R. Davidson and E.M. **Jorgensen**. 2007. The sensory circuitry for sexual attraction in *C. elegans* males. *Current Biology* 17, p1847-1857.
- Commentary: Robert K. Herman (2007). Faculty of 1000. <http://www.f1000biology.com/article/id/1098161/evaluation>
- Peters, M. T. Teramoto, J.Q. White, K. Iwasaki and E. M. **Jorgensen**. 2007. A calcium wave mediated by gap junctions coordinates a rhythmic behavior in *C. elegans*. *Current Biology* 17, 1601-1608.
- Commentary: Michel Labouesse (2007). Robert Herman (2007). Faculty of 1000. <http://f1000.com/1091179>.
- Jospin, M., S. Watanabe, D. Joshi, S. Young, K. Hamming, C. Thacker, T. Snutch, E.M. **Jorgensen** and K. Schuske. 2007. UNC-80 and the NCA ion channels contribute to endocytosis defects in synaptojanin mutants. *Current Biology* 17, p1595-1600.
- Hammarlund, M., M. Palfreyman, S. Watanabe, S. Olsen, and E.M. **Jorgensen**. 2007. Open syntaxin docks synaptic vesicles. *PLoS Biology* 5 (8): e198, p1695-1711.
- Commentary: E. Chapman (2007), D. Andrew (2007). Faculty of 1000. <http://f1000.com/1091993>
- Schuske, K. M.T. Palfreyman, S. Watanabe, and E. M. **Jorgensen**. 2007. UNC-46, a novel protein required for trafficking of the vesicular GABA transporter. *Nature Neuroscience* 10, p846-853.
- Palfreyman, M., and E.M. **Jorgensen**. 2007. PKC defends crown against Munc13. *Neuron* 54, p179-180. Review.
- Speese, S., M. Petrie, K. Schuske, M. Ailion, K. Ann, K. Iwasaki, E.M. **Jorgensen**, and T.F.J. Martin. 2007. UNC-31 (CAPS) is required for dense core vesicle but not synaptic vesicle exocytosis in *Caenorhabditis elegans*. *Journal of Neuroscience* 27, p6150-6162.
- Bednarek, E., L. Schaheen, J. Gaubatz, E.M. **Jorgensen** and H. Fares. 2007. The plasma membrane calcium-ATPase is required for clathrin-mediated endocytosis. *Traffic* 8, p543-553.
- Hammarlund, M., E.M. **Jorgensen**, M.J. Bastiani. 2007. Axons break in animals lacking beta-spectrin. *J Cell Biol.* 176, p269-275.
- Commentary: Leslie, M. (2007). Nervous Breakdown. *J Cell Biol.* 176, 244.

- Commentary: 'Broad Impact Paper' (2007). Faculty of 1000. Robert Herman (2007). Judith Eisen (2007). David Sherwood (2007). Robert Herman (2007). Y Peng Loh (2007). <http://f1000.com/1064707>
- Morton, J., M.W. Davis, E.M. **Jorgensen**, D. Carroll. 2006. Induction and repair of zinc-finger nuclease-targeted double-strand breaks in *C. elegans* somatic cells. *Proc Natl Acad Sci USA* 103, p16370-16375.
- Abraham, C., H. Hutter, M.T. Palfreyman, G. Spatkowski, R. Weimer, R. Windoffer, E.M. **Jorgensen**, R. Leube. 2006. Synaptic tetraspan vesicle membrane proteins are conserved but not needed for synaptogenesis and neuronal function in *C. elegans*. *Proc Natl Acad Sci USA* 103, p8227-8232.
- Wardell, B., P.S. Marik, D. Piper, T. Rutar, E.M. **Jorgensen**, B.A. Bamber. 2006. Residues in the first transmembrane domain of the *Caenorhabditis elegans* GABA_A receptor confer sensitivity to the neurosteroid pregnenolone sulfate. *Brit. J. Pharm.* 148, p162-172.
