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Education

Ph.D.	2016 - 2022	Integrative Biology <i>Advisor: Dr. Virginia Weis</i>	Oregon State University
B.S.	2009 - 2013	Marine Biology	University of California, Santa Cruz

Training and Employment

2022 - Present	NSF Postdoctoral Fellow <i>Sponsors: Dr. Phillip Cleves Dr. Nathan Kirk</i>	Carnegie Institution for Science Department of Embryology
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Publications

- **Maruyama S**, Unsworth JR, Sawiczy VA, Students of Spring 2021 Z362, Weis VM. (2022) Algae from *Aiptasia egesta* are robust representations of Symbiodiniaceae in the free-living state. [PeerJ](https://doi.org/10.7717/peerj.13796). doi: 10.7717/peerj.13796
- **Maruyama S**, Mandelare-Ruiz PE, McCauley M, Peng W, Cho BG, Wang J, Mechref Y, Loesgen S, and Weis VM. (2022) Heat stress of algal partner hinders colonization success and alters the algal cell surface glycome in a cnidarian-algal symbiosis. [Microbiology Spectrum](https://doi.org/10.1128/spectrum.01567-22). doi: 10.1128/spectrum.01567-22
- **Maruyama S**, Weis VM. (2020) Limitations of using cultured algae to study cnidarian-algal symbioses and suggestions for future studies. [Journal of Phycology](https://doi.org/10.1111/jpy.13102). doi: 10.1111/jpy.13102

Patents

- Maruyama T, **Maruyama S**, and Okumura S. Preparation of Gene-Specific Templates for the Use in Single Primer Amplification. US 20140162321

Funding

\$138,000	2022 NSF Postdoctoral Research Fellowship in Biology
\$597,545	<i>Contributing author:</i> NSF IOS Grant 2124119
\$2,250	2021 Oregon Lottery Scholarship
\$500	2020 OSU College of Science Student Travel Award
\$1,000	2020 OSU Graduate School Student Travel Award
\$400	2020 OSU Department of Integrative Biology, Zoology Research Fund
\$300	2019 OSU Department of Integrative Biology, Zoology Research Fund
\$400	2018 OSU Department of Integrative Biology, Zoology Research Fund
\$2,000	2017 Phycological Society of America Grants-in-Aid of Research

\$1,000 2017 Society for Integrative And Comparative Biology Grants-in-Aid of Research

Oral Presentations

- **Maruyama S** (2022) The importance of experimental context: the Limitations of using cultured algae to study cnidarian-algal symbiosis. 15-minute invited talk for Oregon State University Department of Integrative Biology's "Enlightened Talks". Corvallis, OR.
- **Maruyama S, Weis VM** (2021) Characterizing symbiosis-specific proteins in Aiptasia symbiosis using aptamer Cell-SELEX. 12-minute oral presentation at the *14th International Coral Reef Symposium*. Virtual Meeting.
- **Maruyama S, Weis VM** (2021) Characterizing symbiosis-specific proteins in a cnidarian-dinoflagellate symbiosis using aptamer Cell-SELEX. 15-minute oral presentation at the *2021 Society for Integrative Biology and Comparative Biology Annual Meeting*. Virtual Meeting. https://youtu.be/6Gf8_8RTRRw
- **Maruyama S** (2020) Cnidarian-algal symbiosis. 30-minute *invited guest lecture for Maine Maritime Academy's Marine Botany class*. Remote guest lecture.
- **Maruyama S, Mandelare PE, Loesgen S, Weis VM** (2018) The role of the symbiont glycome in colonization of cnidarian host, Aiptasia, by heat stressed *Symbiodinium minutum*. 15-minute oral presentation at the *9th International Symbiosis Society Congress*. Corvallis, OR.
- **Maruyama S, Weis VM** (2018) The role of symbiont glycans and host immunity in the recolonization of the model cnidarian Aiptasia with heat-stressed *Symbiodinium*. 15-minute oral presentation at the *2018 Society for Integrative Biology and Comparative Biology Annual Meeting*. San Francisco, CA.
- Weis VM, **Maruyama S**, Parkinson JE, Tivey T, Koch J (2017) Symbiotic sea anemones: model organisms for studying impacts of climate change. *Invited Seminar: Walla Walla University Rosario Beach Marine Laboratory*. Anacortes, Washington.
- **Maruyama S** (2017) Using a cancer detection method to study coral-algae symbiosis. 5-minute oral presentation at the *30th Biology Graduate Student Symposium*. Corvallis, OR.

Teaching Experience

2020-2021	BI 34x	Advanced Human Anatomy and Physiology Lab	Instructor
2021	Z 361	Invertebrate Biology Lab	Teaching Assistant
2020	BI 223	Principles of Biology Lab	Course Design
2017-2020	BI 24x	Intro to Human Anatomy and Physiology Lab	Instructor
2019	Z 425	Embryology and Development Lab	Teaching Assistant
2019	BI 358	Symbioses and the Environment	Instructor
2016-2017	BI 21x	Principles of Biology Lab	Teaching Assistant

Workshops

- Dept of Integrative Biology Mentorship Training Workshop. Five hour-long workshop

sessions. October 9 – December 4, 2019

- Invited Aiptasia-Dinoflagellate Symbiosis Workshop at Corvallis, OR. July 21-22, 2018

