DCT's DHEMPE COLLEGE OF ARTS & SCIENCE, MIRAMAR- GOA.

DEPARTMENT OF BIOTECHNOLOGY

Report on the Two Day Science Exhibition Chiasma 11.0 (Academic Year 2025-2026)

Chiasma is an annual departmental event organized by the Department of Biotechnology, showcasing innovative projects developed by students. Chiasma 11.0, the eleventh edition of the exhibition, was held on 16th and 17th January 2026 at DCT's Dhempe College of Arts and Science, Miramar-Goa. This event promoted innovation in Biotechnology, hands-on learning, and scientific awareness among students and the general public.

Event Overview

The event was formally inaugurated in the presence of respected dignitaries; Principal, Dr. P. S. Ramumurthy, Vice Principal Dr. Swati Pawar, Department In-charge Mrs. Mrunal Phadke, Chiasma 11.0 Faculty coordinator Ms. Snigdha Mayenkar, and Student coordinator Mr. Arun Naik. The inauguration was graced by the Honourable Chief Guest Dr. Raghab Ray, a proficient scientist, researcher, and Area Manager at TERI (Western Coast, Goa). As part of the inaugural ceremony, the 5th edition of the departmental magazine, “Codon”, was officially released.

The theme for Chiasma 11.0 was “Smart Biology,” designed to raise awareness of cutting-edge advancements in biotechnology, AI integration, and sustainable science applications. This theme shone through the in-house exhibition of 9 innovative student projects, which drew a total footfall of approximately 450 visitors- 283 on Day 1 (January 16) and 157 on Day 2 (January 17) greatly enhancing public and student engagement with biotechnology. Visitors, including participants, gained hands-on education about biotechnology lab instruments and equipment through demonstrations by third-year students, directly linking to project experiments and promoting practical scientific skills. Competitive exhibitions for high school and higher secondary students further advanced interdisciplinary biotechnology learning, fostering innovation and real-world problem solving.

The in-house exhibition hosted a total of 9 innovative projects worked on by the students from the department of Biotechnology. The projects were as follows:

1) Konkan Flora: Developed value-added products from indigenous Goan beans using fermentation technology, demonstrating biotechnology's role in environmental sustainability

and local resource utilization. Team: Ms. Khushbu Kumari, Ms. Shravani Khot, Ms. Safah Mehraj, Ms. Mausamee Shetye.

2) Airlytix: Built a bio-integrated air purifier targeting volatile organic compounds (VOCs) through microbial biotechnology and IoT integration. Team: Ms. Saisha Naik, Ms. Siya Virnodkar, Mr. Sushant Pokle, Mr. Rehan Shaikh.

3) Blackbox Botany: Created a smart automatic plant watering system with integrated wastewater recycling dispensers, highlighting agricultural biotechnology enhanced by AI for efficient resource management. Team: Mr. Emmanuel Bethpudi, Mr. Tejas Gawas, Mr. Shreyash Parab.

4) EcoRepel Tech: Valorized bioenzyme residual slurry into eco-friendly products, advancing bioremediation technology with AI optimization for waste reduction. Team: Ms. Saisha Gaitonde, Ms. Sahinya Gaude, Ms. Niyati Amonkar, Ms. Alisha Singh.

5) Uprooted: Demonstrated vertical hydroponics for microgreens cultivation, showcasing agricultural biotechnology innovations in space-efficient farming. Team: Ms. Akshata Nagvekar, Ms. Nicole Fernandes, Ms. Julia Pereira, Ms. Saloni Prabhu Chodnekar, Ms. Rutvi Narvekar.

6) Waste2wrap: Produced bioplastics while exploring smart packaging solutions, promoting sustainable alternatives in materials science through biotechnology. Team: Mr. Utkarsh Singh, Mr. Shivam Dessai, Ms. Gargi Balve, Ms. Shranaya Govekar.

7) Lumisense: Developed a bioluminescent pollution sensor leveraging environmental biotechnology and AI for real-time detection. Team: Ms. Riddhi Shekar, Ms. Prerna Malik.

8) Radiation Resistance: Engineered ionizing radiation-resistant plants using *Deinococcus radiodurans*, addressing agricultural space biotechnology challenges. Team: Ms. Aakansha Pal, Ms. Ayushi Hodavadekar, Ms. Bhargavi Rege, Ms. Mahika Kotecha, Ms. Venessa Almeida.

9) Bluenova Tech: Modeled an AI-based aquaculture waste management system, applying agricultural biotechnology for efficient aquatic resource sustainability. Team: Ms. Shalvi Desai, Ms. Sanaya Amerkar, Mr. Aditya Chodankar, Ms. Siya Bhosle, Ms. Snehal Sawant.

In-House Exhibition Winners:

1st Place - Konkan Flora: Ms. Shravani Sunil Khot, Ms. Khushbu Kumari, Ms. Mausamee Sidharth Shetye, Ms. Safah Mehraj (guided by Ms. Snigdha Mayenkar, Assistant Professor of Biotechnology).

2nd Place - Airlytix: Mr. Sushant Pokle, Mr. Rehan Sheikh, Ms. Saisha Naik, Ms. Siya Virnodkar (guided by Dr. Amara Begum Mulla, Assistant Professor of Biotechnology).

