



MARUDHAR KESARI JAIN COLLEGE FOR WOMEN (AUTONOMOUS)

VANIYAMBADI, TIRUPATTUR DT - 635 751

- Recognized u/s 2(F) & 12(B) of UGC Act 1956
- Permanently Affiliated to Thiruvalluvar University
- Supported by DST - FIST | DBT STAR College Scheme



PG & Research Department of Biotechnology

Organizes

GUEST LECTURE
on

CLIMATE CHANGE

and it's

IMPACT on BIODIVERSITY

Supported by

DBT STAR COLLEGE SCHEME



Date
31.08.2026



Time
11.30 am



Venue
Sri Guru Mishri
Seminar Hall



CHIEF GUEST

Dr. A. Rajasekar

Associate Professor & DBT-Ramalingaswami Fellow
Head, Department of Biotechnology
Thiruvalluvar University
Serkkadu, Vellore

Sri. V. Dilip Kumar Jain
President

Sri. Anand Singhvi
Secretary

Dr. M. Inbavalli
Principal

Dr. M. Gomathi
Program Coordinator
DBT STAR College Scheme

Ms. S. Aruna
Head

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Marudhar Kesari Jain College
for Women (Autonomous)
Vaniyambadi - 635 751.
Tirupattur District



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AGENDA

- | | | |
|----|------------------------------|---|
| 01 | Prayer | |
| 02 | Welcome Address | : Ms. Nuseba Harmin P
III B.Sc. Biotechnology |
| 03 | Felicitation | : Dr. M. Inbavalli
Principal, MKJC |
| 04 | Chief Guest Introduction | : Ms. Tharika
II B.Sc. Biotechnology |
| 05 | Honouring of the Chief Guest | : Dr. M. Inbavalli
Principal, MKJC |
| 06 | Chief Guest Address | : Dr. A. Rajasekar
Associate Professor & DBT-Ramalingaswami Fellow
Head, Department of Biotechnology
Thiruvalluvar University
Serkkadu, Vellore |
| 07 | Vote of Thanks | : Ms. Taiyeeba
I B.Sc. Biotechnology |
| 08 | National Anthem | |

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Activity Report

Topic/ Subject of the Activity

Guest Lecture on Climate Change and its Impact on Biodiversity under DBT STAR College Scheme.

Objectives (Input)

- ✓ To create awareness among students about climate change and its impacts on biodiversity and ecosystem health.
- ✓ To introduce students to emerging pollutants such as crude oil, tannery effluents, textile dyes, pesticides and microplastics.
- ✓ To familiarize students with the toxic effects of environmental pollutants on microorganisms, plants, animals and aquatic ecosystems.
- ✓ To provide students with an understanding of biodegradation and bioremediation as sustainable approaches for pollutant removal.
- ✓ To introduce students to basic environmental biotechnology techniques such as serial dilution, pour-plate culture and 16S rRNA based microbial identification.

Methodology (Process)

The PG & Research Department of Biotechnology organized the Guest Lecture on 31.08.2026 at 11.30 a.m. at the Sri guru Mishri Seminar Hall with the support of the DBT STAR College Scheme. Dr. A. Rajasekar, Associate Professor & DBT Ramalingaswami Fellow, Head & Department of Biotechnology, Thiruvalluvar university, Serkkadu, Vellore served as the Chief Guest. The programme commenced with a prayer, invoking blessings for the successful conduct of the programme. This was followed by the Welcome Address delivered by Ms. Nuseba Harmin P, III B.Sc. Biotechnology, warmly welcomed the Chief Guest, faculty members and students. The Chief Guest was felicitated by Dr. M. Gomathi, Dean, Program Coordinator DBT STAR College Scheme. The Chief Guest was then formally introduced by Ms. Tharika, II B.Sc. Biotechnology. Following the inaugural proceedings, the Chief Guest delivered a two hour detailed guest lecture session in the Sri Guru Mishri Seminar Hall.

The lecture on "Climate Change and its Impacts on Biodiversity" under SDG 13 provided students with a comprehensive understanding of the relationship between climate change,

environmental pollution and the loss of biodiversity. The session emphasized that increasing industrialization, urbanization, agricultural activities and improper waste disposal contribute to environmental degradation. Particular attention was given to emerging pollutants, which are contaminants of increasing environmental concern due to their persistence, toxicity and potential effects on living organisms and ecosystems. Also focused on tannery effluents, which are generated during leather-processing operations. Tannery wastewater may contain considerable amounts of organic matter, inorganic compounds, acids, salts and heavy metals, particularly chromium due to environmental significance of hexavalent chromium [Cr(VI)], which is highly toxic and requires appropriate treatment before the discharge of wastewater into the environment.

