

B E Vardhamann

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Education

UM-DAE Centre for Excellence in Basic Sciences <i>Intergated M.Sc. in Biology, CGPA - 8.22</i>	2019 August – Present <i>Mumbai, India</i>
Miranda Composite PU College <i>12th PUC</i>	2017 – 2019 <i>Bengaluru, India</i>
Kendriya Vidyalaya DRDO <i>10th SSC</i>	2017 <i>Bengaluru, India</i>

Research Experience

Master Thesis <i>Indian Institute of Technology, Bombay</i>	June, 2023 – December, 2023 <i>Mumbai, India</i>
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- Understanding Cellular Movement: Exploring Migration Patterns
- Conducted in-depth analysis of Viscotaxis experiments, to improve methods to define and categorize types of migration and cellular migration patterns
- Under guidance of Prof. Abhijit Majumder.

Device development <i>UM-DAE Centre for Excellence in Basic Sciences</i>	March, 2022 – October, 2022 <i>Mumbai, India</i>
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- Developed a low cost portable device to detect amounts of curcuminoids in turmeric samples through colorimetry using off shelf parts
- Under guidance of Prof. Indira Priyadarsini.
- Patent status - Second examination, Indian patent no. - 202221063957

Semester Project <i>UM-DAE Centre for Excellence in Basic Sciences</i>	February, 2024 – May, 2024 <i>Mumbai, India</i>
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- Improving the performance of a CNC machine for fabricating PCB
- Under guidance of Prof. R Nagarajan.
- Semester X elective project

Semester Project <i>UM-DAE Centre for Excellence in Basic Sciences</i>	January, 2023 – April, 2023 <i>Mumbai, India</i>
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- Towards detecting the presence of RNA in the extracellular vesicles from *Fusarium oxysporum*
- Explored the possibility of microRNA based gene regulation in interactions between banana plants and fungi in panama disease infections
- Under guidance of Prof. Siddhesh Ghag.
- A part of Semester VIII in house project.

Literature review <i>UM-DAE Centre for Excellence in Basic Sciences</i>	September, 2022 – December, 2022 <i>Mumbai, India</i>
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- Non-enzymatic ways of Oxidative Stress Rescue in Cyanobacteria
- Under guidance of Prof. S K Apte.
- A part of Semester VII in house project.

Awards & Honors

KVPY scholar <i>Department of Science and Technology, India</i>	SX2018 - Rank 797 2019 - 2024
Dr. R. P. Shenoy Award for Excellence in Science	2015 - 2017

Referees

Prof. Siddhesh Ghag

UM-DAE Centre for Excellence in Basic Sciences

siddhesh.ghag@cbs.ac.in

Prof. R. Nagarajan

UM-DAE Centre for Excellence in Basic Sciences

nagarajan@cbs.ac.in

Prof. Indira Priyadarsini

UM-DAE Centre for Excellence in Basic Sciences

k.indira@cbs.ac.in

On Campus Involvement

Student committee

2021 – 2022

Science club tech team

2020 – 2024

- Organized multiple sessions featuring researchers at various career stages to discuss their work and career journeys.

E-game club member

2019 – 2022

Movie club

2021 – 2022

Organized Workshops

- Linux Party (How the use of FOSS promotes the democratization of science, along with an introduction to Linux fundamentals and command-line tools.)
- 3D printing workshop (basics of FDM, designing for 3d printing, basics of CAD)

Specialized Skills

Model systems handled : *C. elegans*, *D. rerio*, *F. oxysporum*, *N. tabacum*(briefly), *E. coli*, Human cancer cell lines (MFC-7, MDAMB-231), *D. melanogaster*(briefly)

Techniques : PCR(rt, colony), ELISA, Fluorescence Microscopy, TEM/SEM sample preparation and microtomy, Gel electrophoresis(DNA and Protein), Chromatography, Basic bioinformatics

Programming Languages : Python, R, Fortran, Javascript, Latex

Spoken languages : English, Tamil, Hindi, Kannada

Software & Hardware Skills : CAD, 3D printing, microcontroller programming, CAM, laser PCB etching/ PCB milling

Other Interests

Maker : Developing feasible and frugal solutions to everyday problems.

Reading : Sci-fi, Fantasy