**Alexa D. Gannon**

Email: alexa36@usf.edu ● Cell: 240-419-7109

1611 E. Linden Ave. Tampa, FL 33604

[www.darchlab.com/](http://www.darchlab.com/)

**Education**

**PhD Allergy, Immunology, and Infectious Disease** 2019-Present

University of South Florida, Tampa, FL

P.I. Dr. Sophie Darch

**BS Biological Sciences**

Stevenson University, Owings Mills, MD 2015- 2018

GPA 3.59, *Cum Laude*

P.I. Dr. Rebecca Burgess

**AA Applied Science and Technology**

The College of Southern Maryland, La Plata, MD 2015

GPA 3.58, *Cum Laude*

**Publications**

**Gannon AD**, Darch SE. 2021. Tools for the Real-Time Assessment of a *Pseudomonas aeruginosa* Infection Model. J Vis Exp. 2021 Apr 6;(170). doi: 10.3791/62420.

**Gannon AD**, Darch SE. 2021. Same game, different players: Emerging pathogens of the CF lung. MBio. American Society for Microbiology. USA. 2021 January 10.1128/mBio.01217-20

**Awards/Professional Memberships**

Krzanowski Career Development Award 2021

American Society of Microbiology 2021-Present

USF Graduate Fellowship 2019-2020

Sigma Xi Scientific Research Society 2017-2019

American Society for Biochemistry and Molecular Biology 2017-2018

Stevenson University Dean’s List 2017-2018

Council on Undergraduate Research Travel Award 2017

Seven Oaks Transfer Scholarship 2016

Transfer Honor Society Scholarship 2015

College of Southern Maryland Dean’s List 2015

**Research Experience**

**Graduate Research Assistant, Laboratory of Dr. Sophie Darch**

Dept. of Molecular Medicine, University of South Florida, Tampa, FL Jan. 2019 - Present

My current research consists of two primary projects:

* Develop tools to characterize and quantify *Pseudomonas aeruginosa* aggregate communication and heterogeneity at a high resolution
* Determine mechanisms used by *Pseudomonas aeruginosa* for aggregate formation and dissemination during chronic infection

**Undergraduate Research Student, Laboratory of Dr. Rebecca Burgess** 2016-2018

Dept. of Biological Sciences, Stevenson University, Owings Mills, MD

* Investigated interactions between Rad54 and PCNA, a DNA clamp involved in homologous recombination (in collaboration with Lumir Krejci, Masaryk University, Czech Republic)
* Mastered a wide range of laboratory skills to include multiple DNA manipulation techniques

**Professional Development**

**Student Participant, “Build-a-Phage Project”**  2017

Dept. of Biological Sciences, Stevenson University, Owings Mills, MD in collaboration with Loyola University, MD

* Created a null mutation in Mycobacteriophage Giles gene 34 and used synthetic biology to investigate its function
* Contributed results to phage database and larger study

**Poster Presentations**

**Annual Research Day** 2021

University of South Florida, Tampa, FL

“*Pseudomonas aeruginosa* aggregate formation in the cystic fibrosis lung”

**American Society for Cell Biology and European Molecular Biology Organization Annual Conference**

Philadelphia, PA 2017

“Disabling the interaction between Rad54 and PCNA to study its role in homologous recombination”

**Annual Undergraduate and Graduate Research Symposium** 2017

Morgan State University, Baltimore, MD

“Disabling the interaction between Rad54 and PCNA to study its role in homologous recombination”

**Lab Skills**

* PCR based genome manipulation
* Plasmid assembly, transformation
* RT-PCR/qPCR assays
* gDNA extraction and purification
* Fluorescent microscopy
* Confocal microscopy
* Transposon Seq
* Genotype assessment
* Yeast tetrad dissection
* Heterogeneous data integration
* Cross-validations
* High-dimensional data visualization
* Cell culture
* Western blot
* ELISA