The environmental significance of pesticides and neonicotinoids was also explained. Pesticides are widely used in agriculture. Neonicotinoids are a group of systemic insecticides that can persist in environmental compartments and may affect beneficial organisms when exposure occurs. A major component of the lecture was microbial biodegradation and bioremediation.

Serial dilution was explained as a technique used to progressively dilute environmental samples to obtain suitable microbial concentrations for cultivation. This can be followed by the pour plate culture technique, in which diluted samples are mixed with suitable growth media and allowed to form colonies after incubation. The lecture explained that bacterial cells contain DNA, which carries genetic information, while ribosomes are cellular structures involved in protein synthesis. 16S rRNA gene is a widely used molecular marker for the identification and classification of bacteria. The session emphasized the need for sustainable environmental management, pollution prevention, responsible use of chemical substances and the application of biotechnology based approaches for the protection and conservation of biodiversity.

The Vote of Thanks was delivered by Ms. Taiyeeba, I B.Sc. Biotechnology, expressing gratitude to the Chief Guest, faculty members, organizers and students for their valuable contributions and participation. The programme concluded with the National Anthem.

Output

- ✓ A total of 130 students from II B.Sc. Biotechnology actively participated in the programme and gained theoretical knowledge and awareness of biodiversity, environmental pollution, and climate change. Six Faculty members also attended the programme.

- ✓ Students gained a better understanding of biodiversity and its importance in maintaining environmental and ecosystem balance.
- ✓ Students developed awareness of the impact of climate change and emerging pollutants on biodiversity and ecosystem health.
- ✓ Students understood the environmental effects of crude oil, tannery and textile effluents, pesticides, neonicotinoids and microplastics.
- ✓ Students became familiar with basic techniques such as serial dilution, pour-plate culture and 16S rRNA based microbial identification for studying pollutant-degrading microorganisms.

Outcomes

The lecture enabled students to understand the importance of biodiversity and its role in maintaining ecosystem balance. They gained awareness of the impacts of climate change and emerging pollutants such as crude oil, tannery effluents, textile dyes, pesticides and microplastics on biodiversity. Students also developed knowledge about biodegradation and bioremediation as eco-friendly approaches for controlling environmental pollution. They were introduced to basic techniques such as serial dilution and pour-plate culture for the isolation of pollutant-degrading microorganisms. The lecture also provided an overview of 16S rRNA based molecular identification and its application in studying environmental microorganisms.

Head of the
Department

Dean

Program Coordinator
DBT Star College Scheme

IQAC Director

Principal

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MARUDHAR KESARI JAIN

College for Women (Autonomous), Vaniyambadi.

33
Years
of Educational
Excellence...

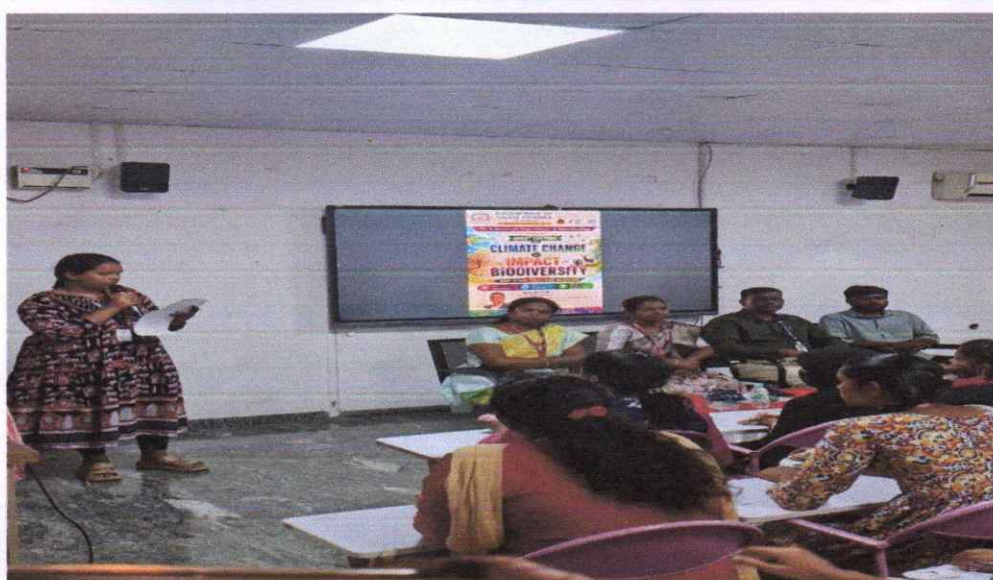
PG & RESEARCH DEPARTMENT OF BIOTECHNOLOGY

Organizes

Guest Lecture on 31.08.2026

CLIMATE CHANGE AND ITS IMPACT BIODIVERSITY
DBT STAR COLLEGE SCHEME

Venue: Sri Guru Mishri Seminar Hall



Principal

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