

LISA JOHNSON COHEN

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EDUCATION

- Ph.D. Molecular, Cellular, Integrative Physiology** 2015-Present
with a Designated Emphasis in Biotechnology
University of California, Davis
Advisor: C. Titus Brown
- M.S. Environmental Resource Management** 2007-2009
Florida Institute of Technology
Agency: Southeast Florida Aquatic Preserves, Florida Department of Environmental Protection
- M.S. Biology** 2002-2004
University of North Carolina at Wilmington
Thesis: “Metabolic influences of fiber size in aerobic and anaerobic muscles of the blue crab, *Callinectes sapidus*.”
Advisor: Stephen Kinsey
- B.S. Biochemistry** 1998-2002
Minor in Music
Eckerd College

PUBLICATIONS

- Hanley O, Zewdu R, **Cohen L**, Jung H, Lacombe J, Lee D, Philippidou P, Selleri L, Dasen J. In Press. Parallel Pbx-Dependent Pathways Govern the Coalescence and Fate of Motor Columns. *Neuron*. (NEURON-D-16-00192R1)
- Cartularo L, Kluz T, **Cohen L**, Shen SS, Costa M. 2016. Molecular Mechanisms of Malignant Transformation by Low Dose Cadmium in Normal Human Bronchial Epithelial Cells. *PloS One*. 11(5), e0155002.
- Maass K, Shekar A, Lu J, Kang G, See F, Kim E, Delgado C, Shen S, **Cohen L**, Fishman G. 2015. Isolation and Characterization of ESC-Derived Cardiac Purkinje Cells. *Stem Cells*. Dec 18. doi: 10.1002/stem.1921.
- Montenegro D, Kalpana K, Chrissian C, Sharma A, Takaoka A, Iacovidou, M, Soll C, Aminova O, Heguy A, **Cohen L**, Shen S, Kawamura A. 2015. Uncovering “herbal probiotics” in Juzen-taiho-to, an immune-boosting herbal formulation. *Bioorganic & Medicinal Chemistry Letters*. doi:10.1016/j.bmcl.2014.12.036
- Johnson LK**, Dillaman RM, Gay DM, Blum JE, Kinsey ST. 2004. Metabolic influences of fiber size in aerobic and anaerobic locomotor muscles of the blue crab, *Callinectes sapidus*. *Journal of Experimental Biology*. 207:4045-4056.
- Gavrilova O, Haluzik M, Matsusue K, Cutson JJ, **Johnson L**, Dietz KR, Nicol CJ, Vinson C, Gonzalez FJ, Reitman ML. 2003. Liver peroxisome proliferator-activated receptor-gamma contributes to hepatic steatosis, triglyceride clearance, and regulation of body fat mass. *Journal of Biological Chemistry*. 278(36):34268-34276.

BOOK CHAPTER

- Cohen L**, Efstathiadis E, Shen S. 2015. Chapter 9: *De novo* Transcriptome Assembly. In: *Next Generation DNA Sequencing Informatics, 2nd Edition*. Ed. Stuart Brown. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.

PRESENTATIONS

Cohen L, González-Angel AM, Edge S. 2013. Molecular responses of coral larvae and sponges to environmental stresses. [Florida Specialty License Plate-Funded Research Symposium, Harbor Branch Oceanographic Institute, Fort Pierce, FL. May 16, 2013.](#)

González-Angel AM, Edge SE, **Cohen LJ**, Mason B. 2013. *Porites astreoides* larval response to acute hyposalinity stress. 42nd Benthic Ecology Meeting, Savannah, GA. March 20-24, 2012.

Voss J, Edge S, **Cohen L**, Fahsbender E, Williams M, Harrison N. 2012. Oil, Dispersant, and Disease: Impacts and Interactions on Corals in the Florida Keys. 41st Benthic Ecology Meeting, Norfolk, VA. Mar 23, 2012.

Voss J, Beal J, Edge S, **Cohen L**, Hanisak, D. 2012. Estuarine Impacts on St. Lucie Reef: Determining the Effects of Changing Resource Management on Floridas Northernmost Coral Reef. Indian River Lagoon Symposium, Harbor Branch Oceanographic Institute at Florida Atlantic University. Feb 9, 2012

Voss J, Edge S, **Cohen L**, Fahsbender E, Williams M, Harrison N. 2011. Oil, Dispersant, and Disease: Impacts and Interactions on Corals in the Florida Keys. Coastal And Estuarine Research Federation Meeting, Daytona Beach, FL. Nov 7, 2011.

Beal J, Voss J, Edge S, **Cohen L**. 2011. Living on the ledge: assessment of coral stressors on St. Lucie Reef, Florida. 21st Biennial Conference of the Coastal and Estuarine Research Federation. November 6-10, 2011. Daytona Beach, FL.

