

## **Timothy J. Licknack**

Arizona State University

Biodesign Institute, Center for Mechanisms of Evolution

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### **Education:**

- 2017-present **Ph.D. in Molecular/Cellular Biology** Arizona State University, Tempe, AZ
- GPA: 4.00/4.00
  - Research Advisor: Michael Lynch
  - Project: Genetic, Biochemical, and Evolutionary Investigation into Gene Regulatory Architecture in *Paramecium Aurelia*
- 2016-2017 **M.S., Cell/Molecular Biology** \*pending\* University of Arkansas, Fayetteville, AR
- GPA: 3.89/4.00
  - Research Advisor: Nicholas B. Anthony
  - Project: Embryonic and Transcriptomic Analysis of Ascites Syndrome in Broilers
- 2012-2015 **B.S., Biology** (minor in Chemistry) Stockton University, Galloway, NJ
- GPA: 3.83/4.00
  - Research Adviser: Guy F. Barbato
  - Project: Genetic Analysis of Embryonic Growth in Japanese Quail Divergently Selected for Stress Responsiveness

### **Professional Experiences/Memberships:**

- 2018-present Graduate Research Assistant Biodesign Institute, Center for Mechanisms of Evolution
- 2018-present Member Society for Molecular Biology and Evolution
- 2017 Graduate Teaching Assistant SOLS, Arizona State University
- 2016-present Member Poultry Science Association
- 2016-2017 Graduate Research Assistant Department of Biological Sciences, University of Arkansas
- 2013-2014 Undergrad. Teaching Assistant NAMS, Stockton University

### **Awards/Honors/Fellowships:**

- 2018 School of Life Science Travel SOLS, ASU
- 2018 ASU Graduate College Travel ASU
- \*pending\* Magna Cum Laude University of Arkansas
- 2018 Biodesign Travel Award Biodesign Institute, ASU
- 2016-2017 Distinguished Doctoral Fellow University of Arkansas
- 2015 Cum Laude, Program Distinction NAMS, Stockton University
- 2013-2015 Golden Key Honors Society Stockton University
- 2013-2015 Biological Honors Society Stockton University
- 2014 NSF REU Fellow University of Kansas (worked w/ John Karanicolas)
- 2013+2014 Foundation Scholarship The Richard Stockton College of NJ (prior to name change)
- 2013 NSF REU Fellow University of Connecticut (worked w/ Daniel Mulkey)

### **Oral Presentation:**

- July 11, 2016 Poultry Science Association Annual Meeting, New Orleans, LA  
Effects of Pre-Hatch Hypoxic Challenge to Six Different Lines of Chickens

### **Poster Presentations:**

- July 10, 2018 Society for Molecular Biology and Evolution Annual Meeting, Yokohama, Japan  
Preliminary Analysis of Transcription Start Site Profiles in *Paramecium Aurelia*
- April 17, 2015 NAMS Research Symposium @ Stockton University, Galloway, NJ  
Genetic Analysis of Embryonic Growth Curves of Japanese Quail Divergently Selected for Stress Responsiveness
- July 25, 2014 Summer Undergraduate Research Symposium @ University of Kansas, Lawrence, KS  
Multiple Effector Ligands can Activate a Designed Allosteric Pocket

- April 25, 2014 NAMS Research Symposium @ The Richard Stockton College, Galloway, NJ  
Comparative Embryonic Development in High and Low Stress Lines in Coturnix Japonica
- August 2, 2013 REU Science Symposium @ University of Connecticut, Storrs, CT  
Regulation of Vascular Tone in the Retrotrapezoid Nucleus
- March 2, 2013 New England Science Symposium @ Harvard Medical School, Boston, MS  
Increased Inflammatory Control Using the Selective Interaction of COX and LOX

**Publications:**

1. Khaloud Al-Zahrani, **Timothy Licknack**, Destiny L. Watson, Nicholas B. Anthony, and Douglas D. Rhoads. Further Investigation of Mitochondrial Biogenesis and Gene Expression of Key Regulators in Ascites-Susceptible and Ascites-Resistance Broiler Research Lines (in review).
2. **Licknack T.J.**, Anthony, N.B. Effects of Hypobaric Hypoxic During Embryonic Development on Broiler Lines Divergently Selected for Ascites Incidence. (in prep).
3. **Licknack, T.J.**, Anthony, N.B., Schmidt, C., Rhoads, D.D. Transcriptomic Analysis of Hypoxic and Hypertrophied Broiler Heart. (in prep).
4. Dey, S., Parveen, A., Tarrant K.J., **Licknack, T.J.**, Kong, B.C., Anthony, N.B., Rhoads, D.D. 2017. Whole Genome Resequencing Identifies the CPQ Gene as a Determinant of Ascites Syndrome in Broilers. *PLoS ONE* 13(1): e0189544. <https://doi.org/10.1371/journal.pone.0189544>
5. Budiardjo, S.J., **Licknack, T.J.**, Cory, M.B., Kapros, D., Roy, A., Lovell, S., Douglas, J. and Karanicolas, J., 2016. Full and Partial Agonism of a Designed Enzyme Switch. *ACS Synthetic Biology*, 5(12), pp.1475-1484.

**Computational Skills:**

Bash, Python, R, SAS