- Davis*, M.W., M. Hammarlund*, T. Harrach, S. Olsen, E.M. **Jorgensen**. 2005. Rapid single nucleotide polymorphism mapping in *C. elegans*. *BMC genomics* 6, p118.
- Jorgensen**, E.M. 2005. GABA. WormBook, ed. The *C. elegans* Research Community, WormBook, doi/10.1895/wormbook.1.14.1, <http://www.wormbook.org>. Book Chapter.
- Hammarlund, M.* , M.W. Davis*, H. Nguyen, D. Dayton, E.M. **Jorgensen**. 2005. Heterozygous insertions alter crossover distribution but allow crossover interference in *C. elegans*. *Genetics*, 171: p1047-1056.
- Commentary: Hawley, R. S. (2005). Faculty of 1000.
- Williams, D.C., T. Boulin, A.F. Ruaud, E.M. **Jorgensen**, J.L Bessereau. 2005. Characterization of *Mos1*-mediated mutagenesis in *Caenorhabditis elegans*: A method for the rapid identification of mutated genes. *Genetics*, 169: p1779-1785.
- Bamber, B.A., J.E. Richmond, J.F. Otto, E.M. **Jorgensen**. 2005. The composition of the GABA receptor at the *Caenorhabditis elegans* neuromuscular junction. *Br. J. Pharm.* 144, p502-509.
- Davis, M.W., A.J. Birnie, A.C. Chan, A.P. Page, E.M. **Jorgensen**. 2004. A conserved metalloprotease mediates ecdysis in *C. elegans*. *Development* 131, p6001-6008.
- Jorgensen**, E.M. 2004. Dopamine: should I stay or should I go now? *Nature Neuroscience* 7, p1019-1021. Review.
- Schuske, K., E.M. **Jorgensen**, 2004. The vesicular glutamate transporter: shooting blanks. *Science* 304, p1750-1752. Review.
- Schuske, K., A. Beg, E.M. **Jorgensen**, 2004. The GABA nervous system in *Caenorhabditis elegans*. *Trends in Neurosci.* 27, p407-414. Review.
- Rostaing, P., R.M. Weimer, E.M. **Jorgensen**, A. Triller, J.L Bessereau. 2004. Preservation of immunoreactivity and fine structure of *C. elegans* tissues using high-pressure freezing. *J. Histochemistry and Cytochemistry* 52: p1-12.
- Schuske, K.R., J.E. Richmond, D.S. Matthies, W.S. Davis, S. Runz, D.A. Rube, A.M. van der Blik, E.M. **Jorgensen**. 2003. Endophilin is required for synaptic vesicle endocytosis by localizing synaptojanin. *Neuron* 40, p749-762.
- Commentary: Endophilin and synaptojanin hook up to promote synaptic vesicle endocytosis. Song and K. Zinsmaier. 2003. *Neuron* 40, p665-670.
 - Commentary: Lafer, E. (2004). Faculty of 1000. <http://f1000.com/1006954>.
- Beg, A., E.M. **Jorgensen**. 2003. An excitatory GABA receptor. *Nature Neuroscience* 6, p1145-1152.
- Commentary: Exciting guts with GABA. Goillard, J-M., and E. Marder. 2003. *Nature Neuroscience* 6, p1121-1122.
- Lesa, G., M. Palfreyman, D. H. Hall, M. T. Clandinin, C. Rudolph, E.M. **Jorgensen**, G. Schiavo. 2003. Long chain polyunsaturated fatty acids are required for efficient neurotransmission in *C. elegans*. *J. Cell Science* 116, p4965-4975.

- Weimer, R., J.E. Richmond, W.S. Davis, J. Gritton, G. Hadwiger, M. Nonet, E.M. **Jorgensen**. 2003. Defects in synaptic vesicle docking in *unc-18* mutants. *Nature Neuroscience* 6, p1023-1030.
- Weimer, R., E.M. **Jorgensen**. 2003. Controversies in synaptic vesicle exocytosis. *J. Cell Sci.* 116, p3661-3666. Review.
