

CIRCULAR

DEPARTMENT OF MICROBIOLOGY

Guest Lecture on “Homologous Recombination”

This is to inform all the II BSc year students M. S. Ramaiah College of Arts, Science and Commerce-Autonomous that the Department of Microbiology is organizing a guest lecture as a part of the teaching pedagogy for II-year BSc students on **Homologous Recombination**.

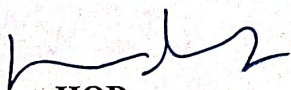
The guest speaker is **Dr. Yogini Mulay, IQAC coordinator, Vice principal and NAAC coordinator**, Department of Microbiology, T C College, Baramati, Dist. Pune, Maharashtra.

The main objective of this talk is to provide students with an in-depth understanding of the molecular mechanisms, biological significance, and applications of homologous recombination in maintaining genomic stability, DNA repair, genetic diversity, and biotechnology.

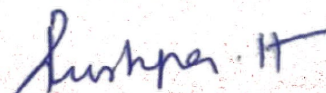
Date: 3rd October 2025

Time: 11:00am to 12:30pm

Venue: Kuvempu Seminal Hall, 2nd Floor, MSRCASC



HOD



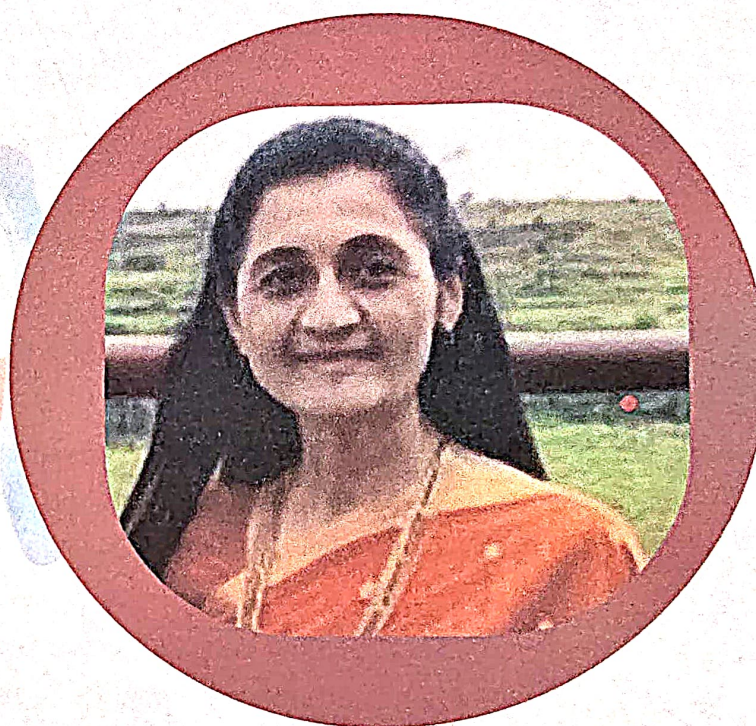
Principal

DEPARTMENT OF MICROBIOLOGY ORGANIZES GUEST LECTURE

HOMOLOGOUS RECOMBINATION

PROF. VOGINI R MULAY

IQAC coordinator, Vice Principal
& NAAC coordinator,
T C College, Baramati, Dist Pune



OBJECTIVE

To provide students with an in-depth understanding of the molecular mechanisms, biological significance, and applications of homologous recombination in maintaining genomic stability, DNA repair, genetic diversity.

Coordinator

Mrs. Soumya S Shanbhag

Dr. Prasanna Srinivas R

Head of the Department

Date: 4th October 2025

Time: 11:00am to 12:30pm

Venue: Kuvempu Seminar Hall, MSRCASC

Dr. Pushpa H

Principal

DEPARTMENT OF MICROBIOLOGY

REPORT ON GUEST LECTURE

Title: Guest Lecture on “Homologous Recombination”

Date: 4th October 2025

Venue: Kuvempu Seminar Hall

Participants: II Year BSc students

Resource Persons:

