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| Holly McQueary, PhD  |  | | --- | |  | | hmcqueary11@gmail.com | |  | | 352-226-3112 | |  | | https://www.linkedin.com/in/holly-mcqueary/ | | https://github.com/hollygene | | Objective Enthusiastic new Genetics PhD scientist with expertise in NGS data analysis, genomics and transcriptomics. Talented in designing experiments, troubleshooting, and developing new protocols. 5+ years of experience managing a research laboratory and training new research assistants. | | Skills R, Python, Linux/Unix, bash scripting, high-performance cluster computing, JMP, Bioconductor, Github, Geneious, Docker, Atom, Integrative Genomics Viewer, GATK, SAMtools, BWA, Tuxedo Suite, quantitative analysis, teaching, animal models, cell culture, DNA/RNA extraction, library prep, flow cytometry, CRISPR, PCR, primer design, plasmid isolation, transformation, quantification of nucleic acids, manuscript writing, data visualization, statistics, public speaking | | Activites and involvement **Genetics Graduate Student Association**  *Travel Award Committee Chair* 2018  **Georgia Junior Science & Humanities Symposium**  *Paper Reader* 2016, 2018  **Clarke County Science and Engineering Fair**  *Science Fair Judge* 2016, 2018  **Clarke Middle School**  *Reptile Education Assistant* 2017  **2017 National Science Bowl**  *Timekeeper/Rules Judge* 2017  **Genetics Graduate Student Association**  *Social Chair* 2016 – 2017  **Genetics Graduate Student Association**  *Travel Award Reviewer* 2016  **Athens Science Observer**  *Blog Contributor* 2016  **American Society of Naturalists**  *Member* 2016 – present  **Society for the Study of Evolution**  *Member* 2016 – present  **Genetics Society of America**  *Member* 2018 – present | | Awards/Honors **Genetics Graduate Student Association Travel Award**  2019  Department of Genetics  **SEPEEG Travel Award**  2019  American Society of Naturalists  **Mary E. Case Award for**  **Excellence in Teaching**  2018  Department of Genetics  **Outstanding Teaching Assistant Award**  2018  Graduate School, University of  Georgia  **Robin Hightower Graduate Support Fund**  2018  Department of Genetics,  University of Georgia  **Graduate Travel Award for Submission of NSF GRFP Proposal**  2016, 2017  Graduate School, University of  Georgia  **Rosemary Grant Award**  2016  Society for the Study of Evolution | |  | |  | | --- | | Research ExperienceGraduate Research AssistantAugust 2015 – August 2020  * Update and add new experimental protocols as needed * Analyzed and curated short-read NGS genomic sequencing data to identify loss of heterozygosity in diploid mutation accumulation progenitor lines of *Saccharomyces cerevisiae* * Produced an experimental plan for future dissertation work in the form of an NSF grant and orally defended the research plan * Produced, curated, and analyzed short-read NGS whole-transcriptome RNA-seq datasets for 45 aneuploid and euploid mutation accumulation lines of *S. cerevisiae* * Designed and carried out a 200-day mutation accumulation experiment with 192 individual lines of *Saccharomyces paradoxus* in order to determine the effect of transposon load on mutation rate and spectrum * Troubleshooted both wet-lab experiments and data analysis pipelines * Developed novel protocol for engineering yeast strains to express GFP * Developed protocol for competitive fitness assays using flow cytometry * Trained and mentored 8 undergraduate students in laboratory techniques and bioinformatics approaches * Held yearly committee meetings with 5 members of the faculty in order to evaluate progress towards degree and implemented ways to improve performance * Presented biological research results and biannually to colleagues * Documented code using version control and kept records of laboratory experiments * Wrote articles for publication in scientific journals  Undergraduate Research Assistant2013 - 2015  * Assisted with behavioral studies involving mice * Handled mice prior to experiments, and injected mice with sodium salicylate to induce tinnitus and examine the effects of treatment on the acoustic startle reflex * Placed mice on platforms inside boxes atop arduinos that transmitted the startle reflex of a mouse in response to a loud noise to the computer * Developed vocalization recordings from mouse vocalizations using Adobe Audition * Trained new undergraduate research assistants on basic laboratory techniques | | EducationDoctor of Philosophy (Ph.D.) in GeneticsUniversity of Georgia Dissertation Title: Genomic and Transcriptomic Impacts of Large- and Small-Scale Spontaneous Mutations in Yeasts Bachelor of Science (B.S.) in Cell and Molecular BiologyUniversity of South Florida Thesis: Ultrasonic Mouse Vocalizations Facilitate the Acoustic Startle Reflex in Male CBA/CaJs publications *In prep*  **McQueary, H**, M. Behringer, S. Demario, A. Canas, B. Johnson, A. Tsfoni, J. Chamberlin, D. Hall. Effects of spontaneous aneuploidy on gene expression in yeast mutation accumulation lines | | Selected Presentations **Talk Titled:** “*Effects of Ploidy and Transposon Load on Mutation Rate in* Saccharomyces paradoxus"  GENE 8880, Department of Genetics, University of Georgia, 2019  **Talk Titled:** “*Effects of Differing Transposon Load on Mutation Rate in* Saccharomyces paradoxus”  Southestern Population Ecology and Evolutionary Genetics  Meeting, Clemson Outdoor Lab, SC, 2019  **Talk Titled:** “*Gene expression in aneuploid yeast*”  GENE 8880, Department of Genetics, University of Georgia, 2018  **Poster Titled:** *“Effects on Gene Expression of Spontaneous Aneuploidy in Yeast Mutation Accumulation Lines”*  Southestern Population Ecology and Evolutionary Genetics  Meeting, Mountain Lake Biological Station, VA, 2018  **Talk Titled:** “*Evolution of Dosage Compensation in* Saccharomyces cerevisiae”  3MT Competition, University of Georgia, Athens, GA, 2016  **Poster Titled:** “*Rates and Biases of Mitotic Gene Conversion in* Saccharomyces cerevisiae”  Evolution, Austin, TX, 2016 | | Teaching Experience |   **Graduate Teaching Assistant,** *Evolutionary Biology* 2019   * Lead discussion sections once per week and hold office hours * Upload quizzes and exams for internet-based testing   **Graduate Teaching Assistant,** *Introductory Genetics.*  2017 – 2018   * Lead 2 discussion sections per week for 45 students, and hold office hours during the week * Grade and proctor exams during the semester for 300 students   **Graduate Teaching Assistant,** *Biology I for Non-Majors* 2017   * Coordinate assignments and material for an online course * Grade assignments and give feedback   **Graduate Laboratory Assistant,** *Biology I for Non-Majors* 2016 – 2017   * Lead 3 laboratory classes per week for 20 students, assist students during labs * Grade assignments and hold office hours  |  | | --- | | Professional Development |   **7th Annual Online Career Conference**  Beyond the Professoriate, 2020  **Georgia Bio Career Symposium**  *Georgia Bio, 2019*  **Life Sciences Industry Day 2019**  *UGA Graduate School xPD (Experiential Professional Development)*  **Extern**  UGA Startup Extern Program, Innovation Gateway, 2019  Participated in market research for a company providing services for recycling education.  **Industry Career Exploration Workshop**  *UGA Graduate School xPD (Experiential Professional Development), 2018* |