# ABELARDO AGUILAR CÁMARA

**PhD Graduate Student**

Miami, United States

**+1 (786) 843-6911** **abelardoaguilar@miami.edu**

## PROFILE

Dedicated researcher with experience in **bioinformatics** and **evolution,** with a proven track record**.** Currently a **PhD student** at the **University of Miami**, commited to work hard and serve my institution.

## LINKS

### ORCID

- 0000-0003-3133-0590

### X (Twitter)

- https://twitter.com/abelardoacm

### Github

- https://github.com/abelardoacm
- https://github.com/abelardoaguilar

## EDUCATION

### National Autonomous University of Mexico — Aug 2014 — May 2019

*Biologist* — Mexico City

Graduated with honors with the thesis entitled: "Study of the unitary activity of the human oncogenic channel Kv10.1 by noise analysis of its ionic current"

### National Autonomous University of Mexico — Jan 2020 — Mar 2023

*Master of Science* — Mexico City

Graduated with honors with the thesis entitled: "Pangenomic study of single-stranded DNA viruses". Candidate for the Alfonso Caso.

### University of Miami — Aug 2023 — Present

*PhD* — Miami

Engaging in advanced research focusing on the biophysics of viral capsids, seeking to understand their structural complexities.

## RESEARCH ARTICLES

### A Note on the Potential Clinical Use of Sofosbuvir to Treat COVID-19: The Importance of Protease Inhibitors — Jan 2020

SSRN Electronic Journal

- *10.2139/ssrn.3653571*

✤ **Two short low complexity regions (LCRs) are hallmark sequences of the Delta SARS-CoV-2 variant spike protein** ..... Jan 2022
Scientific Reports 12, 938

Becerra, A., Muñoz-Velasco, I., **Aguilar-Cámara, A. et al.**

- In charge of the bioinformatics process for the detection of low complexity regions in SARS-CoV-2 genomes (*https://github.com/abelardoacm/SARS-COV2_LCRs)*
- *10.1038/s41598-022-04976-8*

✤ **Big impacts with small efforts: A spatial prioritization for amphibian conservation in the Sierra Madre del Sur, Mexico** ..... Jan 2024
Animal Conservation

Fuentes, D., **Aguilar-Cámara, A. et al.**

- accepted in "Animal Conservation", in publication process

## PARTICIPATION IN CONGRESSES

✤ **Analysis of metagenomes reveals potential ancestral candidates of tailed phages (Poster)** ..... Jan 2024
Princeton University

Bacteria versus Phage: the Main Event

✤ **Simplifying the enigma: Archaeal phylogenomics through a pangenomic approach and discrete characters (Talk)** ..... Oct 2023
San Miguel de Allende

VII Congress of Biochemistry and Molecular Biology of Bacteria

*awarded for outstanding talk

✤ **On ssDNA viral evolution: Insights from pangenomic analysis (Poster)** ..... Sep 2022
Montpellier

International Symposium on ssDNA Viruses (IS3DV)

✤ **Bayesian Phylogenetic Inference In Viral Evolution (Talk)** ..... Jul 2023
Guanajuato

Bioinformatics and Complex Networks Retreat

✤ **Low complexity regions detection in SARS CoV-2 variants (Talk)** ..... Nov 2021
Tlaxcala

2nd Colloquium on Applications of Molecular Biology

✤ **Pangenomic analysis of ssDNA viruses (Talk)** ..... Dec 2021
National Autonomous University of Mexico

PUMAVIR symposium

## RESEARCH INTERNSHIPS

✤ **Institute for Integrative Systems Biology, Evolutionary Genetics Lab** ..... Oct 2018 — Feb 2019
Valencia

Employed Big Data tools to assess genomic complexity metrics across more than 10,000 viral reference genomes and metagenomes.

✤ **Faculty of Sciencies (UNAM), Laboratory of Protists** ..... Aug 2015 — Aug 2016
Mexico City

Preparation of ciliates samples for electron and bright field microscopy

## EMPLOYMENT HISTORY

✤ **Lecturer, National Autonomous University of Mexico** ..... Aug 2022 — Jul 2023
Mexico City

- Designed and delivered physics lessons tailored for Biology students, promoting active participation and discussions on current biological research topics, ensuring deep understanding.

**Online course tutor, ATGenomics** ..... Jan 2022 — Present
Mexico City

- Led R and Python classes tailored for biological science professionals leveraging my expertise in statistics and bioinformatics.

**Research Assistant, University of Miami** ..... Aug 2023 — Present
Miami

- Actively developing and refining bioinformatics tools tailored to model the distinct biophysical properties of viral capsids, drawing insights from genomic data.

## SKILLS

| | | | |
|---|---|---|---|
| Python | ***Skillful*** | GitHub | ***Skillful*** |
| R | ***Skillful*** | MATLAB Programming | ***Beginner*** |
| Bash Scripting | ***Skillful*** | Markdown | ***Skillful*** |

## LANGUAGES

| | | | |
|---|---|---|---|
| Spanish; Castilian | ***Native speaker*** | English | ***B2*** |

## SPECIALIZED COURSES

**Finding Hidden Messages in DNA (Bioinformatics I)** ..... Nov 2017
*University of California San Diego in Coursera*

**Genome Sequencing (Bioinformatics II)** ..... Dec 2017
*University of California San Diego in Coursera*

**Comparing Genes, Proteins and Genomes (Bioinformatics III)** ..... Mar 2018
*University of California San Diego in Coursera*

**Python Bioinformatics** ..... Nov 2021
*ATGenomics*

## REFERENCES

**Dr. Antoni Luque**
*University of Miami* — antoni.luque@miami.edu

**Dr. Arturo Carlos II Becerra Bracho**
*Faculty of Science (UNAM)* — abb@ciencias.unam.mx

**Dr. Arturo Picones Medina**
*Cell Physiology Institute (UNAM)* — arturopicones@ciencias.unam.mx

## HOBBIES

***Bird Watching***
***Nature Photography***

*Gaming*
*Linux enthusiast*