

Lenz, P.H.

Complete list of publications (as of May, 2015)

Peer-Reviewed Publications

- Roncalli V., Cieslak M.C., Passamaneck Y., Christie A.E., Lenz P.H. (2015) Glutathione S-transferase (GST) gene diversity in the crustacean *Calanus finmarchicus* – contributors to cellular detoxification. *PLoS ONE* **10(5)**: e0123322. doi: 10.1371/journal.pone.0123322
- Lenz, P.H., Roncalli, V., Hassett, R.P., Wu, L.-S., Cieslak, M.C., Hartline, D.K. and Christie, A.E. (2014) *De novo* assembly of a transcriptome for *Calanus finmarchicus* (Crustacea, Copepoda) – the dominant zooplankton of the North Atlantic Ocean. *PLoS ONE* **9(2)**: e88589. doi: 10.1371/journal.pone.0088589
- Christie, A.E., Fontanilla, T.M., Roncalli, V., Cieslak, M.C. and Lenz, P.H. (2014) Diffusible gas transmitter signaling in the copepod crustacean *Calanus finmarchicus*: Identification of the biosynthetic enzymes of nitric oxide (NO), carbon monoxide (CO) and hydrogen sulfide (H₂S) using a *de novo* assembled transcriptome. *General and comparative endocrinology* **202**: 76-86
- Christie, A.E., Fontanilla, T.M., Roncalli, V., Cieslak, M.C. and Lenz, P.H. (2014) Identification and developmental expression of the enzymes responsible for dopamine, histamine, octopamine and serotonin biosynthesis in the copepod crustacean *Calanus finmarchicus*. *General and Comparative Endocrinology* **195**: 28-39
- Unal, E., Bucklin, A., Lenz, P.H. and Towle, D.W. (2013) Gene expression of the marine copepod *Calanus finmarchicus*: Responses to small-scale environmental variation in the Gulf of Maine (NW Atlantic Ocean). *Journal of Experimental and Marine Biology and Ecology* **446**: 76-85
- Christie, A.E., Fontanilla, T.M., Nesbit, K.T. and Lenz, P.H. (2013) Prediction of the protein components of a putative *Calanus finmarchicus* (Crustacea, Copepoda) circadian signaling system using a *de novo* assembled transcriptome. *Comparative Biochemistry and Physiology Part D, Genomics & Proteomics* **8**: 165-193
- Christie, A.E., Roncalli, V., Wu, L.-S., Garrote, C.L., Doak, T. and Lenz, P.H. (2013) Peptidergic signaling in *Calanus finmarchicus* (Crustacea: Copepoda): *in silico* identification of putative peptide hormones and their receptors using a *de novo* assembled transcriptome. *General and Comparative Endocrinology*, **187**: 117-135
- Jungbluth, M.J., Goetze, E. and Lenz, P.H. (2013) Measuring copepod naupliar abundance in a subtropical bay using quantitative PCR. *Marine Biology* **160**: 3125-3141
- Jungbluth, M.J. and Lenz, P.H. (2013) Copepod diversity in a subtropical bay based on a fragment of the mitochondrial COI gene. *Journal of Plankton Research* **35**: 630-643
- Bradley, C.J., Strickler, J.R., Buskey, E.J. and Lenz, P.H. (2013) Swimming and escape behavior in two species of calanoid copepods from nauplius to adult. *Journal of Plankton Research* **35**: 49-65

