

# JOURNAL CLUB 4.0 in Department of Microbiology

| DATE       | PRESENTER          | TITLE OF PAPER                                                                                                                                                                                                                                                                                         |
|------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11/11/2024 | Dr. Saurabh Mishra | The interaction surface of a bacterial transcription elongation factor required for complex formation with an antiterminator during transcription antitermination<br><a href="https://doi.org/10.1074/jbc.m113.472209">https://doi.org/10.1074/jbc.m113.472209</a>                                     |
| 25/11/2024 | Ashu Devraj        | Antibacterial , antibiofilm and anticancer activity of silver nanoparticles synthesized from the cell-filtrate of <i>Streptomyces enissocaesilis</i> <a href="https://doi.org/10.1186/s12896-024-00833-w">https://doi.org/10.1186/s12896-024-00833-w</a>                                               |
| 02/12/2024 | Ruth Zomuansangi   | Anti-bacterial and anti-biofilm activities of arachidonic acid against the cariogenic bacterium <i>Streptococcus mutans</i> <a href="https://doi.org/10.3389/fmicb.2024.1333274">https://doi.org/10.3389/fmicb.2024.1333274</a>                                                                        |
| 16/12/2024 | Vishakha           | Evolutionary and co-evolutionary phage training approaches enhance bacterial suppression and delay the emergence of phage resistance <a href="https://doi.org/10.1093/ismeco/ycae082">https://doi.org/10.1093/ismeco/ycae082</a>                                                                       |
| 06/01/2025 | Aaina              | Isolation and characterization of a bacteriophage with potential for the control of multidrug - resistant <i>Salmonella</i> strains encoding virulence factors associated with the promotion of precancerous lesions <a href="https://doi.org/10.3390/v16111711">https://doi.org/10.3390/v16111711</a> |
| 20/01/2025 | Tushar Midha       | Phage antibiotic synergy : cell filamentation is a key driver of successful phage predation <a href="https://doi.org/10.1371/journal.ppat.1011602">10.1371/journal.ppat.1011602</a>                                                                                                                    |
| 27/01/2025 | Sakshi Kumari      | Spermine oxidase promotes helicobacter pylori mediated gastric carcinogenesis through acrolein production <a href="https://doi.org/10.1038/s41388-024-03218-7">https://doi.org/10.1038/s41388-024-03218-7</a>                                                                                          |
| 03/02/2025 | Shivam Chinyoti    | A blueprint for broadly effective bacteriophage- antibiotic cocktails against bacterial infections <a href="https://doi.org/10.1038/s41467-024-53994-9">https://doi.org/10.1038/s41467-024-53994-9</a>                                                                                                 |
| 10/02/2025 | Akansha Singh      | Alcohol-induced gut microbiome dysbiosis enhances the colonization of <i>Klebsiella pneumoniae</i> on the mouse intestinal tract <a href="https://doi.org/10.1128/msystems.00052-24">https://doi.org/10.1128/msystems.00052-24</a>                                                                     |
| 17/02/2025 | Vikram Prasad      | Prophages and satellite prophages are widespread in streptococcus and may play a role in pneumococcal pathogenesis <a href="https://doi.org/10.1038/s41467-019-12825-y">https://doi.org/10.1038/s41467-019-12825-y</a>                                                                                 |
| 03/03/2025 | C. Lalbaltluangi   | Exploring inhibition of <i>Listeria monocytogenes</i> biofilm by carvacrol based on action to quorum sensing <a href="https://doi.org/10.1016/j.fbio.2024.105790">https://doi.org/10.1016/j.fbio.2024.105790</a>                                                                                       |
| 17/03/2025 | Anshu Singh        | Synergistic efficacy of phage henu10 with antibiotics against <i>Shigella dysenteriae</i> with insight into phage resistance and fitness trade offs <a href="https://doi.org/10.3389/fcimb.2024.1499325">https://doi.org/10.3389/fcimb.2024.1499325</a>                                                |
| 07/04/2025 | Jasina Arora       | Cadmium promotes colorectal cancer metastasis through EGFR/Akt/MTOR signaling cascade and dynamics <a href="https://doi.org/10.1016/j.scitotenv.2023.165699">https://doi.org/10.1016/j.scitotenv.2023.165699</a>                                                                                       |
| 21/04/2025 | Harshdeep Josan    | An integrated 3D cell based electrochemical biosensor for neurotoxicity assessment of organophosphorus pesticides <a href="https://doi.org/10.1016/j.snb.2022.132941">https://doi.org/10.1016/j.snb.2022.132941</a>                                                                                    |
| 21/04/2025 | Apurva Singh       | Stronger gut microbiome modulatory effects by post-biotics than probiotics in a mouse colitis model <a href="https://doi.org/10.1038/s41538-022-00169-9">https://doi.org/10.1038/s41538-022-00169-9</a>                                                                                                |
| 28/04/2025 | Gulsan Naeem       | Evaluation of mrkD, pgaC, and wcaJ genes as biomarkers for rapid identification of K. <i>pneumoniae</i> biofilm infections from endotracheal aspirates and bronchoalveolar lavage<br><a href="https://doi.org/10.1038/s41598-024-69232-7">https://doi.org/10.1038/s41598-024-69232-7</a>               |
| 28/04/2025 | Vishal Patidar     | Dynamic culture system advances the applications of breast cancer organoids for precision medicine <a href="https://doi.org/10.1038/s41598-025-86730-4">https://doi.org/10.1038/s41598-025-86730-4</a>                                                                                                 |
| 05/05/2025 | Rohit              | In silico genomic insights into bacteriophages infecting ESBL-producing <i>Escherichia coli</i> from human, animal, and environmental sources <a href="https://doi.org/10.1186/s12866-025-03913-9">https://doi.org/10.1186/s12866-025-03913-9</a>                                                      |
| 05/05/2025 | Ayushi Singh       | The core microbiomes and associated metabolic potential of water kefir as revealed by pan multi-omics <a href="https://doi.org/10.1038/s42003-025-07808-3">https://doi.org/10.1038/s42003-025-07808-3</a>                                                                                              |
| 19/05/2025 | Anjali             | Antioxidant and antibacterial study of 10 flavonoids revealed rutin as a potential antibiofilm agent in <i>Klebsiella pneumoniae</i> strains isolated from hospitalized patients<br><a href="https://doi.org/10.1016/j.micpath.2021.105121">https://doi.org/10.1016/j.micpath.2021.105121</a>          |
| 19/05/2025 | Ashu Kumari        | Cockayne syndrome linked to elevated r-loops induced by stalled RNA polymerase II during transcription elongation <a href="https://doi.org/10.1038/s41467-024-50298-w">https://doi.org/10.1038/s41467-024-50298-w</a>                                                                                  |