Cohen LJ, Herren LW, Virgilio MT. 2010. [Restoring fringing mangrove habitat in the Indian River Lagoon.](#) Florida Academy of Sciences Annual Meeting, Indian River State College, Ft. Pierce, FL. March 19-20, 2010.

Virgilio MT, **Cohen LJ**, Herren LW. 2010. Using historic aerial photographs and GIS as management tools for establishing baselines and setting goals for future shoreline restoration in the Indian River Lagoon. Florida Academy of Sciences Annual Meeting, Indian River State College, Ft. Pierce, FL. March 19-20, 2010.

Minton D, Smith G, Filmed C, Tafleichig A, **Johnson L**, and Molina M. 2008. Improvement of coral dredging management to minimize environmental impacts in Yap State, Federated States of Micronesia. 11th Annual International Coral Reef Symposium, West Palm Beach, FL. July 7-11, 2008.

Johnson LK and Kinsey ST. 2004. Effects of muscle fiber size on post-contractile lactate recovery in the blue crab, *Callinectes sapidus*. Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA. January 5-9, 2004. ([1st Place Student Poster Award](#))

Johnson LK, Cutson JJ, Nicol CJ, Gonzalez FJ, Gavrilova O, Reitman ML. 2001. Effects of rosiglitazone on A-ZIP/F-1 mice with liver-specific deletion of PPAR-gamma gene. Summer Student Poster Day, National Institutes of Health, Bethesda, MD.

Johnson LK, Gavrilova O, Reitman ML. 2000. Effects of surgical transplantation of brown adipose tissue on the metabolism of lipoatrophic AZIP/F-1 mice. Summer Student Poster Day, National Institutes of Health, Bethesda, MD.

Johnson LK, Everett CA, Chumakov MK, Gavrilova O, Reitman ML. 1999. Effects of diet on metabolism in lipoatrophic A-ZIP/F-1 mice. Summer Student Poster Day, National Institutes of Health.

Tatham TA, **Johnson LK**, Acuna AS. 1998. Symmetrical generalization of the discriminative stimulus effects of toluene and ketamine suggests mediation by NMDA receptors. Society for Neuroscience Annual Meeting, San Diego, CA.

WORK EXPERIENCE

Bioinformatics Programmer

March 2014 - May 2015

*Bioinformatics Core, Genome Technology Center,
New York University Langone Medical Center*

New York City, NY

PIs: [Dr. Steven Shen](#), [Dr. Adriana Heguy](#)

- Routine bioinformatics for core sequencing facility

Biological Scientist - Senior Research Technician

March 2010 - March 2014

*Harbor Branch Oceanographic Institute,
Florida Atlantic University*

Fort Pierce, FL

- PIs: [Dr. Joshua Voss](#), [Dr. Sara Edge](#)
- Trained and supervised 13 staff and students
- Responsible for general lab management and molecular lab protocol development

Shoreline Restoration Project Coordinator

May 2008 - March 2010

*Southeast Florida Aquatic Preserves,
Florida Department of Environmental Protection*

Fort Pierce, FL

- Evaluated a large-scale, long-term ecological restoration project for Master's project
- Trained and supervised staff, student interns, and coordinated a network of over 200 volunteers

U.S. Peace Corps Volunteer

August 2004 - November 2006

Yap State Environmental Protection Agency

Yap, Micronesia

- Worked with local counterparts to develop projects and grant proposal writing

Graduate Research Assistant

August 2002 - June 2004

*Comparative Biochemistry & Physiology Lab,
University of North Carolina at Wilmington*

Wilmington, NC

- PI: [Dr. Stephen Kinsey](#)
- Designed experiments measuring biochemical consequences of cell size in a crustacean model
- Trained undergraduate students

Summer Intern, Laboratory Support Technician (GS-0404-4)

Summers 1999-2001

*Molecular Biology & Gene Regulation Section,
National Institutes of Health, NIDDK*

Bethesda, MD

- PIs: Dr. Oksana Gavrilova, Dr. Marc Reitman
- Funded by NIH Summer Internship Program in Biomedical Research
- Designed experiments investigating the role of lipid metabolism in a mouse model for lipotrophic Type II diabetes

Undergraduate Intern

2000-2001

*Marine Mammal Pathobiology Lab,
Florida Fish & Wildlife Conservation Commission*

St. Petersburg, FL

- Assisted during necropsies on Florida manatees

High School Intern

1997-1998

*Behavioral Pharmacology Lab,
Uniformed Services University of the Health Sciences*

Bethesda, MD

- PI: Dr. Thomas Tatham
- Drug discrimination training in rats with Skinner boxes

TEACHING

Next Generation Sequence Analysis Workshop,
Michigan State University
Teaching Assistant

Kalamazoo, MI
August 2015

University of Phoenix
Associate Faculty

Online
2009-2014

- Developed material and taught 20 sections of Associate-level Environmental Science (SCI 275)

