

A report on one day seminar on Research Methodology

The poster for the seminar has a light blue background with a pattern of colorful, glowing spheres. In the top left corner is the Asutosh College logo. The text is centered and reads: "ASUTOSH COLLEGE" in large red letters, followed by "92, S.P.MUKHERJEE ROAD, KOLKATA - 26" in smaller black letters. Below that is "One-Day Seminar on" in red, and "RESEARCH METHODOLOGY" in large blue letters. Then "Organised by" in red, followed by "Department of Microbiology, Asutosh College" in blue, "in collaboration with" in green, and "The Research & Development Cell and IQAC, Asutosh College" in blue. On the left, "Speaker:" is in red, followed by a circular portrait of Prithwi Ghosh. To the right of the portrait, his name and title are listed: "Prithwi Ghosh, PhD", "Assistant Professor", "Department of Botany", and "Narajole Raj College (Vidyasagar University, India)". At the bottom, the date and time are "Date: Monday, 24th March, 2025 Time: 12 Noon onwards" and the venue is "Venue: Seminar Hall, Centenary Building, Asutosh College".

 **ASUTOSH COLLEGE**
92, S.P.MUKHERJEE ROAD, KOLKATA - 26
One-Day Seminar on
RESEARCH METHODOLOGY
Organised by
Department of Microbiology, Asutosh College
in collaboration with
The Research & Development Cell and IQAC, Asutosh College
Speaker:  **Prithwi Ghosh, PhD**
Assistant Professor
Department of Botany
Narajole Raj College (Vidyasagar University, India)
Date: Monday, 24th March, 2025 Time: 12 Noon onwards
Venue: Seminar Hall, Centenary Building, Asutosh College

THEME OF THE EVENT: Understanding different methodologies involved in the study of biological symbiosis between plant and microbe.

ACADEMICSESSION: 2024-2025

DATE: 24th March 2025

VENUE: Centenary Building, Asutosh College

OBJECTIVE/ PURPOSE: To understand the role of Symbiotic Modifier Peptidases in *Medicago truncatula*–*Sinorhizobium meliloti* symbiosis.

RESOURCEPERSON: Dr. Prithwi Ghosh, Assistant Professor, Department of Botany, Narajole Raj College

ORGANIZERS:

Following Faculties of Dept. of Microbiology, Asutosh College-

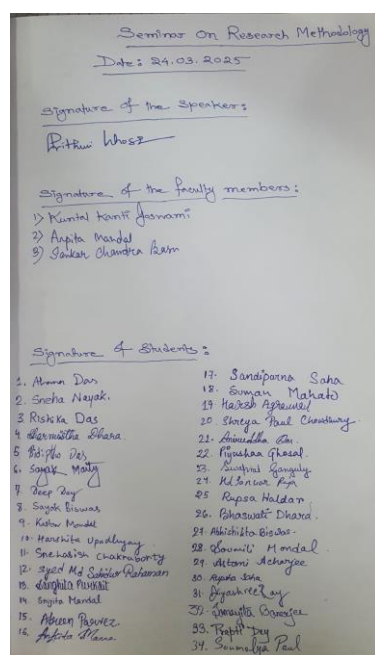
Dr. Kuntal Kanti Goswami, Assistant Prof. & HOD

Dr. Arpita Mondal, Assistant Prof.

Dr. Sankar Chandra Basu, Assistant Prof.

TARGET PARTICIPANTS: Semester II students of the Department.

ATTENDANCE SHEET:



Seminar On Research Methodology
Date: 24.03.2025

Signature of the Speaker:
Prithwi Ghosh

Signature of the faculty members:
1) Kuntal Kanti Goswami
2) Arpita Mondal
3) Sankar Chandra Basu

Signature of Students:

1. Anan Das	17. Sandiporna Saha
2. Anika Nayak	18. Suman Mahato
3. Rishika Das	19. Haiceb Agreval
4. Sharmistha Ghara	20. Shreya Paul Chatterjee
5. Prithvi Das	21. Anusilla Das
6. Sanyal Maiti	22. Apurba Ghosal
7. Anurag	23. Sushmita Ghosh
8. Sayak Biswas	24. Kuntal Kanti Ghosh
9. Kuntal Mondal	25. Rupa Halder
10. Harshita Upadhyay	26. Shikharika Das
11. Snehasita Chatterjee	27. Anusilla Mondal
12. Apurva Mondal	28. Anusilla Mondal
13. Anusilla Mondal	29. Anusilla Mondal
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BRIEF REPORT ABOUT THE EVENT/ PROGRAMME:

The one day seminar on Research Methodologies was conducted by the Dept. of Microbiology, Asutosh College. In the interactive session Dr. Prithwi Ghosh, the invited speaker, shared ideas on exploring the role of Symbiotic Modifier Peptidases in *M. truncatula*- *Sinorhizobium meliloti* symbiosis.