- Christie, A.E., Roncalli, V., Batta Lona, P., McCoolle, M.D., King, B.L., Bucklin, A., Hartline, D.K. and Lenz, P.H. (2013) *In silico* characterization of the insect diapause-associated protein couch potato (CPO) in *Calanus finmarchicus* (Crustacea: Copepoda). *Comparative Biochemistry and Physiology. Part D, Genomics & Proteomics* **8**: 45-57
- Buskey, E.J., Lenz, P.H. and Hartline, D.K. (2012) Sensory perception, neurobiology, and behavioral adaptations for predator avoidance in planktonic copepods. *Adaptive Behavior* **20**: 57-66
- Lenz, P.H. (2012) The biogeography and ecology of myelin in marine copepods. *Journal of Plankton Research* **34**: 575-589 (journal cover, featured article)
- Lenz, P.H., Unal, E., Hassett, R.P., Smith, C.M., Bucklin, A., Christie, A.E. and Towle, D.W. (2012) Functional genomics resources for the North Atlantic copepod, *Calanus finmarchicus*: EST database and physiological microarray. *Comparative Biochemistry Physiology Part D, Genomics & Proteomics* **7**: 110-123
- Christie, A.E., McCoolle, M.D., Harmon, S.M., Baer, K.N. and Lenz, P.H. (2011) Genomic analysis of the *Daphnia pulex* peptidome. *General and Comparative Endocrinology* **171**: 131-150
- Christie, A.E., Chapline, M.C., Jackson, J.M., Dowda, J.K., Hartline, N., Malecha, S.R. and Lenz, P.H. (2011) Identification, tissue distribution and orexigenic activity of neuropeptide F (NPF) in penaeid shrimp. *Journal of Experimental Biology* **214**: 1386-1396
- Christie, A.E., Nolan, D.H., Garcia, Z.A., McCoolle, M.D., Harmon, S.M., Congdon-Jones, B., Ohno, P., Hartline, N., Congdon, C.B., Baer, K.N. and Lenz, P.H. (2011) Bioinformatic prediction of arthropod/nematode-like peptides in non-arthropod, non-nematode members of the Ecdysozoa. *General and Comparative Endocrinology* **170**: 480-486
- Christie, A.E., Nolan, D.H., Ohno, P., Hartline, N. and Lenz, P.H. (2011) Identification of chelicerate neuropeptides using bioinformatics of publicly accessible expressed sequence tags. *General and Comparative Endocrinology* **170**: 144-155
- Christie, A.E., Durkin, C.S., Hartline, N., Ohno, P. and Lenz, P.H. (2010) Bioinformatic analyses of the publicly accessible crustacean expressed sequence tags (ESTs) reveal numerous novel neuropeptide-encoding precursor proteins, including ones from members of several little studied taxa. *General and Comparative Endocrinology* **167**: 164-178
- Ma, M., Xiang, X., Wang, J., Davoodian, N., Gard, A.L., Lenz, P.H., Malecha, S.R., Christie, A.E. and Li, L. (2010) Combining *in silico* transcriptome mining and biological mass spectrometry for neuropeptide discovery in the Pacific white shrimp *Litopenaeus vannamei*. *Peptides* **31**: 27-43
- Gard, A.L., Lenz, P.H., Shaw, J.R., and Christie, A.E. (2009) Identification of putative peptide paracrines/hormones in the water flea *Daphnia pulex* (Crustacea; Branchiopoda; Cladocera) using transcriptomics and immunohistochemistry. *General and Comparative Endocrinology* **160**: 271-287
- VanderLugt, K., Cooney, M.J., Lechner, A., and Lenz, P.H. (2009) Cultivation of the paracalanid copepod, *Bestiolina similis* (Calanoida: Crustacea). *Journal of the World Aquaculture Society* **40**: 616-628

- Sousa, G.L., Lenz, P.H., Hartline, D.K., and Christie, A.E. (2008) Distribution of pigment dispersing hormone- and tachykinin-related peptides in the central nervous system of the copepod crustacean *Calanus finmarchicus*. *Comparative and General Endocrinology* **156**: 454-459
- VanderLugt, K. and P.H. Lenz. (2008) Management of nauplius production in the paracalanid, *Bestiolina similis* (Crustacea: Copepoda): Effects of stocking densities and culture dilution. *Aquaculture* **276**: 69-77
- Burdick, D.S., Hartline, D.K., and Lenz, P.H. (2007) Escape strategies in co-occurring calanoid copepods. *Limnology and Oceanography* **52**: 2373-2385
- Lenz, P.H., Hower, A.E., and Hartline, D.K. (2005) Temperature compensation in the escape response of a marine copepod, *Calanus finmarchicus* (Crustacea). *Biological Bulletin* **209**: 75-85
- Lenz, P.H., Hower, A.E., and Hartline, D.K. (2004) Force production during pereiopod power strokes in *Calanus finmarchicus*. *Journal of marine Systems* **49**: 133-144
- Voznesensky, M., Lenz, P.H., Spanings-Pierrot, C., and Towle, D.W. (2004) Genomic approaches to detecting thermal stress in *Calanus finmarchicus* (Copepoda: Calanoida). *Journal of Experimental Marine Biology and Ecology* **311**: 37-46
- Buskey, E.J., Lenz, P.H., and Hartline, D.K. (2002) Escape behavior of planktonic copepods to hydrodynamic disturbances: high-speed video analysis. *Marine Ecology Progress Series* **235**: 135-146
- Marine Zooplankton Colloquium 2 (2001) Future marine zooplankton research – a perspective. *Marine Ecology Progress Series* **222**: 297-308 (contributing author)
- Weatherby, T.M. and Lenz, P.H. (2000) Mechanoreceptors in calanoid copepods: designed for high sensitivity. *Arthropod Structure and Development* **29**: 275-288
- Lenz, P.H., Hartline, D.K., and Davis, A.D. (2000) The need for speed. I. Fast reactions and myelinated axons in copepods. *Journal of Comparative Physiology A* **186**: 337-345
- Weatherby, T.M., Davis, A.D., Hartline, D.K., and Lenz, P.H. (2000) The need for speed. II. Myelin in calanoid copepods. *Journal of Comparative Physiology A* **186**: 347-357
- Davis, A.D., Weatherby, T.M., Hartline, D.K., and Lenz, P.H. (1999) Myelin-like sheaths in copepod axons. *Nature* **398**: 571
- Hartline, D.K., Buskey, E.J., and Lenz, P.H. (1999) Rapid jumps and bioluminescence elicited by controlled hydrodynamic stimuli in a mesopelagic copepod, *Pleuromamma xiphias*. *Biological Bulletin* **197**: 132-143
- Lenz, P.H. and Hartline, D.K. (1999) Reaction times and force production during escape behavior of a calanoid copepod, *Undinula vulgaris*. *Marine Biology* **133**: 249-258
- Hartline, D.K., Lenz, P.H. and Herren, C.M. (1996) Physiological and behavioral studies of escape responses in calanoid copepods. *Marine Freshwater Behavior and Physiology* **27**: 199-212
- Lenz, P.H., Weatherby, T.M., Weber, W. and Wong, K.K. (1996) Sensory specialization along the first antenna of a calanoid copepod, *Pleuromamma xiphias* (Crustacea). *Marine Freshwater Behavior and Physiology* **27**: 213-221