Dr. Yogini Ramakrishna Mulay

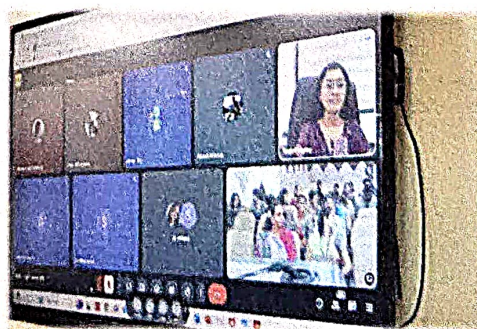
Vice Principal, IQAC Coordinator, NAAC coordinator, Tuljaram Chaturchand College-Autonomous, Baramati, Dist. Pune, Maharashtra.

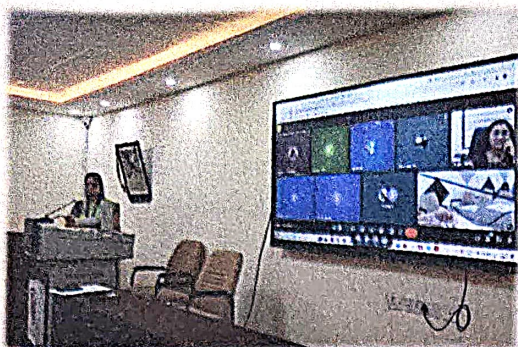
No. of Participants: 34 students' online mode + 44 students' offline mode.

Objective:

- The primary objective of a guest lecture is to share knowledge, expertise, or insights on a topic.
- To provide valuable information to the audience, enhancing their understanding of the topic.
- To provide networking opportunities for students. Interacting with professionals in various fields can help students build connections
- To provide students with an in-depth understanding of the molecular mechanisms, biological significance, and applications of homologous recombination in maintaining genomic stability, DNA repair, genetic diversity.

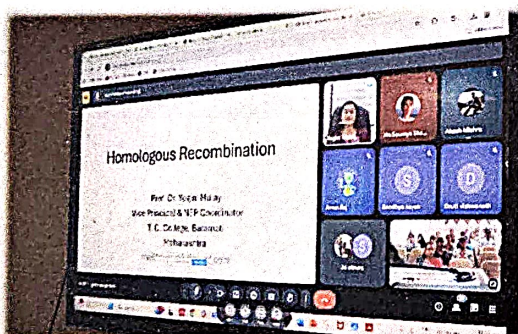
A guest lecture on the topic “Homologous Recombination as a Pedagogy” was organized by the Department of Microbiology, MSRCASC for II-year BSc students as a teaching pedagogy. The session was delivered by **Dr. Yogini Mulay**, an accomplished educator and researcher known for her innovative teaching methodologies and





deep understanding of molecular biology concepts. The objective of the lecture was to introduce students to the complex mechanism of homologous recombination and demonstrate how such intricate biological processes can be effectively taught using pedagogical tools that promote conceptual clarity and active learning.

Dr. Yogini Mulay began the lecture with an overview of **DNA damage and repair mechanisms**, setting the stage for understanding the significance of homologous recombination in maintaining genomic integrity. She explained the stages of the recombination process — recognition of homologous sequences, strand invasion, formation of Holliday junctions, branch migration, and resolution — in a stepwise and visually engaging manner.



What made the lecture unique was her emphasis on **pedagogical integration**. Instead of merely explaining the process, Dr. Mulay showcased **how this topic can be taught interactively** using animations. She presented creative analogies, comparing DNA strands to zipper chains and recombination intermediates

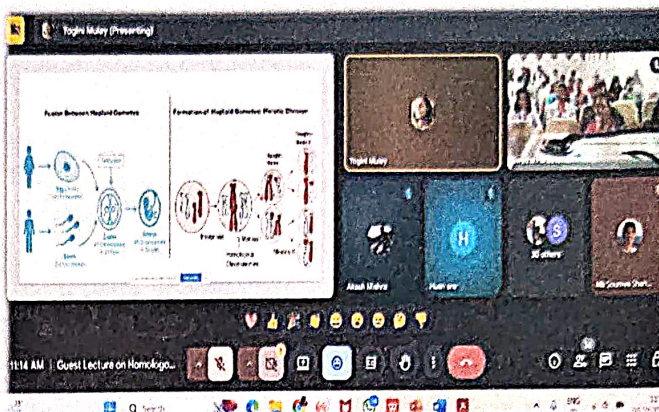
to road crossings, helping students relate molecular events to real-world visuals. Her teaching approach reflected constructivist principles, where learners actively build understanding through guided exploration.

