

Ewelina Rubin, Ph.D.

Current Appointment:

Senior Research Associate II
University of Miami, CIMAS NOAA-AOML Affiliate
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Miami, FL 33149
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Education:

Doctor of Philosophy in Marine and Atmospheric Sciences (2014), Stony Brook University, NY

Master of Science in Marine Biology (2009), Nova Southeastern University, FL

Bachelor of Science in Marine Science, summa cum laude (2005), Long Island University, NY

Completed 3 years towards Master's Degree in Oceanography, University of Gdansk, Poland (1998- 2001)

Publications:

Rubin E. T., Enochs, I. C., Foord, C., Mayfield, A. B., Kolodziej, G., Basden, I., & Manzello, D. (2021). Molecular mechanisms of coral persistence within highly urbanized locations in the Port of Miami, Florida. *Frontiers in Marine Science*, 8, 936.

Geraci-Yee, S., Brianik, C. J., **Rubin**, E., Collier, J. L., & Allam, B. (2021). Erection of a New Genus and Species for the Pathogen of Hard Clams 'Quahog Parasite Unknown'(QPX): *Mucochytrium quahogii* gen. nov., sp. nov. *Protist*, 172(1), 125793.

Menden-Deuer, S., Morison, F., Montalbano, A. L, Franzè, G., Strock, J., **Rubin**, E., McNair, H., Mouw, C., and Marrec, P. Multi-Instrument Assessment of Phytoplankton Abundance and Cell Sizes in Mono-Specific Laboratory Cultures and Whole Plankton Community Composition in the North Atlantic. *Frontiers in Marine Science* 7, no. 254 (2020-April-24 2020).

Rubin, E.T., Cheng, S., Montalbano, A.L., Menden-Deuer, S., and Rynearson, T.A. (2019). Transcriptomic Response to Feeding and Starvation in a Herbivorous Dinoflagellate. *Frontiers in Marine Science* 6. doi: 10.3389/fmars.2019.00246

Santoferrara L, **Rubin** E, McManus G. (2018). Global and local DNA (meta)barcoding reveal new biogeography patterns in tintinnid ciliates. *Journal of Plankton Research* 00(00): 1–13. doi:10.1093/plankt/fby011

Rubin ET, Tanguy A, Pales Espinosa E, Allam, B. (2017). Transcriptome-wide gene expression profiles of five geographically distinct isolates of quahog parasite unknown (QPX). *Journal of Eukaryotic Microbiology* 64, 647-654.

Rubin ET, Werneburg G, Pales Espinosa E, Thanassi D, Allam, B. (2016). Identification and characterization of peptidases secreted by quahog parasite unknown (QPX), the protistan parasite of hard clams. *Diseases of Aquatic Organisms* 122: 21-33.

Rubin ET, Pales Espinosa E, Koller T, Allam, B (2015). Characterization of the secretome of the clam parasite, QPX. *International Journal for Parasitology* 45: 187-196

Rubin ET, Tanguy A, Perrigault M, Pales Espinosa E, Allam, B (2014). Characterization of the transcriptome and temperature-induced differential gene expression in QPX, the thraustochytrid parasite of hard clams. *BMC Genomics* 15: 245-261

Hill MS, Hill AL, Lopez J, Peterson KJ, Pomponi S, Diaz MC, Thacker RW, et al., **Rubin, ET (no 32)**, (2013). Reconstruction of family-level phylogenetic relationships within *Demospongiae* (*Porifera*) using nuclear encoded housekeeping genes, *PloS One*, 8(1):e50437

Rubin ET, Moulding AL, Lopez, JV, Gilliam DS, Kosmynin VN, Dodge RE (2009). **Scleractinian coral recruitment to reefs physically damaged by ship groundings.** Proceedings of the 11th International Coral Reef Symposium, July 2008, Fort Lauderdale, Florida

Presentations:

Rubin, ET, Ahern O, Hunt DE, Jenkins BD, Dyhrman ST, Rynearson, TA. (2018). Transcriptional response of *Thalassiosira rotula* to phosphate limitation. ASLO-Ocean Science Meeting, Portland, Oregon

Rubin, ET, Dyhrman ST, Jenkins BD, Whitney LP, Mercier M, Rynearson, TA (2017). Transcriptional response of *Thalassiosira rotula* to phosphate limitation. Integrated Marine Biosphere Research (IMBeR) meeting. Woods Hole Oceanographic Institutions, Woods Hole, MA.

