ASUTOSH COLLEGE
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A report on one day seminar on Research Methodology

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

ACADEMICSESSION: 2024-2025

DATE: 24thMarch 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-

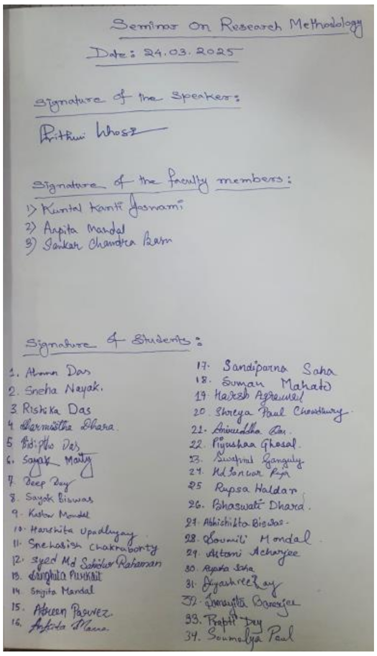
Dr. Kuntal Kanti Goswami, Assistant Prof. & HOD

Dr. Arpita Mondal, Assistant Prof.

Dr.SankarChandraBasu,AssistantProf.

TARGETPARTICIPANTS: 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 Mandal
3) Sankar Chandra Basu

Signature of Students:
1. Ahana Das
2. Sneha Nayak.
3 Rishika Das
4 Sharmistha Dhara
5 [illegible] Das
6. Sayak Maity
7. Deep Dey
8. Sayak Biswas
9. Kastav Mondal
10. Harshita Upadhyay
11. Snehasish Chakraborty
12. Syed Md Sahidur Rahaman
13. Sanghita Purkait
14. Srijita Mandal
15. Afreen Parwez.
16. [illegible]
17. Sandiparna Saha
18. Suman Mahato
19 Harsh Agrawal
20. Shreya Paul Chowdhury.
21. Aniruddha Das.
22. Piyushaa Ghosal.
23. [illegible] Ganguly
24. Md [illegible]
25 Rupsa Haldar
26. Bhaswati Dhara.
27. Abhishikta Biswas.
28. Soumili Mondal
29. [illegible] Acharyee
30. Arpita Saha
31. Jayashree Ray
32. [illegible] Banerjee
33. Prapti Dey
34. Soumalya Paul

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 poits 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:

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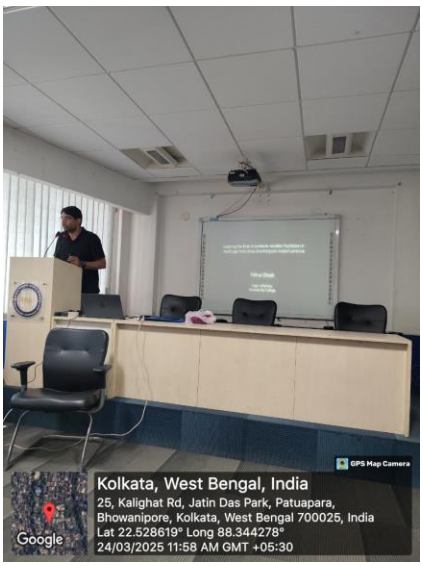

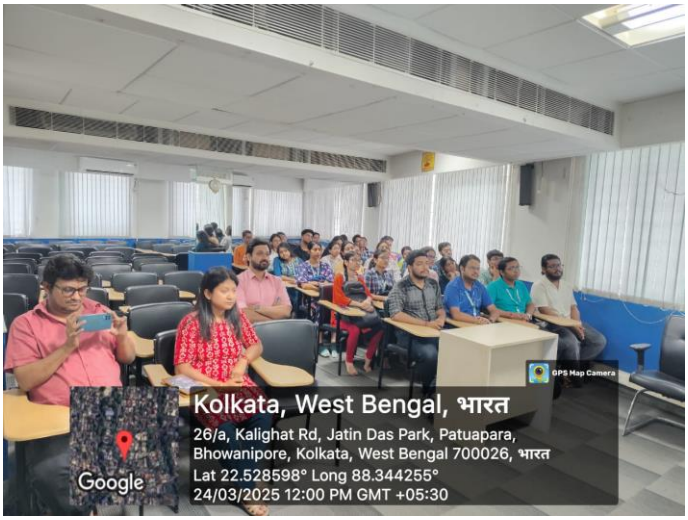

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