**Kelly Schiro**

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E**ducation**

B.S., Genetics (May 2016)

B.S., Journalism and Mass Communications (May 2016)

Iowa State University, Ames, IA

Cumulative GPA: 3.58/4.0

**Research Experience**

**Oak Ridge Institute for Science and Education Post-Baccalaureate Scholar (Bioinformatics)**

United States Department of Agriculture – Agriculture Research Service**,** National Animal Disease Center, Ames, IA

Supervisors: Amy Vincent, DVM, Ph.D. and Tavis Anderson, Ph.D.

September 2016-Present

* Curate publicly available influenza A genomes for swine influenza surveillance and spatial analyses.
* Utilize text processing commands in UNIX command line to format sequences for reference and analysis.
* Generate phylogenies utilizing several programs (RAxML and BEAST).
* Work closely with supervisors on research project analyzing the spatial dynamics of swine influenza.

**Iowa Institute of Human Genetics Bioinformatics Internship**

University of Iowa Carver College of Medicine, Iowa City, IA

Supervisor: Andrew Kitchen, Ph.D.

June 2016-August 2016

* Utilized Bayesian phylogenetic programs (i.e. BEAST) to analyze molecular sequence data of polyomaviruses from several different host species to infer rates of evolution.
* Gathered viral sequence data from human, avian, piscine and other mammalian host species from Genbank and literature.
* Worked with UNIX command line and utilized a high-performance computing cluster for analysis.

**Science with Practice – Undergraduate Researcher**

Wildlife Disease Ecology and Genetics Laboratory**,** Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA

Supervisor: Lynne Gardner-Almond, M.S., Ph.D. Candidate

January 2016-May 2016

* Conducted population genetic research for a project funded by Iowa Department of Natural Resources (DNR) that examined levels of genetic variation and similarity in several Midwest white-tailed deer (Odocoileus virginianus) populations.
* Extracted DNA from deer tissue samples using lysis buffer protocol and quantified DNA concentrations using a NanoDrop 1000 spectrophotometer.
* Performed PCR sequencing reactions on samples of white-tailed deer to amplify an approximately 700 base pair region of the mitochondrial D-loop. Cleaned the reactions with ExoSapIt PCR cleanup reagent.
* Gathered preliminary white-tailed deer sequence data from GenBank to put in a database for future project use and comparison.

**Undergraduate Research Assistant**

Statistical Phylogenetics Lab, Department of Ecology, Evolution and Organismal Biology, Iowa State University, Ames, IA

Supervisor: April Wright, Ph.D.

January 2016-May 2016

* Learned to work with programming languages (Python and R).
* Shared scripts and journals with mentors in a Git repository.
* Assisted Dr. Wright with applying the Fossilized Birth-Death Bayesian model to datasets with sampled ancestors and non-sampled ancestors.

**Undergraduate Research Assistant**

Nason Lab, Department of Ecology, Evolution and Organismal Biology, Iowa State University, Ames, IA

Supervisor: John Nason, Ph.D.

September 2015 – December 2015

* Distinguished and counted several species of fig wasps from fruit using a dissecting microscope.
* Counts will be used to analyze the relationship between amount of mutualists and antagonists within a fig fruit.

**NSF Research Experience for Undergraduates**

Scientists Engaged in Education Research Center & Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA

Summer 2015

Supervisor: Kristen Miller, Ph.D.

* Helped input and organize data into Excel spreadsheet.
* Assisted with qualitative data coding of online and face-to-face responses to introductory laboratory biology course that was taught online and in class to compare effectiveness of online lab modules.

Met weekly to discuss coding for inter-rater reliability consistency.

**Undergraduate Research Assistant**

Meta!Blast Project (metablast.org), Department of Genetics, Development and Cell Biology, Iowa State University, Ames, IA

Supervisor: Diane Bassham, Ph.D.

Fall 2014–Spring 2015

* Worked with graphic artist and computer programmer to create accurate models of DNA bases for a biological game concept in Meta!Blast.
* Organized questions in biology mini-game addressing fundamental genetic concepts such as transcription and translation.

**Teaching Experience:**

**Undergraduate Teaching Assistant (MICRO 302)**

Department of Microbiology, Iowa State University, Ames, IA

Supervisor: Nancy Boury, Ph.D.

January 2016 – May 2016

* Facilitate student group discussions through encouraging group collaboration.
* Weekly meetings to discuss classroom dynamics and future lecture material.
* Grade homework, develop concept maps and help create case studies.

**Undergraduate Learning Assistant (BIOL 212)**

Department of Genetics, Development, and Cell Biology, Iowa State University, Ames, IA

Supervisor: Clark Coffman, Ph.D.

January 2014-May 2014

* Facilitate student group discussions.
* Weekly meetings to discuss classroom dynamics and future lecture material.
* Read STEM education literature to better understand best practices in large lecture settings.

Supervisor: Sayali Kukday, Ph.D.

September 2014-December 2014

* Facilitate student group discussions in large lecture hall.
* Attend weekly meetings to discuss how to be a more effective Learning Assistant during lectures and discuss future lecture material.
* Create and participate learning activities to enhance visual learning of lecture concepts.
* Help evaluate end of semester research projects.

**Presentations:**

“Estimating rates of evolution of polyomaviruses,” Iowa Institute of Human Genetics Internship Program. July 29, 2016.

**Posters**

Schiro, K., Gardner, L.C. & Blanchong, J. Spatial Patterns of Genetic Diversity in Midwest White-tailed Deer. Iowa State University Science With Practice Poster Session, Ames, IA. April 26, 2016.

Schiro, K., McCourt, J. & Lemons, P. Faculty Perceptions of science education literature. University of Georgia REU Research Symposium Poster Session, Athens, GA. July 23, 2015.

**Honors and Awards**

**Sui Tong Chan Fung Fund for the Promotion of Study and Research in Genetics** - Highest GPA Award, Iowa State University, Ames, IA

(Spring 2016)

* Awarded to the senior with the highest cumulative GPA for that semester and who was enrolled in 12 or more credits.

**George Washington George Washington Carver Scholar**, Iowa State University, Ames, IA

(2012–2016)

* Full tuition scholarship given to multicultural students who were in upper 25 percent of high school class, had a minimum of 3.5 GPA and minimum ACT score of 24/SAT score of 1100.

**Diane Brandt Scholarship**, Iowa State University, Ames, IA

(2012–2013)

* Given to first-year Women in Science and Engineering member who applies and has top high school academic standing.

**Other Experience:**

**Ethos Magazine Co-Editor-in-Chief**

May 2014–September 2015

* Directed the creation of a campus magazine that covers issues on campus to well-being and health.
* Managed timeline, obtained advertising and worked with printer.
* Helped the webmaster format articles and format the website platform with HTML.

**Ames Laboratory Communication Intern**

February 2015-May 2015

* Assisted in creating images and graphics for research projects for the Division of Materials Sciences and Engineering.

**Professional Development and Activities**

Genetics Club Fall 2012–May 2016

Iowa State Women’s Ultimate Club Fall 2012–May 2016

Ethos Magazine Fall 2013–Winter 2015

Co-Editor of Ethos Magazine Spring 2014–Fall 2015

George Washington Carver Student Advisory Board Spring 2013–Fall 2014

Young Women’s Christian Association Mentor Fall 2012–Spring 2013

O’Bryan-Friley Vice President Fall 2012–Spring 2013