



# GABRIEL AMORIM DE ALBUQUERQUE SILVA

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## Education

### Bachelor in Bioprocesses and Biotechnology Engineering | Bahia State University (UNEB)

2017 – Dec/2022 (Expected)

- Cumulative Grade 91% (3.7 GPA)
- Recipient of Research Scholarship for three years;
- Best Research Award;
- Outstanding Student Award;
- Former member of the Student Society;
- Vice-President and Quality Control Director at Junior Enterprise.

## Research Experience

### Internship

2019 – 2021 Federal University of the São Francisco Valley (UNIVASF)

- Collaborated in understanding the impact of nutrition in ruminal metagenome of Brazilian goat breeds;
- Collaborated in Pan genomic analysis of *Aeromonas* spp. from fish;
- Performed genome assembly of different bacterial samples;
- Gained programming language skills and knowledge of different Bioinformatics OMICs tools.

### Undergraduate Research Projects

Federal University of the São Francisco Valley (UNIVASF)

2021 – Present **Comparative genomics of *Aeromonas veronii***

- Compare genomes of *A. veronii* strains from fish with those from public databases using average nucleotide identity (ANI) and searching for antimicrobial resistance genes and virulence factors.

Bahia State University (UNEB)

2019 – 2020 **Evolutionary history of sisal (*Agave sisalana*) inferred through phylogeographic analysis of its endophytic rhizobacteria** - Scholarship by Bahia State University (UNEB)

- Analyzed the evolution of the endophytic microbiota of *Agave* genus plants using 16S rRNA from public databases;
- Gained experience using methods such as Maximum-likelihood and neighbor-joining trees, haplotypes networks and diversity, bayesian population analysis, and genetic flow analysis.

2018 – 2019 ***Allium cepa* assay for the evaluation of cytotoxic, genotoxic and biochemical effects of processed meats such as sausages and nuggets** - Scholarship by Bahia State Research Support Foundation (FAPESB)

- Evaluated the Genotoxicity and Mutagenesis of Sausages using the *Allium cepa* assay and molecular tools such as PCR;
- Won 1<sup>st</sup> prize for project presentation;
- Gained lab experience in molecular biology procedures;
- Improved writing skills by publishing the results as a book chapter, as well as collaboration and interpersonal communication skills.

2017 – 2018 ***Allium cepa* assay for the evaluation of cytotoxic and genotoxic effects of bouillon cubes** - Scholarship by Bahia State University (UNEB)

- Conducted laboratory experiments on Mutagenesis and Genotoxicity of Industrialized food using the *Allium cepa* assay;
- Gained lab experience and developed public speaking skills by presenting the results on relevant scientific events.

## Extracurricular Activities

2018 – 2021 **Vice President & Director of Quality Control** | Condicione Jr (Junior Enterprise)

- Locate and investigate production concerns and help implement corrective actions;
- Supervise production planning;

- Follow quality standards and procedures to minimize errors and maximize customer satisfaction.
- Developed interpersonal skills such as collaboration, team planning and management.

2018 – 2019 **Student Society Member** | Bahia State University (UNEB)

- Gained experience in leading and group engagement.

## Publications

2020 **Silva, GAA**, et al. **Use of *in silico* and *in vivo* tools for the analysis of the genotoxic potential of ultra-processed foods**. In Silva, RJ. *Scientific initiation and its multiple applications 1*. DOI: 10.35170/ss.ed.97865862832591.03 (Book Chapter)<sup>1</sup>

## Conference presentations

- 2021 **Silva, GAA**, et al. **Combining taxonomic tools for metagenome analysis**. XXIII Northeast Genetics Meeting, Online, Brazil. (Poster)<sup>1</sup>
- 2018 **Silva, GAA**, et al. **Toxnet platform as complementary tool in the evaluation of toxicity from industrialized food**. 7th Brazilian Biotechnology Congress & 2nd Biotechnology Ibero-American Congress, Brasília, DF, Brazil. (Poster)
- 2018 **Silva, GAA**, et al. **Use of the toxnet platform as a tool for *in silico* toxicity evaluation of routine reagents in laboratories of teaching and research institutions**. V Bahia Congress of Sanitary and Environmental Engineering, Juazeiro, BA, Brazil. (Oral)<sup>1</sup>
- 2018 Tinel, JLS, Silva, RF, **Silva, GAA**, Sousa, AO. **Evaluation of the genotoxic and mutagenic potential of industrialized sauces**. XXII Northeast Genetics Meeting, Natal, RN, Brazil. (Poster)<sup>1, 2</sup>
- 2018 Silva, RF, Tinel, JLS, **Silva, GAA**, Sousa, AO. **Cytotoxic, genotoxic and mutagenic effects of powdered soft drinks**. XXII Northeast Genetics Meeting, Natal, RN, Brazil. (Poster)<sup>1, 2</sup>
- 2017 Guimarães, ML, **Silva, GAA**, et al. **Isolation and selection of waste water degrading bacteria associated with the macrophy *Eichhornia crassipes* from the São Francisco river**. II Interdisciplinary Symposium of the São Francisco Valley, Juazeiro, BA, Brazil. (Oral)<sup>1</sup>

<sup>1</sup>Original in Portuguese; <sup>2</sup>Not the presenter.

## Awards

- 2019 **Best undergraduate project presentation** - *Allium cepa* assay for the evaluation of cytotoxic, genotoxic and biochemical effects of processed meats such as sausages and nuggets.
- 2017 **Outstanding student** on the 1<sup>st</sup> Integration Challenge of Bioprocesses and Biotechnology Engineering.

## Skills

<b>Dry-lab Bioinformatics:</b> <ul style="list-style-type: none"> <li>• Python and R;</li> <li>• Linux and HPC environments;</li> <li>• Git and GitHub;</li> <li>• Conda and Snakemake</li> </ul>	<b>Wet-lab Microbiology and Molecular Biology:</b> <ul style="list-style-type: none"> <li>• Pipetting and Plating techniques;</li> <li>• DNA Extraction and Manipulation;</li> <li>• PCR and Electrophoresis;</li> <li>• Microorganisms cultivation.</li> </ul>
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## Hobbies

Crochet, Knitting, Tatting, and other fiber arts.