Following major points were discussed in the seminar:

1. NCR peptides (Nodule specific Cysteine Rich peptides), produced by legumes particularly in the nodules where they establish relationships with nitrogen fixing bacteria (*Rhizobium*). These have antimicrobial properties which lead to bacteroid differentiations.
2. Various species of Host plant (*M.trunactula*), specifically A17 & A20 on which the study is conducted. It has been observed that some plants of the same species are fix+ while some are fix-.
3. Tripartite structure of *Sinorhizobium*, selection of 28 candidate putative peptides, cloning and conjugation with *Rhizobium* . Discussion on phenotypes obtained.
4. Protein expression and purification methodologies.
5. Construction of Promoter GUS construct and analysis of the obtained results.
6. Brief outline of proposed model for NCR peptides and bacterial Peptidase interaction.

EXPECTED OUTCOME:

The concept and methodologies discussed in the seminar will help students in their future research work.

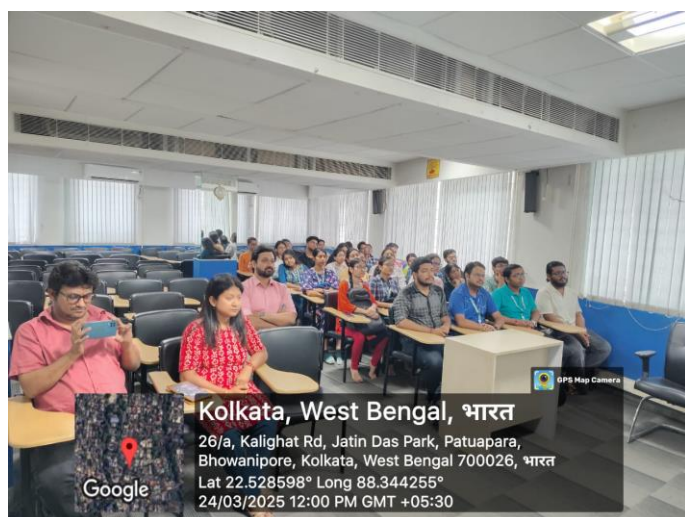
GEO-TAGGED PHOTOGRAPHS:



ASUTOSH COLLEGE
(Estd. 1916)
92, S.P. Mukherjee Road
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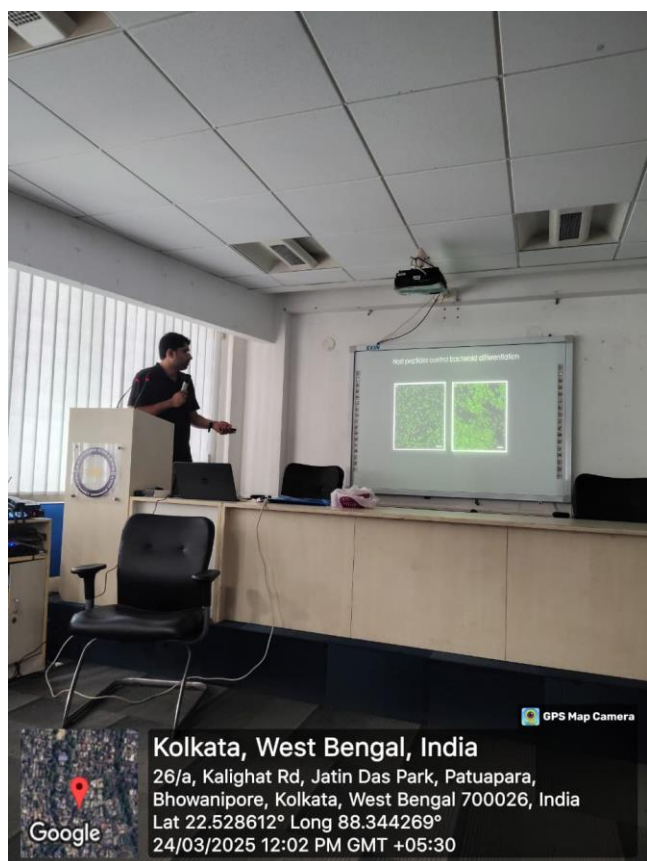
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