

# Guadalupe Reynoso

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www.linkedin.com/in/guadalupe-reynoso

## Objective

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Highly driven recent graduate with my master's degree, looking for employment to apply the skills I have obtained through my years of work in a research setting.

## Education

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**Master of Science, Biological Sciences,** December 2021  
Virginia Tech, Blacksburg, VA

**Bachelor of Science, Biology; Medical Spanish Minor,** May 2018  
James Madison University, Harrisonburg, VA

## Relevant Skills

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PCR	Gel electrophoresis and imaging	XenoGI
qPCR	qRT-PCR	BLAST
Bacterial culturing and isolation	Media preparation	MarkerFinder
Transformation	<i>In vitro</i> and <i>in planta</i> assays	R
RNA extractions	Gel extraction and purification	ViralRecall
Conjugation	RNA-Seq analyses	QIIME2
Chromosomal gene deletions	FastTree	Biopython
Linux	Python	

## Professional Experience

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### Virginia Tech, Blacksburg, VA

#### Graduate Research Assistant

July 2019 – December 2021

Project: Comparative genomics analysis of plant pathogens and other Enterobacterales

- Identification of genomic islands from 50+ selected genomes
- Genomic analysis using XenoGI and Python on ARC supercomputer
- Interpretation of results outputs through the creation of phylogenetic trees

Project: Elucidation of the *in planta* role of the global regulator Lrp from the bacterial phytopathogen *Pantoea stewartii* subsp. *stewartii*

- Creation of gene deletion and revertant strains
- *In vitro* and *in planta* assays to observe for a phenotype
- Optimization of *in planta* RNA extraction methods for RNA-Seq of the *lrp* deletion

#### Graduate Teaching Assistant

Fall 2021

- Teaching 48 students proper technique in a microbiology lab and grading assignments

### Sugaright, Harrisonburg, VA

#### Lab Technician

September 2018 – May 2019

- Calibration of laboratory equipment and laboratory maintenance
- Product analysis to establish predicted outcomes for various inputs
- Establishment of protocols for lab tests
- Training employees in aseptic technique and proper use of laboratory equipment

James Madison University, Harrisonburg, VA

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## Research Assistant

May 2018 – September 2018

Projects: Sequence analysis of samples obtained from Lake Shenandoah and Lake Erie.

- Sequence analysis using QIIME2 bioinformatics pipeline

## Undergraduate Research Assistant

September 2016 – May 2018

Projects: Characterization of bacteria isolated from Lake Shenandoah and Lake Erie.

- Water sample collection, isolation, and characterization of bacteria
- Co-culture experiments of isolates with *Microcystis aeruginosa*
- Development of technique for algal culture cell counts

## Professional Certificates

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2022 Complete Python Bootcamp From Zero to Hero in Python. Online course. Udemy.

## Research Publications

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Bartholomew HP\*, **Reynoso G\***, Thomas BJ, Mullins CM, Smith C, Gentzel IN, Giese LA, Mackey DM, Stevens AM. 2021. The transcription factors Lrp and IscR of *Pantoea stewartii* subsp. *stewartii* are important for its *in planta* lifestyle. *Frontiers Microbiology*. *Accepted*.

Hoke AK, **Reynoso G**, Smith MR, Gardner MI, Lockwood DJ, Gilbert NE, Wilhelm SW, Becker IR, Brennan GJ, Crider KE, Farnan SR, Mendoza V, Poole AC, Zimmerman ZP, Wurch LL, Steffen MM. 2021. Genomic signatures of Lake Erie bacteria suggest interaction in the *Microcystis* phycosphere. *PLOS ONE*. 16(9): e0257017. doi: <https://doi.org/10.1371/journal.pone.0257017>

**Reynoso G**, Smith MR, Holmes CP, Keelan CR, McGrath SE, Alvarez GH, Coceano MA, Eldridge KA, Fried HI, Gilbert NE, Harris MT, Kohler LR, Modolo CM, Murray EA, Polisetti SM, Sales DJ, Walsh ES, Steffen MM. 2019. Bacterial community structure and response to nitrogen amendments in Lake Shenandoah (VA, USA). *Water Sci Technol*. 80 (4): 675–684. doi: <https://doi.org/10.2166/wst.2019.311>

\**Co-first authors*