NSF GK-12 Integrated Science Teaching Enhancement Partnership Program,
Florida Institute of Technology
Graduate Teaching Fellow

Melbourne, FL
Fall 2007

- Developed inquiry-based curriculum in Brevard County Public High Schools

Montgomery County Public Schools
Substitute Teacher

Montgomery County, Maryland
Spring 2007

- High School, Middle School science, math, social studies, music

Department of Biology & Marine Biology,
University of North Carolina at Wilmington
Graduate Teaching Assistant

Wilmington, NC
Fall 2002

- Labs: Principles of Biology, Cells (BIO 101), Anatomy & Physiology I (BIO 240)

Department of Chemistry,
Eckerd College
Teaching Assistant

St. Petersburg, FL
Fall 2000-Spring 2002

- Labs: Organic Chemistry I (CHN 121), Organic Chemistry II (CHN 122),
Biochemistry I (CHN 415), Biochemistry II (CHN 417)

GRANT FUNDING

US Environmental Protection Agency, National Estuary Program and St. Johns River Water Management District, Palm Bay, FL. FY 2007-2008 and FY 2008-2009. Indian River Lagoon Shorelines Restoration Project. Awarded to: **Southeast Florida Aquatic Preserves, Florida Department of Environmental Protection.** (Contract #24860; Grant #FC397 and Contract #25209; Grant #FC411)

National Marine Fisheries Service, NOAA Coral Reef Conservation Grants Program-General Grant. August 2006. Developing a coral reef monitoring program in the State of Yap, FSM. Awarded to: Yap Community Action Program, **Yap State Environmental Protection Agency**, Yap State Marine Resources Management Division. (NMFS-HCPO-2006-2000348)

US-FSM Joint Economic Management Committee, US Department of the Interior. 2006. Request for technical assistance for managing and monitoring coral reef dredging operations in Yap State, FSM through a Memorandum of Understanding between the Federated States of Micronesia, Department of Economic Affairs and the US FWS. Awarded to: **Yap State Environmental Protection Agency**, Yap State Marine Resources Management Division.

Sigma Xi Grant-in-Aid-of-Research, Cell Biology/Biochemistry. March 2003. The effects of cell size on metabolism during recovery from fatigue in the blue crab, *Callinectes sapidus*. Awarded to: **Lisa K. Johnson** and Stephen T. Kinsey.

OTHER FUNDING & AWARDS

Honorable Mention <i>Graduate Research Fellowship Program, National Science Foundation</i>	2015
Graduate Student Fellowship <i>Molecular, Cellular, Integrative Physiology Graduate Group, UC Davis</i>	Fall 2015, Winter 2016
Graduate Fellowship in Environmental Resource Management <i>Florida Institute of Technology</i>	2008-2009
First Place, Student Poster Award <i>Division of Comparative Physiology & Biochemistry, Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA</i>	2004
Academic Honors & Special Talent Scholarships <i>Eckerd College</i>	1998-2002
Student Science Award Fellowship <i>American Heart Association</i>	1998

TECHNICAL

Computing Resources	<i>User:</i> AWS cloud, HPCC workload management (PBS, SGE, Slurm)
Operating Systems	Linux, OSX, Windows
Scripting Languages	Python, R, Bash
NGS Bioinformatics Pipelines	Illumina bcl2fastq demultiplexing, QC, RNASeq differential expression, 16S metagenomics, <i>de novo</i> assembly, annotation, evaluation
Molecular Lab	RNA, DNA, protein isolations, purification, quantification, electrophoresis/Bioanalyzer, PCR, Cy3/Cy5 labeling, microarray hybridization, western blotting, enzyme assays
Field & Wet Lab	Biological sampling (estuarine, marine shallow and deep sea), benthic ecological surveys, <i>ex situ</i> exposure experiments

SPECIAL TRAINING

<i>Workshop on Genomics</i> evomics.org	January 12-24, 2014 Český Krumlov, CZ
<i>Software Carpentry Boot Camp</i> Woods Hole Oceanographic Institute & NOAA National Marine Fisheries Service	November 12-13, 2013 Woods Hole, MA
<i>Scientific Diver</i> American Association of Underwater Sciences Harbor Branch Oceanographic Institute, FAU	2010-2014 Fort Pierce, FL
<i>GIS, Spatial Analysis & Modeling</i> Florida Institute of Technology	January-May, 2009 Melbourne, FL

COMMUNITY

Melbourne Beach Environmental Advisory Board <i>Member, Town Commission-appointed</i>	Terms 2010-2012, 2012-2014
Cellist: New York University Community Orchestra (2014-2015), Vero Beach Chamber Orchestra (2010-2013, Principal: 2012-2013), Melbourne Community Orchestra (2007-2009), Wilmington Symphony Orchestra (2002-2004), Tampa Bay Symphony (1998-2002), Montgomery County Youth Orchestras (1993-1998)	