

# Lisa K. Johnson

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Bioinformatician, originally trained in wet lab biology & environmental science; passionate about open science, developing reproducible NGS analysis pipelines, providing computational training for biologists and de-mystifying the data intensive phases of research so that discoveries are proportional to the deluge of sequencing data being collected

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## Education

- 2015-Present **PhD Molecular, Cellular & Integrative Physiology**, with a *Designated Emphasis in Biotechnology*, University of California, Davis.
- 2009 **MS Environmental Resource Management**, *Florida Institute of Technology*.
- 2004 **MS Biology**, *University of North Carolina, Wilmington*.
- 2002 **BS Biochemistry**, *Eckerd College, St. Petersburg, FL*.

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## Experience

- 2015-Present **Graduate Researcher**, *Data Intensive Biology Lab*, School of Veterinary Medicine, University of California Davis, CA. PI: C. Titus Brown.
- 2016-Present **Graduate Researcher**, *Environmental Genomics*, Department of Environmental Toxicology, University of California Davis, CA. PI: Andrew Whitehead.
- 2014 - 2015 **Bioinformatics Programmer**, *Bioinformatics Core Facility, Genome Technology Center*, New York University Langone Medical Center, New York City, NY.
- 2010 - 2014 **Molecular Biology Research Technician**, *Coral Reef Genomics, Harbor Branch Oceanographic Institute, Florida Atlantic University*, Fort Pierce, FL.
- 2008 - 2010 **Shoreline Restoration Project Coordinator**, *Southeast Florida Aquatic Preserves, Florida Department of Environmental Protection*, Fort Pierce, FL.
- 2004 - 2006 **U.S. Peace Corps Volunteer**, *Natural Resources Conservation & Development Program*, Yap State Environmental Protection Agency, Yap, Micronesia.
- 1999 - 2001 **Summer Intern**, *Molecular Biology & Gene Regulation Section, National Institutes of Health, NIDDK*, Bethesda, MD.

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## Data Science Skills

**Languages**, Python, R, bash, L<sup>A</sup>T<sub>E</sub>X.

**Computing Resources**, AWS cloud, HPC management systems (PBS, SGE, Slurm).

**Automation**, snakemake, Jupyter Notebook, RMarkdown, conda, Docker.

**Bioinformatics pipelines (projects on <https://github.com/ljcohen>)**, RNAseq differential gene expression analysis with multifactor, multi-species data sets, de novo assembly, annotation, evaluation.

Software <https://github.com/glympsed/>, <https://github.com/dib-lab/khmer>, <https://github.com/dib-lab/eelpond>, <https://github.com/dib-lab/dammit/>.  
Maintainer: [github.com/dib-lab/eelpond](https://github.com/dib-lab/eelpond), <https://github.com/dib-lab/dammit/>.

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## Bioinformatics Teaching

Certified **Software Carpentry Foundation**, an organization whose volunteer members teach  
Instructor researchers basic software and computational skills. (4 workshops taught).

Lead **Bioinformatics skills training workshops (using Jetstream cloud platform)**.  
Instructor

- Society for Environmental Tox. & Chem. annual meeting, Sacramento, CA. (Nov 4, 2018)
- Global Invertebrate Genomics Alliance (GIGA) meeting, Curaçao. (Oct 19-22, 2018)
- Data Intensive Biology Summer Institute, UC Davis. (July 17-21, 2017) (July 2-14, 2018)
- Bioinformatics Users Group, UC San Diego. (Oct 11-12, 2017)
- Nonmodel RNAseq Workshop, UC Davis. (July 17-21, 2017)

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## Publications

- [8] **Johnson LK** et al, 2018, *GigaScience*. doi: 10.1093/giy158.  
**Commentary and Press release**
- [7] Standage et al, 2017, *J. Open Source Software*. 2(15)272, doi:10.21105/joss.00272\*.
- [6] Hanley et al, 2016, *Neuron*. 91(5):1005-1020\*.
- [5] Cartularo et al, 2016, *PloS One*. 11(5), e0155002\*.
- [4] Maass et al, 2015., *Stem Cells*. doi: 10.1002/stem.1921\*.
- [3] Montenegro et al, 2015, *Bioorganic Med. Chem. Lett.* doi:10.1016/j.bmcl.2014.12.036\*.
- [2] **Johnson LK** et al, 2004, *J. Exp. Biol.* 207:4045-4056.
- [1] Gavrilova et al, 2003, *J. Biol. Chem.* 278(36):34268-34276.

\*former name Lisa J. Cohen

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## Selected Presentations

**Johnson, LK** et al., 2018, 13th International Conference on Genomics. Shenzhen, China, October 25-29, 2018 (oral).

**Johnson, LK** and Whitehead A, 2018, 13th International Congress on the Biology of Fishes. University of Calgary, Alberta, Canada, July 15-19, 2018 (poster).

**Johnson LK** et al., 2013, Florida Specialty License Plate-Funded Research Symposium, Harbor Branch Oceanographic Institute. Fort Pierce, FL, May 16, 2013 (oral).

**Johnson LK** et al., 2010, Florida Academy of Sciences Annual Meeting, Indian River State College, Ft. Pierce, FL. March 19-20, 2010 (oral).

**Johnson LK** and Kinsey ST, 2004, Society for Integrative and Comparative Biology Annual Meeting. New Orleans, LA. January 5-9, 2004 (poster).

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## Awards

- 2018 **First Place, *GigaScience* Prize Track**, 13th International Conference on Genomics.
- 2017 **Oral Presentation Award, MCIP Colloquium**, UC Davis.
- 2016 **Honorable Mention, Graduate Research Fellowship Program**, NSF.
- 2004 **First Place, Student Poster Award**, *Society for Integrative and Comparative Biology*.