Professional Service

2021	Frontiers in Marine Science	Manuscript Review
2020	The Phycoverse Podcast Interview	Interviewed for a 16 minute podcast about cnidarian-algal symbioses (https://www.buzzsprout.com/1274138/6018754)
2020	ISMEJ	Manuscript Review
2018	International Symbiosis Society	Program Design for 9 th ISS Congress
2017-2018	International Symbiosis Society	Social Media Committee Member - managed Society Twitter and Instagram pages

University and Department Service

OSU Ethnic Minorities United in STEM

- Member 2020 – Present
- Secretary 2019 – 2020

OSU Department of Integrative Biology – Graduate Student Association

- Fundraising Committee – Head 2017 – Present
- Equity, Justice, and Inclusion Committee – Member 2019 – 2020
 - Designed and executed a departmental climate survey on EJI issues
- Outreach Committee – Media Coordinator 2016 – 2019
- Outreach Committee – Open House Leader 2017 – 2019

OSU Department of Integrative Biology – Faculty Outreach Committee

- Social Media Coordinator 2016 – 2018

Undergraduate Mentoring

2021	Julia Unsworth	Lab Technician
2020-2021	Elizabeth Wirsching	Lab Volunteer
2018-2020	Dylan Gregory	Honors College Thesis and Lab Volunteer
2018-2020	Alanis Morales	STEM Leaders Scholar and Summer Undergraduate Research Experience Scholar
2017-2020	Morgan Conmy	Lab Volunteer
2018	Sean Trobaugh	Summer Undergraduate Research Experience Scholar
2017-2018	Lauren Minshall	Lab Volunteer
2017-2018	Shelley Gale	Undergraduate Internship
2016-2017	Sarra Hawash	STEM Leaders Scholar

Societies

2019-2020	International Coral Reef Society
2018-2020	International Symbiosis Society
2017-Present	Phycological Society of America
2017-Present	Society for Integrative and Comparative Biology

Outreach

Kyushu University Visiting Students March 2020

- Gave a 15-minute lab tour to visiting undergraduate students from Kyushu University

Discovery Days May 2019 and October 2019

- Designed and hosted a table for K-6 students to present sea anemones and demonstrate animal and algal fluorescence. The event hosted over 800 students.

OSU Integrative Biology Open House May 2017 and May 2018

- Co-lead a department-wide event that hosts over 300 attendees from the local Corvallis community where attendees can roam around Cordley Hall to visit various labs. Involved coordination with graduate students, promotion of the event to local K-12 schools and the community, and setting up a silent auction to raise funds for the Graduate Student Association.

Discovering the Scientist Within March 2018

- Presented 2 x 1 hour activities titled “How do anemones feed?” to middle school girls

OSU Department of Integrative Biology – Social Media 2016 – 2019

- **Instagram.com/OSUIB** – Created and actively maintain departmental Instagram
- **@OSUIB Twitter** – Actively maintain departmental Twitter

“Chasing Coral” Film screening October 2017

- Presented Weis Lab research with live animal demonstrations to attendees

OSU SPARK event: A Call to Life – Variations on a Theme of Extinction April 2017

- Presented Weis Lab research with a poster and live animal demonstration

Discovery Days May 2017

- Presented an ocean acidification activity to children K-6

OSU Integrative Biology Open House May 2017

- Presented Weis Lab projects to visitors of all ages
- Promoted and photographed the event

National Ocean Science Bowl Volunteer

February and April 2017

- Officially photographed the event as well as assisted in event set-up

Research Employment

2014	UC Davis – Fish Conservation and Culture Lab	Laboratory Assistant I
	<ul style="list-style-type: none"> • Husbandry of endangered Delta smelt and assisted in various experiments 	
2013	Abwiz Bio Inc.	Research Associate I
	<ul style="list-style-type: none"> • Development of monoclonal antibodies through phage display 	

Miscellaneous Research Experience

University of California, Santa Cruz

Potts Lab Volunteer

September 2012 – April 2013

- Maintenance of North Pacific krill, *Euphausia pacifica*, in ocean acidification experiments
- Use of microscopy and ImageJ software to measure krill growth
- Conducted coulometry to measure dissolved inorganic carbon in water samples

University of Queensland, Australia

University of California Education Abroad Program

August 2011– November 2011

- Independent research project at Stradbroke Island on the feeding patterns of the soldier crab *Mictyris longicarpus*
- Independent research project at Heron Island on the effect of the sea cucumber, *Holothuria atra*, on the biodiversity of benthic algae and abundance of the Symbiodiniaceae

Scripps Institution of Oceanography - University of California San Diego

Gerwick Lab Volunteer

June 2011 – August 2011,
September 2008 – August 2009

- Husbandry of Zebrafish colony and California halibut specimens
- Assisted in PCR, inoculation of pathogens in Zebrafish, maintenance of mammalian cell culture, and California halibut field collections

Skills

Molecular/Cell Biology

- Aptamer Cell-SELEX
- Emulsion PCR

- DNA purification (miniprep, maxiprep, agarose gel purification, PCR purification)
- cDNA library prep (RNA isolation, reverse transcription)
- transfection (electroporation, microinjection, plasmid recombination)
- fluorophore labeled flow cytometry
- cell/tissue staining and fluorescence microscopy
- ELISA
- phage display
- mammalian cell culture
- algal cell culture
- Western Blot
- algal chemoattraction assay
- spectrophotometry
- tissue dissociation of Aiptasia

Ecology/Marine Biology

- transect sampling
- random plot sampling
- fish and invertebrate husbandry
- dissection

Computer

- R
- ImageJ
- Python
- Unix
- Adobe Photoshop
- Adobe Illustrator