

**M S RAMAIAH COLLEGE OF ARTS, SCIENCE AND
COMMERCE-AUTONOMOUS**

**MICROBIOLOGY INSIGHTS
OCTOBER- DECEMBER 2024**

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MICROBIOLOGY



ABOUT THE DEPARTMENT

The Department of Microbiology was established in 1999, offers a wide range of undergraduate and postgraduate courses, ensuring comprehensive education and research opportunities in this field. The department boasts a faculty of highly qualified experts who bring with them vast experience and expertise in various domains of Microbiology. Their commitment to teaching and research is reflected in their active involvement in cutting-edge research projects and their contributions to scientific publications and conferences. The department is equipped with state-of-the-art infrastructural facilities, including modern laboratories and research equipment, creating an ideal environment for teaching, experimentation, and innovation. Additionally, the department maintains strong collaborations with industry partners, providing students with valuable industry exposure and internship opportunities. The emphasis on research, professional development workshops, and a collaborative atmosphere nurtures the overall growth of students, preparing them for successful careers in academia, research, or the industry.

DEPARTMENTAL ACTIVITIES

1. Value Added Program on Microbiological Quality Control of Food, HACCP, and Food Auditing

The Department of Microbiology, under the DBT-Star College Scheme, organized a Value- Added Programme on "Microbiological Quality Control of Food, HACCP, and Food Auditing" from 16th to 18th October 2024. The event aimed at providing participants with essential skills in biosafety, microbial analysis, food safety standards, food auditing, and adulterant detection, crucial for maintaining and improving the quality and safety standards of the food industry.

The programme featured expertise from both external and in-house resource persons. Mr. Arvind from Dextrose Technologies Pvt. Ltd., Bangalore delivered

critical sessions on food auditing, HACCP, and quality standards. Additionally, the in-house faculty, including, Dr. Vidya J, Dr. Prashanthi R, Dr. Juliya Rani Francis, Dr. Swathi D, and Dr. Arvindhganth R, Dr. Vishal M played a significant role in conducting modules on biosafety, microbial analysis, and detection techniques.



2. Workshop on Entrepreneurship Development on Principles of Food Processing and Preservation:

The Department of Microbiology, Sukshmanika Club, in collaboration with the Research & Development Cell, MSRCASC, Bengaluru, successfully organized a workshop on “Entrepreneurship Development on Principles of Food Processing and Preservation”. The workshop aimed at equipping participants with the skills and knowledge to create value added food products while understanding the fundamental principles of food preservation.



The workshop was conducted by Dr. Mohan Kumar S, an esteemed Assistant Professor of Food Science and Technology from St. Joseph’s University, Bengaluru. Dr. Mohan Kumar, with his vast experience in food processing technology, shared insights on the technical aspects and entrepreneurial opportunities in the food industry.

The workshop on Entrepreneurship Development on Principles of Food Processing and Preservation was a resounding success. It equipped students with practical knowledge in food processing and preservation, fostering entrepreneurial thinking. The skills learned during the workshop will undoubtedly prove valuable in both academic and industrial settings, encouraging participants to explore opportunities in the growing food processing sector.



3. Value Added Program on Analytical Techniques in Bacterial Proteomics

The Department of Microbiology conducted 3 days value added program on “Analytical Techniques in Bacterial Proteomics” on 16th, 18th, and 19th November 2024. The objective of the Value-Added Programme was to train the students with hands on experience on the basic and advanced concepts of proteomics which involved- SDS PAGE analysis of proteins, Western Blotting, Protein sequence databases and analysis tools, analysis of tertiary



structure of Proteins using bioinformatics tools.

This VAP was a initiative by faculty members from Department of Microbiology and the resource persons’ for the VAP were Dr. Vemula Vani, Mrs. Soumya Shanbhag, Dr. Nimitha Venugopal G, Dr.



Swetha P and Dr. Tejaswini HK.

The program was conducted for 3 days- first day was understanding the concepts of bioinformatics and initial experiment of SDS-PAGE.



Second day students stained the gel to observe the protein bands and started with the blotting process. Day 3 students observed the protein blots on the nitrocellulose membrane and also calculated the molecular weight of unknown protein. The



students were assessed for the knowledge gained during the program by giving the assessment and feedback was taken from students.