- Bamber, B.A.; R.E. Twyman, E.M. **Jorgensen**. 2003. Pharmacological characterization of the homomeric and heteromeric UNC-49 GABA receptors in *C. elegans* *British Journal Pharmacology*, 138, p883-893.
- Corsi A.K., T.M. Brodigan, E.M. **Jorgensen**, M. Krause. 2002. Characterization of a dominant negative *C. elegans* Twist mutant protein with implications for human Saethre-Chotzen syndrome. *Development* 129: p2761-2772.
- Jorgensen**, E.M., S.E. Mango. 2002. The art and design of genetic screens: *Caenorhabditis elegans*. *Nature Review Genetics* 3, p356-369. Review.
- Halevi, S., J. McKay, M. Palfreyman, L. Yassin, M. Eshel, E. **Jorgensen**, M. Treinin. 2002. The *C. elegans ric-3* gene is required for maturation of nicotinic acetylcholine receptors. *EMBO J.* 21, p1012-1020.
- Knobel, K., M.W. Davis, E.M. **Jorgensen**, M. Bastiani. 2001. UNC-119 suppresses axon branching in *C. elegans* *Development* 128: p4079-4092.
- Koushika, S., J. E. Richmond, G. Hadwiger, R. Weimer, E. M. **Jorgensen**, M. L. Nonet. 2001. A post-docking role for active zone protein Rim. *Nature Neuroscience* 4, p997-1005.
- Commentary: Thomas Sollner (2001). Josep Rizo (2002). Faculty of 1000. <http://f1000biology.com/article/id/1001031/evaluation>
- Bessereau, J.L., A. Wright, D.C. Williams, K. Schuske, M.W. Davis, E.M. **Jorgensen**. 2001. Mobilization of a *Drosophila* transposon in the *Caenorhabditis elegans* germ line. *Nature* 413, p70-74.
- Commentary: Jonathan Hodgkin (2001). Faculty of 1000. <http://f1000biology.com/article/id/1000315/evaluation>
- Harris, T.W., K. Schuske, E.M. **Jorgensen**. 2001. Synaptic vesicle endocytosis in *C. elegans*. *Traffic* 2, p597-605. Review.
- Richmond, J.E., R.M. Weimer, E.M. **Jorgensen**. 2001. An open form of syntaxin bypasses the requirement for UNC-13 in vesicle priming. *Nature* 412, p338-341.
- Commentary: Josep Rizo (2002). Faculty of 1000. <http://f1000biology.com/article/id/1007956/evaluation>
- Yook, K.J., S.R. Proulx, E.M. **Jorgensen**. 2001. Rules of nonallelic noncomplementation at the synapse in *Caenorhabditis elegans*. *Genetics* 158, p209-220.
- Yook, K., E.M. **Jorgensen**. 2001. Genetics of the *Caenorhabditis elegans* nervous system. In *Encyclopedia of Genetics*. Ed. S. Brenner, J. Miller, Academic Press, New York. pp. 1309-1314. Review.
- Harris, T.W., E. Hartweg, H.R. Horvitz, E.M. **Jorgensen**. 2000. Mutations in synaptojanin disrupt vesicle recycling. *J Cell Biol* 150, p589-600.
- Hammarlund, M., W.S. Davis, E.M. **Jorgensen**. 2000. Mutations in β -spectrin disrupt axon outgrowth and sarcomere structure. *J. Cell Biol.* 149, p931-942.
- Commentary: A protein accumulator. Pinder, J.C. and A.J. Baines. 2003. *Nature* 406, p253-254.
- Richmond, J.E., W.S. Davis, E.M. **Jorgensen**. 1999. UNC-13 is required for synaptic vesicle fusion in *C. elegans*. *Nature Neuroscience* 2, p959-964.
- Dal Santo, P., M.A. Logan, A.D. Chisholm, E.M. **Jorgensen**. 1999. The inositol trisphosphate receptor regulates a 50 second behavioral rhythm in *C. elegans*. *Cell* 98, p757-767.
