

Department Achievements

2024

B.Tech. in Biomedical Engineering introduced in collaboration with AMTZ

1st

Rank & Gold Medalists in the University: 2020, 2022, 2023

7

GATE AIR 2, 6, 21, 22, 27, 30, and 39 secured by students from the department

168

Papers published in SCOPUS, SCI, and Web of Science-indexed journals

5

patents granted in biomedical and biotechnological innovations

5

MOUs signed with industries for collaboration in knowledge exchange and training

1

Multidisciplinary lab (NeuroLab) established for research in neuroscience, behaviour, and aging

₹ 8.64 Cr

secured in sponsored research funding from DST, UGC, and DBT

2

Solar-based units installed in tribal areas, cutting post-harvest losses and promoting clean energy

1200+

Tribal families empowered through impactful technology

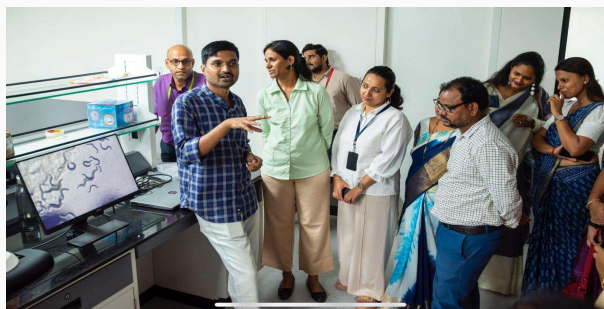
Dept. of Biotechnology, School of Technology



Department Achievements



Solar-based cold storages installed in tribal regions of Araku and Paderu to reduce post-harvest losses.



NeuroLab, a multidisciplinary facility, established for research in behaviour, neuroscience, and aging



Apurva Mula
secured All India Rank (AIR)
27 in GATE 2019 in
Biotechnology



Pallabita Saha
secured All India Rank (AIR)
39 in GATE 2019 in
Biotechnology



Vedula Parimala
secured 1st Rank and was
awarded the Gold Medal in the
University in 2023

Empowering Women Communities Through Scientific Intervention

What We Did:

Technology + Local Knowledge = New Livelihoods

- ☒ Solar Drying (Mango Jelly & Foods)
- ☒ Tissue Culture (Banana Farming)
- ☒ Hygienic Meat Processing Unit

Dept. of Biotechnology, School of Technology

Modern technologies empower women in Alamanda

Umamaheswara Rao
@timesgroup.com

Vizianagaram: Tucked amid lush green fields 20 kilometres from Vizianagaram, Alamanda has been well-known for decades for its mango jelly. Estimated to have an annual turnover of ₹3 to ₹5 crore, hundreds of women in the village are actively involved in the jelly-making process that had followed conventional methods till a few years ago.

A project sanctioned by the department of science and technology (DST) in May 2018 changed the course of mango jelly production, em-



Women undergo training in production of vegetable powders in Alamanda

powering the women to tap into demand in states such as Telangana, Odisha, Maharashtra, etc. The women were trained in using solar drying technology and hygienic processing and packing met-

hods, which have come in handy during the post-harvest season while also contributing to value addition.

Dr Imandi Sarat Babu, associate professor, department of biotechnology, Gi-

tam Institute of Technology, said the project by DST-SEED is titled, "Development and extension of technologies to improve livelihood of small farm holders at Alamanda, north-coastal Andhra Pradesh" and focuses on developing livelihoods of unemployed women.

Explaining the progress of the project, Dr Sarat Babu said during a baseline study in 2018, it was felt there was a need to train women in modern technologies given the foreign export potential of mango jelly. "The solar drying, vacuum packaging and other modern technologies have enhanced the shelf life

of the jelly. Various other products have also been experimented with the help of solar dryers, such as vegetable powders, dry fruits, dry prawns and fish which can be sold in markets," added Sarat Babu.

Dr Sarat Babu added that women in the village are also being trained on in-situ, low cost production of tissue culture banana plantlets. "The lab-grown banana variety Grand Nain, being pest- and disease-free, has significantly improved crop yield in this village. The women have also been trained in goat meat processing by leveraging modern equipment," he said.

₹ 51.22 Lakhs Funded by DST-SEED



Empowering Women Communities Through Scientific Intervention

60
women
entrepreneurs
leading
production & sales

₹6,500/-
month
income for
women
(30% increase)

240
individuals
benefiting from
jobs & income

30%
reduction in
post-harvest
losses

53%
lower processing
cost
(₹15/kg - ₹7/kg)

2,000 kg
mango jelly
processed
monthly

From the Hills of Araku to the Homes of India

Funded by DST-SEED | ₹ 3.65 Crore

What We Did

Income Stability | Reduced Migration | Sustainable Rural Economy

1. **Enhanced socio-economic conditions** of Scheduled Tribe communities through Science & Technology Interventions.
2. **Developed value chains & social enterprises** by leveraging livelihood capital strengths.
3. **Improved physical & human capital**, focusing on health, nutrition, and skill development.

Dept. of Biotechnology, School of Technology



From the Hills of Araku to the Homes of India

1200

tribal families empowered
through impactful
technology

50%

reduction in fruit waste
across villages using solar
cold storage

₹ 24,000

additional annual
income through cold
press oil mill units

80%

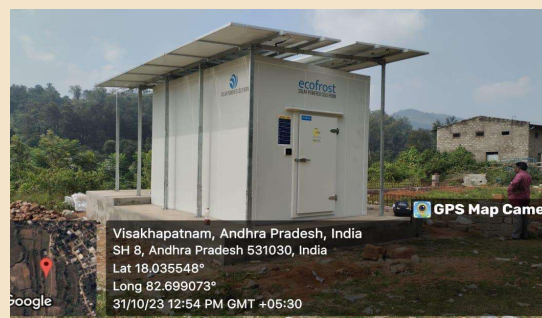
increase in Honey purity
through processing units

4

STI Hubs Serving 27
Villages with Innovative
Solutions

₹ 1.2 lakh

annual earnings from
women-led vegetable
units



STI Capacity Building & Technological Advancements in Araku Valley and Paderu Mandals

STI Capacity Building & Technological Advancements in Araku Valley and Paderu Mandals

04

Niger Seed Oil Mill Units set up with advanced machinery for high-yield, quality oil extraction

02

Vegetable Processing Units established for washing, cutting, drying, and packaging

04

Automated Honey Units installed with moisture control, temperature and filtration feature

02

Solar-Powered Cold Storage Units installed for sustainable preservation of perishable goods

04

QA & QC Labs established for Honey and Niger Oil to ensure compliance with market standards

05

Technologies / techniques / tools deployed