The lecture was highly interactive, with Dr. Yogini encouraging students to ask questions and discuss their interpretations of recombination models. Several students



participated enthusiastically, offering analogies and clarifications. The dynamic exchange created a collaborative learning environment. Faculty members also appreciated the demonstration of pedagogical strategies that could be adapted in their own classrooms.

The guest lecture had a significant impact on students' appreciation for homologous recombination as a method of genetic variation in bacteria. It deepened their understanding of the underlying principles and broadened their awareness of the diverse applications of techniques in research and industry settings.



Outcome:

The guest lecture by Dr. Yogini Mulay on “Homologous Recombination as a Pedagogy” was both informative and inspiring. It successfully blended molecular biology content with educational methodology, demonstrating how science can be taught through creativity and interaction. The event not only enhanced students’ understanding of genetic recombination but also motivated faculty and learners to adopt innovative teaching approaches in the life sciences. The department expressed sincere gratitude to Dr. Yogini Mulay for her enlightening session and to the organizing committee for arranging an intellectually stimulating event that enriched the academic environment.

Event Coordinator

Mrs. Soumya S Shanbhag

Soumya S Shanbhag
8/10/25

[Signature]
Head of the Department

[Signature]
Principal

M.S.Ramaiah College of Arts, Science &
Commerce-Autonomous
MSRIT POST, MSRIT Main Road
Bengaluru - 560 084

DEPARTMENT OF MICROBIOLOGY
GUEST LECTURE on HOMOLOGOUS RECOMBINATION
4TH OCTOBER 2025
ATTENDANCE

Sl. No.	Name of the Student	Registration No.	Section	Signature of the student
01	Ranjitha Suresh	U18MB2450036	'B'	Ranjitha S.
02	Rachana S	U18MB2450038	'B'	Rachana S.
03	Rikisha J	U18MB2450129	'B'	Rikisha J.
04	SHREYA R	U18MB2450127	'B'	Shreya R.
05	Sshree Varsha	U18MB2450074	'B'	Sshree Varsha
06	Aadishree V.	U18MB2450391	'C'	Aadishree V.
07	Prachi Pandey	U18MB2450079	'C'	Prachi Pandey
08	Aastha Priya	U18MB2450359	'C'	(online present)
09	Amurka Bose	U18MB2450384	'C'	Amurka Bose
10	Kavya V	U18MB2450337	'C'	Kavya V.
11	Lekhana C.	U18MB2450080	'C'	Lekhana C.
12	Ankita Verma	U18MB2450367	'A'	Ankita Verma
13	Mahwish Afreen	U18MB2450388	'A'	Mahwish Afreen
14	Madhumitha A	U18MB2450047	'C'	Madhumitha A.
15	Ikshita Bhat	U18MB2450044	'C'	Ikshita Bhat
16	Dev Sharma	U18MB2450345	'A'	Dev Sharma
17	Balaji Gowda J.K	U18MB2450048	'C'	Balaji Gowda J.K
18	Goutham Yadhav	U18MB2450050	'A'	Goutham Yadhav
19	Chethan Kumar SB	U18MB2450007	'A'	Chethan Kumar SB
20	N. Varsha	U18MB2450212	'C'	N. Varsha
21	Ankitha N	U18MB2450324	'A'	Ankitha N.
22	Chasmita M.S	U18MB2450068	'A'	Chasmita M.S
23	Kavana S	U18MB2450122	'A'	Kavana S.
24	Jeevitha M	U18MB2450369	A	Jeevitha M.
25	Harshitha KS	U18MB2450011	A	Harshitha KS
26	Bhavya Singh	U18MB2450085	A	Bhavya Singh

Ganga 4/10/25

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4/10/25-



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