

# ABIGAIL FERNANDES

Current Affiliation: Amity University, Maharashtra, India

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## 🎓 EDUCATIONAL QUALIFICATION

Year	Degree/Qualification	Institution	Score
2018-Present	<b>Ph.D.Biotechnology</b> Thesis- Isolation and identification of lactic acid bacteria and their potential use as probiotics in functional foods	Amity University, Maharashtra	-
2016-2018	<b>Master of Science-Zoology</b> Dissertation- Phylogenetic study of a few natural populations of Rock Oyster <i>Saccostrea cucullata</i> from Goa	Goa University	8.35/10
2013-2016	<b>Bachelor of Science-Zoology</b>	Parvatibai Chowgule College-Margao, Goa	72.69%

## 🔬 RESEARCH EXPERIENCE

### ◆ Project Fellow

Jan 2021 - Present

Employer: Amity Center of Excellence in Astrobiology, Amity University, Maharashtra

Project: **ALGE-1 experimental payload to be launched on ISRO PSLV-PS4 Orbital platform**

- Developed plant callus and bacterial samples module to study effects of microgravity
- Optimized image processing to track the plant tissue growth.

### ◆ Research Fellow

Nov 2020 - March 2021

Employer: IVY Skin & Laser Clinic, Pune, Maharashtra

Project: **Efficacy of UVC machine**

- Analyzed changes in microbial diversity in controlled environmental setting before and after UV- C exposure

### ◆ Project Fellow

Nov 2019 - Present

Employer: Amity Center of Excellence in Astrobiology, Amity University, Maharashtra

Project: **ASBE-1 experimental payload to be launched on ISRO PSLV-PS4 Orbital platform**

- Developed plant callus module to study effects of Low-Earth Orbit (LEO)

### ◆ Research Fellow

Oct 2019 - March 2020

Employer: Gumpro Drilling Fluids Pvt.Ltd, Mumbai, Maharashtra

Project: **Production of biogum**

- Standardized fermentation medium for *Xanthomonas campestris*
- Refined extraction protocols

### ◆ Research Fellow

Nov 2018 - Feb 2019

Employer: Natural Remedies Pvt.Ltd, Bangalore

Project: **Effects of licorice on the viability and probiotic potential of *Lactobacillus* and *Bifidobacterium***

- Explored the potential of probiotics to survive in presence of licorice
- Investigated the viability of the two bacteria

## 📄 PUBLICATIONS

- ◆ **Fernandes, A., & Jobby, R. (2022). Bacteriocins from lactic acid bacteria and their potential clinical applications.** Applied Biochemistry and Biotechnology. <https://doi.org/10.1007/s12010-022-03870-3>
- ◆ **Jathar, S., Shinde, D., Dakhni, S., Fernandes, A., Jha, P., Desai, N., & Jobby, R. (2021). Identification and characterization of chlorine-resistant bacteria from water distribution sites of Mumbai.** Archives of microbiology, 203(8), 5241–5248. <https://doi.org/10.1007/s00203-021-02503-3>

## TECHNIQUES & SKILLS

- Handling & experimentation on bacterial, yeast, plant, animal cell cultures, *C.elegans*, *Artemia*, zebrafish and Wistar rats
- Microbiology- Isolation, identification, quantification, safety analysis, light and inverted microscopy
- Molecular biology- DNA, RNA isolation, Electrophoresis (AGE & PAGE), conventional, gradient and RT-qPCR, RFLP, Cloning
- Bioinformatics (phylogenetic analysis- Bioedit, MEGA)
- Image J/FIJI (image analysis), GraphPad prism (statistical analysis), ClustVis tool (PCA and Heat map analysis)

## ACHIEVEMENTS/AWARDS

- \* Winner- Oral poster presentation at the International conference on “The Frontiers of Microbiology: Man-Microbe Dynamics” organized by SIES College Mumbai. **Sept 2021**
- \* Winner- Poster presentation at the “Contemporary issues in National Science” organized by CK Thakur College Panvel. **Feb 2020**
- \* Bacterial 16s rRNA sequences published in NCBI Genbank (26 IDs) **May 2018**
- \* University Rank Holder Scholarship **2016-2018**
- \* Post-Matric scholarship for minorities & Undergraduate meritorious student scholarship

## MISCELLANEOUS

### Leadership Experience:

- \* President- Microbiologists Society India's Student Unit at AIB **2021-2022**
- \* General secretary- Sports Council Parvatibai Chowgule College **2014-2015**

### Volunteering:

- \* Demonstrator- One day PCR workshop at National College Bandra, organized by AIB and Futuris LLP **Nov 2019**
- \* Organizing committee -Cell Separation and Biochemical Techniques organized at Amity **April 2019**
- \* Demonstrator- PTC/ATC techniques organized at Amity University Mumbai **Feb 2019**

### Professional associations:

- \* Microbiologists Society, India
- \* Indian Women Scientists Association
- \* Institute of Scholars
- \* Probiotics Association India

## REFERENCES

### \* Dr Renitta Jobby

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### \* Dr Siddharth Pandey

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### \* Dr Avelyno D'Costa

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