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- Weatherby, T.M., Wong, K.K. and Lenz, P.H. (1994) Fine structure of the distal sensory setae on the first antennae of *Pleuromamma xiphias* Giesbrecht (Crustacea: Copepoda). *Journal of Crustacean Biology* **14**: 670-685
- Lenz, P.H. and Yen, J. (1993) Distal setal mechanoreceptors of the first antennae of marine copepods. *Bulletin of Marine Science* **53**: 170-179
- Linkowski, T.B., Radtke, R.L. and Lenz, P.H. (1993) Otolith microstructure, age and growth of two species of *Ceratoscopelus* (Osteichthyes: Myctophidae) from the Eastern North Atlantic. *Journal of Experimental Marine Biology and Ecology* **167**: 237-260
- Radtke, R.L., Hubold, G., Folsom, S.D. and Lenz P.H. (1993) Otolith structural and chemical analyses: the key to resolving age and growth of the Antarctic silverfish, *Pleurogramma antarcticum*. *Antarctic Science* **5**: 51-62
- Gassie, D.V., Lenz, P.H., Yen, J., and Hartline, D.K. (1993) Mechanoreception in zooplankton first antennae: Electrophysiological techniques. *Bulletin of Marine Science* **53**: 96-105
- Yen, J., Lenz, P.H., Gassie, D.V. and Hartline, D.K. (1992) Mechanoreception in marine copepods: electrophysiological studies on the first antennae. *Journal of Plankton Research* **14**: 495-512
- Lenz, P.H., Melack, J.M., Robertson, B., and Hardy, E. (1986) Ammonium and phosphate regeneration by zooplankton in an Amazon floodplain lake. *Freshwater Biology* **16**: 821-830
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- Dana, G.L. and Lenz, P.H. (1986) Effects of increasing salinity on an *Artemia* population from Mono Lake, California. *Oecologia* **68**: 428-436
- Cooper, S.D., Winkler, D.W., and Lenz, P.H. (1984) The effect of grebe predation on a brine shrimp population. *Journal of Animal Ecology* **53**: 51-64
- Lenz, P.H. (1984) Life-history analysis of an *Artemia* population in a changing environment. *Journal of Plankton Research* **6**: 967-983

Books

- Lenz, P.H., Hartline, D.K., Purcell, J.E. and Macmillan, D.L. (eds) (1996) *Zooplankton: sensory ecology and physiology*. Gordon and Breach Publishers, Amsterdam. 590 pp.

Invited contributions

- Lenz, P.H. and Hartline, D.K. (2014) Mechanoreception in crustaceans of the pelagic Realm. In *Crustacean Nervous Systems and Their Control of Behavior*, Derby, C. and Thiel, M. (eds). *The Natural History of the Crustacea* **3**: 293-320.

- Lenz, P.H. (1993) Vibration sensitivity in marine copepods. Pp. 423-430. In *Sensory Systems and Communication in Arthropods II*, Wiese, K., Gribakin, F.G., Popov, A.V. and Renninger, G.H. (eds.), Birkhäuser, Basel, Switzerland. 682 pp.
- Lenz, P.H. and Browne, R.A. (1991) Ecology of *Artemia*, pp. 237-253. In R.A. Browne, P. Sorgeloos and C.N.A. Trotman (eds), *Artemia Biology*, CRC Press, Boca Raton
- Lenz, P.H. and Dana, G.L. (1987) Life-cycle studies in *Artemia*: a comparison between a sub-tropical and a temperate population. Pp. 89-100. Sorgeloos, P., Bengston, D.A., Declair, W., and Jaspers, E. (eds.), *Artemia Research and its Applications. Vol. 3. Ecology, Culturing, Use in Aquaculture*. Universa Press, Wetteren, Belgium
- Lenz, P.H. (1987) Ecological studies on *Artemia*: a review. Pp. 5-18. Sorgeloos, P., Bengston, D.A., Declair, W., and Jaspers, E. (eds.), *Artemia Research and its Applications. Vol. 3. Ecology, Culturing, Use in Aquaculture*. Universa Press, Wetteren, Belgium
- Melack, J.M., Lenz, P.H., and Cooper, S.D. (1985) The ecology of Mono Lake. *National Geographic Soc. Res. Repts.* 20: 461-470