- Knobel, K., E.M. **Jorgensen**, M. Bastiani. 1999. Growth cones stall and collapse during *C. elegans* development. *Development* 126, p4489-4498.

- Richmond, J.E., E.M. **Jorgensen**. 1999. One GABA and two acetylcholine receptors function at the *C. elegans* neuromuscular junction. *Nature Neuroscience* 2, p791-797.
- Nonet, M., A.M. Holgado, F. Brewer, C.J. Serpe, B.A. Norbeck, J. Holleran, L. Wei, E. Hartweg, E.M. **Jorgensen**, A. Alfonso. 1999. UNC-11, a *Caenorhabditis elegans* AP180 homologue, regulates the size and protein composition of synaptic vesicles. *Mol. Biol. Cell* 10, p2343-2360.
- Bamber, B., Beg, A., Twyman, R., E.M. **Jorgensen**. 1999. The *Caenorhabditis elegans unc-49* locus encodes multiple subunits of a heteromultimeric GABA receptor. *J. Neuroscience* 19, p5348-5359.
- Jin, Y., **Jorgensen**, E., Hartweg, E., H.R. Horvitz. 1999. The *C. elegans* gene *unc-25* encodes glutamic acid decarboxylase and is required for synaptic transmission but not synaptic development. *J. Neuroscience* 19, p539-548.
- Chalfie, M., E.M. **Jorgensen**. 1998. *C. elegans* neuroscience: genetics to genome. *Trends Genet.* 14, p506-512. Review.
- Gilbert, S.F., E.M. **Jorgensen**. 1998. Wormwholes: a commentary on K.F. Schaffner's 'Genes, behavior and developmental emergentism'. *Philosophy of Science* 65, p259-266.
- McIntire, S.L., R.J. Reimer, K. Schuske, R.H. Edwards, E.M. **Jorgensen**. 1997. Identification and characterization of the vesicular GABA transporter. *Nature* 389, p870-876.
- Nonet, M.L., J.E. Staunton, M. Kilgard, E. Hartweg, T. Fergestad, H.R. Horvitz, E.M. **Jorgensen**, B.J. Meyer. 1997. *C. elegans rab-3* mutant synapses exhibit impaired function and are partially depleted of vesicles. *J. Neurosci.* 17, p8061-8073.
- Jorgensen**, E.M., Hartweg, E., Yook, K., Horvitz, H.R. 1996. Genetic screens for synaptic function mutants in the nematode *C. elegans*. In Basic Neuroscience in Invertebrates. Tenth Tokyo Metropolitan Institute for Neuroscience International Symposium. p217-226.
- Jorgensen**, E., E. Hartweg, K. Schuske, M.L. Nonet, Y. Jin, H.R. Horvitz. 1995. Defective recycling of synaptic vesicles in synaptotagmin mutants of *Caenorhabditis elegans*. *Nature* 378: p196-199.
- Jorgensen**, E., M. Nonet. 1995. The *C. elegans* neuromuscular junction. *Seminars in Developmental Biology*, 6, p207-220. Review.
- McIntire, S., E.M. **Jorgensen**, H.R. Horvitz. 1993. Genes required for GABA function in the nematode *Caenorhabditis elegans*. *Nature* 364: p334-337.
- McIntire, S., E.M. **Jorgensen**, J. Kaplan, H.R. Horvitz. 1993. The GABAergic nervous system of *Caenorhabditis elegans*. *Nature* 364: p337-341.
- Riley, G.R., E.M. **Jorgensen**, R.K. Baker, R. Garber. 1991. Positive and negative control of the *Antennapedia* promoter P2. *Development Sup.* 1: p177-185.
- Jorgensen**, E.M., R. Garber. 1987. Function and misfunction of the two promoters of the *Antennapedia* gene in *Drosophila*. *Genes and Development* 1: p544-555.
- Stroeher, V., E.M. **Jorgensen**, R. Garber. 1986. Multiple transcripts from the *Antennapedia* gene of *Drosophila melanogaster*. *Mol. Cell. Biol.* 6: p4667-4675.