

VIRGINIA M. WEIS
Professor and Department Head
Department of Integrative Biology
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PROFESSIONAL PREPARATION

Undergraduate:	Yale University	Biology	B. S.	1984
Graduate:	University of California, Los Angeles	Biology	Ph.D.	1990
Postdoctoral:	University of Southern California (Dr. Margaret McFall-Ngai)			1991-1993
	Stanford University, Hopkins Marine Station (Dr. Paul Levine)			1993-1996

APPOINTMENTS

Department Head	Dept of Integrative Biology, OSU	2011-present
Director	School of Life Science, College of Science, OSU	2014-2017
Professor	Dept of Zoology (now Integrative Biology), OSU	2007-present
Associate Professor	Dept of Zoology, Oregon State University	2001-2007
Assistant Professor	Dept of Zoology, Oregon State University	1996-2001

PUBLICATIONS IN LAST 3 YEARS (OUT OF 91 TOTAL)

- Matthews, J. L., C. A. Oakley, A. Lutz, A., K. E. Hillyer, U. Roessner, A. R. Grossman, **V. M. Weis**, S. K. Davy. 2018. Partner switching and metabolic flux in a model cnidarian-dinoflagellate symbiosis. *Proceeding Royal Society of London B*. <https://doi.org/10.1098/rspb.2018.2336>
- Parkinson, J. E., T. R. Tivey, P. E. Mandelare, D. A. Adpressa, S. Loesgen, **V. M. Weis**. 2018. Subtle differences in symbiont cell surface glycan profiles do not explain species-specific colonization rates in a model cnidarian-algal symbiosis. *Frontiers in Microbiology*, 9, 842. <https://doi.org/10.3389/fmicb.2018.00842>
- Gabay, Y., **V. M. Weis**, S. K. Davy. 2018. Symbiont identity influences patterns of symbiosis establishment, host growth, and asexual reproduction in a model cnidarian-dinoflagellate symbiosis. *Biological Bulletin*, 234(1), 1-10. <https://doi.org/10.1086/696365>
- Sproles, A. E., N. L. Kirk, S. A. Kitchen, C. A. Oakley, A. R. Grossman, **V. M. Weis**, and S. K. Davy. 2018. Phylogenetic characterization of transporter proteins in the cnidarian-dinoflagellate symbiosis. *Molecular Phylogenetics and Evolution*, 120, 307-20. <https://doi.org/10.1016/j.ympev.2017.12.007>
- Mansfield, K. M., N. M. Carter, L. Nguyen, P. A. Cleves, A. Alshanybayeva, L. M. Williams, C. Crowder, A. R. Penvose, J. R. Finnerty, **V. M. Weis**, T. W. Siggers, T. D. Gilmore. 2017. Transcription factor NF- κ B is modulated by symbiotic status in a sea anemone model of cnidarian bleaching. *Scientific Reports*, 7(1), 16025. <https://www.nature.com/articles/s41598-017-16168-w>
- Matthews, J. L., C. M. Crowder, C. A. Oakley, A. Lutz, U. Roessner, E. Meyer, A. R. Grossman, **V. M. Weis**, S. K. Davy. 2017. Optimal nutrient exchange and immune responses operate in partner specificity in the cnidarian-dinoflagellate symbiosis. *Proceedings of the National Academy of Sciences* 114(50), 13194-13199. <https://doi.org/10.1073/pnas.1710733114>
- Kitchen, S. A., and **V. M. Weis**. 2017. The sphingosine rheostat is involved in the cnidarian heat stress response but not necessarily in bleaching. *Journal of Experimental Biology* 220(9): 1709-1720. <http://dx.doi.org/10.1242/jeb.153858>
- Neubauer E. F., A. Z. Poole, P. Neubauer, O. Detournay, K. T. Tan, S.K. Davy and **V. M. Weis**. 2017. A diverse host thrombospondin-type-1 repeat protein repertoire promotes symbiont colonization during

establishment of cnidarian-dinoflagellate symbiosis. *eLife* 6: p324494

<http://dx.doi.org/10.7554/eLife.24494>

Neubauer, E.F., A. Z. Poole, **V. M. Weis**, and S. K. Davy. 2016. The scavenger receptor repertoire in six cnidarian species and its putative role in cnidarian-dinoflagellate symbiosis. *PeerJ* 4:e2692.

<http://10.7717/peerj.2692>

Bhattacharya, D., S. Agrawa, M. Aranda, S. Baumgarten, M. Belcaid, J. Drake, D. Erwin, S. Foret, R. D. Gates, D. F. Gruber, B. Hanna, M. P. Lesser, O. Levy, Y. J. Liew, M. MacManes, T. Mass, M. Medina, S. Mehr, E. Meyer, D. C. Price, H. M. Putnam, H. Qiu, C. Shinzato, E. Shoguchi, A. J. Stokes, S. Tambutté, D. Tchernov, C. R. Voolstra, N. Wagner, C. W. Walker, A. P. M. Weber, **V. M. Weis**, E. Zelzion, D. Zoccola, and P. G. Falkowski. 2016. Comparative genomics explains the evolutionary success of reef-forming corals. *eLife* 5:e13288.

Poole, A. Z., S. A. Kitchen and **V. M. Weis**. 2016. The role of complement in cnidarian-dinoflagellate symbiosis and immune challenge in the sea anemone *Aiptasia pallida*. *Frontiers in Microbiology*:

7:519. <http://dx.doi.org/10.3389/fmicb.2016.00519>

REVIEW PAPERS SIGNIFICANT TO CORAL BIOLOGY

Davy, S. K., D. Allemand, and V. M. Weis. 2012. Cell biology of cnidarian-dinoflagellate symbiosis.

Microbiology and Molecular Biology Reviews 76:229-291

Weis, V. M. and D. Allemand. 2009. What determines coral health? *Science* 324:1153-1155.

Weis, V. M. 2008. Cellular mechanisms of cnidarian bleaching: Stress causes the collapse of symbiosis.

Journal of Experimental Biology 211: 3059-3066.

Weis, V. M., S. K. Davy, O. Hoegh-Guldberg, M. Rodriguez-Lanetty, and J. R. Pringle. 2008. Cell biology in model systems as the key to understanding corals. *Trends in Ecology and Evolution*. 23(7): 369-376.

CURRENT GRANTS

National Science Foundation. IOS EDGE: Functional-genomics tools for Cnidarian-dinoflagellate symbiosis. Lead PI. \$2,250,000. **Current**. 5/15/2107-4/30/2020.

National Science Foundation. Glycan recognition and the role of innate immunity in cnidarian-dinoflagellate symbioses. PI. \$583,279. **Current**. 1/1/2016-12/31/2019.

Marsden Fund (New Zealand Government Funding Agency). From parasitism to mutualism: symbiosis interaction states and the adaptability of reef corals to climate change. Co-PI (Simon Davy, Lead PI). NZ\$866,000 (No monies coming to OSU). **Current**. 1/1/2017-12/31/2019.

SYNERGISTIC ACTIVITIES

Organizer 9th International Symbiosis Society Congress, July 2018 at OSU. 250 participants

Organizer, Aiptasia Symbiosis Workshop, July 2018 at OSU. 45 participants

Invited public lecture for “Evenings at Whitney” lecture series, Whitney Laboratory of Bioscience, University of Florida, St. Augustine, *In sickness and in health: the marriage of corals with their symbiotic algae*. 2016

Keynote Speaker at: *Discovering the Scientist Within*, a STEM program for 100 middle school girls offered by several colleges at OSU. 2015

Associate Editor: *The Biological Bulletin* 2011 – present; *Frontiers in Microbiology* 2013-present.