

Joseph S. Romanowski

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EDUCATION

Stockton University *Galloway, NJ* *September 2016-May 2020*
Dual-degree in Biology and Mathematics | *Program Distinction in Biology*

Texas A&M University *College Station, TX* *August 2020-current*
Interdisciplinary Graduate Program in Genetics and Genomics | Ph.D. Candidate | Dr. Zachary Adelman Laboratory

RESEARCH INTERESTS

- Molecular biology, genetics, genomics, DNA repair, genome editing, public health

RESEARCH EXPERIENCE

Dr. Zachary Adelman Laboratory, *Genetics and Genomics PhD Candidate* *December 2020-current*

- Investigating effects of nuclease type and break location on DNA double-strand break (DSB) repair pathway choice in *Aedes aegypti* mosquitoes to engineer a biodegradable transgene for disease vector control

NASA Student Spaceflight Researcher, *Co-Principal Investigator* *September 2018-May 2020*

- Designed experiment with guidance from Dr. Michael Law studying DNA damage repair efficiency of budding yeast through NASA and the Student Spaceflight Experiments Program; the proposal was reviewed by Stockton University's Natural Science and Math faculty and NASA; the experiment was sent to the International Space Station July 2019.

Rowan University SURE Program, *Undergraduate Researcher* *May 2019-August 2019*

- Investigated epistatic relationships in the sex-determination pathway of the nematode *C. briggsae* for 10 weeks, full-time at Rowan University Graduate School of Biomedical Sciences in Dr. Ronald E. Ellis Laboratory

Robert Wood Johnson University Hospital, *Student Intern* *July 2018-August 2018*

- Shadowed Jennifer Muhammed, CGC during high-risk genetic counseling sessions, learned of human genetic disorders, their respective modes of inheritance, and wrote patient history reports

TEACHING EXPERIENCE

Aggie Research Program *March 2023-current*

Texas A&M Genetics Laboratory Teaching Assistant *January 2021-December 2021*

- Communicated computational and molecular genetic lecture material, demonstrated molecular techniques, held office hours and review sessions to facilitate student learning

Introduction to Undergraduate Evidence-based STEM Teaching, *certification* *August 2020*

- Completed online, 8-week course focused on providing future STEM faculty, graduate students, and post-doctoral fellows effective teaching strategies, awarded by Texas A&M Center for the Integration of Research, Teaching, and Learning

PUBLICATIONS

1. Finney M*, Romanowski J*, and Adelman ZN (2022). Strategies to improve homology-based repair outcomes following CRISPR-based gene editing in mosquitoes: lessons in how to keep any repair disruptions local. *Virology Journal*.

PRESENTATIONS

6. Romanowski J, Chae K, Tsujimoto H, Myles KM, Adelman ZN. (2024) Investigating the non-homologous end joining (NHEJ) and single-strand annealing (SSA) pathways of DNA double-strand

break (DSB) repair with single-allele resolution after CRISPR/Cas9 treatment in embryos of the major dengue vector, *Aedes aegypti*.

- TAGC24: The Allied Genetics Conference 2024 by Genetics Society of America. March 2024. Washington, DC. (**poster** presentation)
5. **Romanowski J** and Adelman ZN. (2022-2023) Understanding DNA double-strand break (DSB) repair for a self-eliminating transgene in the major dengue vector, *Aedes aegypti*.
 - 2024 Texas A&M Life Science Recruitment Symposium. February 2024. College Station, TX. (**oral** presentation)
 4. **Romanowski J**, Myles KM, and Adelman ZN. (2022-2023) Effects of CRISPR/Cas9 break site location on DNA double-strand break (DSB) repair in *Aedes aegypti*.
 - 2023 Texas6VectorMix. March 2023. College Station, TX. (**oral** presentation)
 - 2022 Gordon Research Conference on Genetic Biocontrol. June 2022. Ventura, CA. (**poster** presentation)
 3. **Romanowski J** and Adelman ZN. (2022) Understanding DNA double-strand break (DSB) repair in *Aedes aegypti*.
 - Texas Genetics Society 49th Annual Meeting. March 2022. Bryan, TX. (**poster** presentation)
 - Texas A&M University Life Sciences Graduate Recruitment Symposium. February 2021. College Station, TX. (**poster** presentation)
 - Texas A&M University Life Sciences Graduate Recruitment Symposium. February 2021. College Station, TX. (**poster** presentation)
 2. Elko M, **Romanowski J**, and Stoyko D. (2019) The analysis of double-strand break repair in haploid *Saccharomyces cerevisiae* under spaceflight conditions.
 - University of Maryland Baltimore County 2019 Undergraduate Research Symposium. October 2019. Baltimore, MD. (**poster** presentation, **second place**)
 - Student Spaceflight Experiments Program, Mission 13 Poster Presentation. July 2019. Kennedy Space Center, Merritt Island, FL. (**poster** presentation)
 - Student Spaceflight Experiments Program 2019 National Conference. June 2019. Smithsonian National Air and Space Museum, Chantilly, Virginia. (**oral and poster** presentations)
 - School of Natural Science and Mathematics 2019 Research Symposium. May 2019. Stockton University, Galloway, NJ. (**poster** presentation, **second place**)
 1. **Romanowski J** and Ellis R. E. (2019) Analysis of *she-1* in the *C. briggsae* sex-determination pathway.
 - Summer Undergraduate Research Experience presentations. August 2019. Rowan University Graduate School of Biomedical Sciences, Stratford, NJ. (**oral** presentation)

SERVICE

Genome Editing Symposium Committee, Research Coordinator

April 2022-current

- Organized the 2022 Texas A&M Genome Editing Symposium with 6 fellow graduate students which had 200+ attendees from the Texas A&M community and consisted of keynote speaker presentations, graduate student travel scholar talks, and poster competitions

HONORS/AWARDS

TAMU Association of Former Students Merit Fellow

August 2020-Current

NJ Space Grant Consortium Fellow

Fall 2019