Rubin ET, Santoferrara L, Zhang H, Lin S, McManus G. (2016). Changes of ciliate diversity across eutrophication gradient in large temperate estuary. Annual meeting of the International Society of Protistologists. Moscow, Russia

Rubin ET, Tanguy A, Pales Espinosa E, Allam B (oral): Extracellular proteins in the mucus secretion of quahog parasite unknown, the protistan pathogen of the hard clam, *Mercenaria mercenaria* 106th Annual Meeting of the National Shellfisheries Association, March 2014, Jacksonville, FL

Rubin ET, Tanguy A, Pales Espinosa E, Allam B (poster): Differential gene expression in quahog parasite unknown (QPX) in response to clam-related factors and transcriptomic profiling of five QPX isolates 106th Annual Meeting of the National Shellfisheries Association, March

2014, Jacksonville, FL

Rubin ET, Tanguy A, Perrigault M, Allam B (oral): Virulence-related genes in QPX, the thraustochytrid parasite of the hard clam *Mercenaria mercenaria*. 103rd Annual Meeting of the National Shellfisheries Association, March 2011, Baltimore, MD

Rubin ET, Moulding AL, Lopez, JV, Gilliam DS, Kosmynin VN, Dodge RE (poster): *Scleractinian* coral recruitment to reefs physically damaged by ship groundings, 11th International Coral Reef Symposium, July 2008, Fort Lauderdale, FL

Research and teaching experience:

Postdoctoral Fellow

Nov 2016 – Nov 2019

Graduate School of Oceanography
Rynearson Lab
University of Rhode Island
Narragansett, RI

- Understanding diatom-bacterial interactions using RNA-Seq methodology; EXport Processes in the Ocean from Remote Sensing (EXPORTS) – metatranscriptome investigation of microzooplankton grazing metabolism
- Study of diatom-bacteria interactions using metranscriptomics

Postdoctoral Fellow

Jan 2015 – Oct 2016

Microzooplankton Diversity Lab of George McManus
Department of Marine Sciences
University of Connecticut
Groton-Avery Point, CT

- Investigating diversity of marine ciliates using 18S amplicon sequencing (Next Generation Sequencing)

Research Assistant

Jun 2010 – Dec 2014

Marine Animal Diseases Laboratory
School of Marine and Atmospheric Sciences
Stony Brook University, NY

- Dissertation research: Investigating virulence factors of QPX (a quahog pathogen unknown), a unicellular parasite of hard clams

Teaching Assistant

Sept 2010 – May 2010

Graduate School of Arts & Sciences
Stony Brook University, NY

- Courses: Diseases of Aquatic Animal Organisms, Fundamentals of Scientific Inquiry in the Biological Sciences, Environmental Problems and Solutions, Ecosystem Ecology and the Global Environment

Research Assistant

Molecular and Microbiology Laboratory
Oceanographic Center
Nova Southeastern University, FL
• Dissertation research: Estimation of coral recruitment rates to ship grounding sites near Port Everglades, Fort Lauderdale, Florida

Sept 2006 – Oct 2009

Teaching Assistant
Oceanographic Center
Nova Southeastern University, FL
• Courses: Microbiology, Chemical Oceanography

Sept 2006 – Oct 2009

Volunteer work experience:

American Museum of Natural History, New York, NY
Malacology Department
Re-curation of research collection specimens, shelving and database maintenance of dry specimens from phylum Mollusca; received Certificate of Appreciation from AMNH Department of Volunteer Services, June 2006

Oct 2005 – Jun 2006

Hel Marine Station, University of Gdansk, Poland Jun 2000 – Jun 2001
Assist in harbor seal rehabilitation program, cleaning and care of aquariums, care and feeding of injured animals; provide public information about local habitat protection

Relevant Skills:

Bioinformatics: high throughput data analysis pipelines (RNA-seq – including popular tools like: cutadapt, trimmomatic, bowtie, bowtie2, RSEM, samtools, salmon, trinity, abyss, command line blast and others) and 18S metabarcoding pipeline e.g. QIIME); primer design, sequence alignments, functional sequence annotation, sequence translation; phylogenetic analysis

Laboratory techniques: animal dissection including sponges, clams, and oysters, hemolymph collection from clams and oysters; DNA and RNA extraction, cDNA synthesis, PCR, quantitative real time PCR, restriction fragment length polymorphism (RFLP), nucleic acid gel electrophoresis, protein extractions, protein dialysis, SDS PAGE, substrate-incorporated SDS PAGE (zymogram), PCR cloning in bacteria, recombinant protein expression in bacteria and insect cells

Other computer skills: R packages, Microsoft Office suite, EndNote, statistical software: MINITAB, SPSS

Research experience: literature review, experimental planning and design, conducting experiments and statistical analyses, writing scientific reports and manuscripts

Teaching experience: supervision of undergraduate students in conducting experiments, grading of laboratory reports, exams and assays, one semester of Teaching Practicum (SBU), guest lectures in Coral Diseases in Aquatic Animal Diseases course (SBU)

Field experience: underwater and near shore collection of specimens: underwater work (SCUBA) using hardware tools; scientific diver in training (2006-2009).

Scholarships/honors:

Nova Southeastern University

- Trustee Scholarship
- President's Faculty Research Development Grant

Long Island University

- Scholarship for Non-Traditional Students
- Academic Excellence Award
- Dean's List and Faculty Honors recognitions