4. Pre-Conference Workshop- TEMA18-2024

The International Conference on Trace Elements in Man and Animals (TEMA) aims to foster a global exchange of insights among researchers, academicians, and practitioners on the critical roles of trace elements in human and animal health. In preparation for the main TEMA conference, a Pre-Conference Workshop was



conducted by Department of Sciences-MSRCASC-A on November 6th 2024 at Abdul Kalam Auditorium, MSRCASC- Autonomous to provide students and research scholars with

a comprehensive introduction to the relevance of trace elements in both human and animal health. This workshop, a precursor to the broader TEMA conference, featured themes such as "Trace Elements and Human Health," "Trace Elements Deficiency



and Toxicity," and the "Environmental Impact of Trace Elements" was attended by 170 participants. The one-day Pre-TEMA

Workshop in 2024 included three keynote speakers and a poster competition as its highlights.



5. 18th International Conference on Trace Elements in Man and Animals (TEMA18-2024):



Ramaiah group of institutions in association with Pennsylvania state University, USA hosted an international conference on Trace Elements in Man and Animals (TEMA). The main objective of the International Conference on Trace Elements in Man and Animals (TEMA)18

was to provide a platform for researchers, academicians and practitioners from around the globe to exchange knowledge and ideas on the significance, role and impact of trace elements in human and animal health.



The conference was conducted from 8th to 12th November 2024 with inauguration on day 1 with key note address, day 2 and 3 was featured with

Plenary talks, and selected oral presentation and poster presentation, day 4 focused on showcasing the culture of Karnataka to foreign delegates by the tour to Mysore palace and Somnathpura temple. Day 5 had some plenary talks, sponsored talks, and selected delegates presentation and during closing ceremony. Closing ceremony feedback from delegates was taken, prize winners of poster presentation of pre-conference workshop and awards for oral and poster of TEMA18 was distributed.



The conference was a great success with 69 foreign delegates and more than 100 Indian researchers participating in the conference. This conference stands as pillars of excellence in education, innovation and holistic development.



6. FDP on “Design Thinking for Educators- A Path Breaking Framework for Engaging Learners”

The Department of Microbiology, in association with the Internal Quality Assurance Cell (IQAC), organized a highly insightful Faculty Development Program (FDP) aimed at fostering an understanding of design thinking, developing ideation skills, and promoting an innovative mindset within the realm of



education for the faculties of MSRCASC on 28th October 2024, Monday from 2.00 PM to 4.30 PM at Abdul Kalam Auditorium, MSRCASC.

No. of Participants: 120 faculty members of MSRCASC



The FDP was designed to equip faculty members with the necessary tools and methodologies to

incorporate design thinking into their teaching practices. The event sought to inspire educators to ideate effectively and adopt innovative strategies that enhance both teaching and learning experiences. The addition of real-world case studies from Unbox provided a unique opportunity for



participants to see practical examples of innovation in action.

Overall, the FDP was a significant milestone in promoting a culture of innovation and adaptability within the institution. It demonstrated the value of combining theory with practical examples to

motivate educators to bring fresh, impactful changes to their teaching practices. The collaboration between the Department of Microbiology and IQAC was pivotal in ensuring the program's success, making it a memorable and impactful experience for all attendees.



7. Awareness on HIV and AIDS Infection”- World AIDS Day

The Department of Microbiology conducted an extension activity on **5th and 6th December 2023**. The event was organized to educate the public about the AIDS infection. The Post graduate students of Microbiology gave awareness to MBA and MCom students of MSRCASC by the displaying posters and



banners that illustrated the **symptoms of HIV infection** and progression to AIDS, the importance of **HIV testing** and how it helps in early diagnosis, how individuals can protect themselves and support affected people.

The event was conducted in the afternoon session by M.Sc microbiology students for other department students of MSRCASC on 5th December along with faculties. Next day on 6th December, about 18 students including



faculties took part in the awareness programme by displaying the posters about the HIV



infection, pathogenicity, medication and control to general public near residential area and signal area of Mathikere. On the occasion of “World AIDS Day”- the December 1st, this extension activity helped in creating awareness among the general public about this pandemic infection and its control. The students explained about the

symptoms and medication in multilingualistic languages of Kannada, Telugu, Tamil, Malayalam and Hindi. The main emphasis was on the symptoms, reduced immunity and control.

8. Industrial Visit to Goa (PG)

The Department of Biotechnology and Microbiology organized an Industrial visit for the PG students from 09.12.2024 to 13.12.2024. A total of 78 students participated in this industrial visit to Goa was a remarkable educational experience



that enhanced students' academic pursuits and future careers. The trip was well-organized and executed by the faculty members Dr. Sowbhagya A, Dr. Muktha H, Dr.R.Arvindganth, Dr. Tejaswini H.K. and returned on 27.12.2024. overall, the visit to



that allowed, M.Sc., students to bridge the gap between theory and practical. Engaging experts across diverse fields – ICAR Krishi Vigyan Kendra, Dairy industry, and oceanography- provided valuable insights



Goa industries and research institutions was a significant step in the student's academic journey, reinforcing the importance of practical exposure in their education.