Apart from the in-house exhibition, competitions were held for high school and higher secondary students, where they showcased their exhibits.

Innovative Minds-Model Making Exhibit (High School Students, January 16, 2026)

Organized for high school students, Innovative Minds showcased their curiosity in innovative science and technology through creative static models addressing real-world applications. The event engaged 10 teams, each presenting fully functional static models that demonstrated ingenuity across sustainability, engineering, and biotechnology-related fields.

Participating Models:

1. **Mars Habitation**: An architectural model illustrating sustainable living on Mars. (1st Place: Kings High School, Margao- Goa)
2. **Ideal Village Model**: A village layout model incorporating sustainable development practices. (2nd Place: Rosary High School, Bambolim- Goa)
3. **Cook and Charge** : Multiuse energy harvester from LPG stove waste heat to charge phones. (3rd Place: Navy Children's School, Vasco- Goa)
4. **Renewable Resources and Sustainable Development**: Model of renewable energy sources, including a hydroelectric power plant.
5. **Hydraulic Lift**: System for lifting heavy vehicles, painting, and window cleaning applications.
6. **Himkavach**: Tech tent designed for soldiers.
7. **Biotics Medassist**: Pill-dispensing gadget for geriatric care.
8. **Filtration Plant**: System for filtering polluted water.
9. **Effectiveness of Local Composting**: Vermicomposting method using kitchen waste.
10. **Agricultural Radar System**: Plant management system utilizing radar technology.

BioVision-Model Making Exhibit (Higher Secondary Students, January 17, 2026)

Organized for higher secondary students, BioVision fostered scientific curiosity, innovation, and practical applications of biological and technological concepts through working models. The event provided a platform for creativity, problem-solving, and addressing real-world challenges, with four teams presenting Working models focused on environmental sustainability, smart technology, and advanced agriculture.

Participating Models:

1. **Advanced Agriculture Management System**: Technology integration for improved productivity. (1st Place: Navy Children's School, Vasco- Goa).
2. **Agribot**: Automation in agriculture to enhance farming efficiency. (2nd Place: The King's School, Margao- Goa).
3. **Smart Dustbin**: Automated waste management system. (3rd Place: Dempo Higher Secondary School, Bambolim- Goa).

4. **Rainwater Harvesting System**: Efficient model emphasizing water conservation and sustainable management practices

Valedictory Functions

Chiasma 11.0 concluded with valedictory functions for high school participants on Day 1 (January 16) and higher secondary participants on Day 2 (January 17), attended by Principal Dr. P. S. Ramumurthy, Vice Principal Dr. Swati Pawar, Department In-charge Mrs. Mrunal Phadke, Faculty Coordinator Ms. Snigdha Mayenkar, and Student Coordinator Mr. Arun Naik. These ceremonies awarded winners, formally acknowledged the successful completion of events, and celebrated student achievements in scientific innovation.

Outcomes

These sessions reinforced DBT Star College Scheme outcomes by recognizing excellence, motivating participants, and strengthening biotechnology education at DCT's Dhempe College. Chiasma 11.0 successfully achieved its objectives through active student, visitor, and organizer participation, blending academic exhibitions, competitive events, and interactive lab demonstrations. These activities perfectly aligned with the "Smart Biology" theme, demonstrating exemplary coordination, teamwork, and innovation while laying a strong foundation for future initiatives. The event fostered scientific engagement, collaboration, and skill development, with anticipation for upcoming editions.


Goa, Goa, India
FRJ6+X47, Panaji, Goa, Panaji, Goa 403001, India
Lat: 15.4826609° Long: 73.8103033°
16/01/2026 10:36 am IST
Picture Credit: Mrs. Mrunal Phadke


Goa, Goa, India
FRJ6+X47, Panaji, Goa, Panaji, Goa 403001, India
Lat: 15.4826001° Long: 73.8104449°
16/01/2026 10:42 am IST
Picture Credit: Mrs. Mrunal Phadke


Konkan Flora


Airlytix


Goa, Goa, India
FRJ6+X47, Panaji, Goa, Panaji, Goa 403001, India
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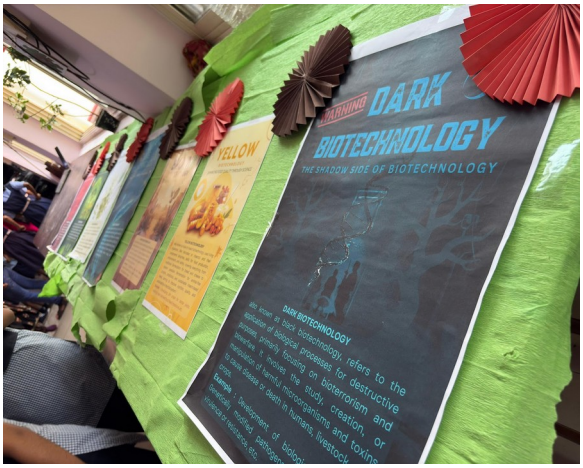
16/01/2026 10:51 am IST
Picture Credit: Mrs. Mrunal Phadke


Uprooted



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