STUDENT & FACULTY ACHIEVEMENTS

1. Students from MS Ramaiah College of Arts, Science, and Commerce showcased their research through the poster presentations and oral presentations at the 51st Annual Meeting of the Mycological Society of India in Jodhpur.

Mrs. Soumya S Shanbhag, & Dr. Vidya Jagadeeshan presented the paper in the conference and **Dr. Vishal M** presented a poster in the conference.

A special moment of pride was the recognition of Prof. **Savitha J** was awarded with Prof. Geeta Sumbali Award for Women's Scientists Lecture for her exceptional contributions in the field of Mycology during the conference.

The conference was a fantastic platform for exposure to groundbreaking research on fungal

biodiversity, bioengineering, and sustainability. Huge Kudos 🙌 to all participants for their efforts, making this event an inspiring experience for all.



2. **Miss. Maithri and Miss. Sumalatha**, Msc students of Department of Microbiology, won prof. K R Aneja and Dr. Mrs Sushma Aneja award for young researcher's award category during the conference.
3. **Ms. Preethi Babu**, MSc Microbiology students' of 2022 batch successfully cleared KSET examination.
4. **Ms. Bhavana P**, MSc Microbiology students' of 2021 batch successfully cleared KSET examination.
5. **Ms. Maithri**, MSc Microbiology students won 1st prize in poster presentation during National Conference on "Current trends in Biological and Health Sciences" organized by REVA University, Bengaluru on December 11th and 12th, 2024.
6. **Ms. Lakshmi Shravya**, BSc III year student, Presented Research Paper for poster presentation in International Conference "Exploring the Anti-Cancer Potential" at the Workshop on Computational Oncology: Modelling and Experiments organized by IIT Hyderabad and the Param Hansa Center for Computational Oncology, IISc Bengaluru.



7. Dr. R. Prashanthi and her students Yazhini S and J. Shiny Roberta from the Department of Microbiology participated in the National Conference on *Current Trends in Biological and Health Sciences* organized by Reva University, Bengaluru, on December 11–12, 2024. They brought laurels to the department by winning a prize in the poster presentation category.



8. Dr. R. Prashanthi along with her students Gita Anjali. B and B. Janani participated in the multidisciplinary national conference *VIBHAVAT 2024*, organized by RJS First Grade College, Koramangala, Bengaluru, on November 28, 2024, further showcasing their active engagement in academic excellence.

OUR NEWSLETTER TEAM

FACULTY MEMBERS:

- **Dr. Prasanna Srinivas R**, Head (PG), Department of Microbiology, MSRCASC
- **Dr. Vemula Vani**, Associate Professor, Department of Microbiology, MSRCASC
- **Mrs. Soumya S Shanbhag**, Head (UG), Department of Microbiology, MSRCASC
- **Dr. Vishal M**, Assistant Professor, Department of Microbiology, MSRCASC

STUDENTS CO-ORDINATORS:

- **Ms. Hastha D**, V SEM BSC, Department of Microbiology, MSRCASC
- **Ms.Nihaarika** V SEM BSC, Department of Microbiology, MSRCASC
- **Ms.Swapna Sahoo**, V SEM BSC, Department of Microbiology, MSRCASC
- **Ms. Laya N**, V SEM BSC, Department of Microbiology, MSRCASC
- **Ms. Manasa V**, V SEM BSC, Department of Microbiology, MSRCASC
- **Ms.Priyadarshini**, III SEM BSC, Department of Microbiology, MSRCASC
- **Ms. Manasa S**, III SEM BSC, Department of Microbiology, MSRCASC

As the department college newsletter comes to an end, we hope that this edition has provided valuable insights, updates, and highlights from our vibrant academic community. We extend our gratitude to the Management, all the contributors, faculty members, staff and students who have made this newsletter possible.

We encourage everyone to stay engaged with the department's activities, upcoming events, and research endeavours. Let us continue to foster a culture of collaboration, innovation, and excellence in our pursuit of knowledge and academic growth.

We welcome your suggestions, feedback, and contributions for future editions of the newsletter. Together, let us celebrate our achievements, share our stories, and inspire one another to reach new heights.

Thank you for being a part of our dynamic department and we look forward to the next edition of the newsletter.

Best wishes,

Department of Microbiology, Newsletter Team
MSRCASC-Autonomous, Bangalore.