

PG DEPARTMENT OF BIOCHEMISTRY

ANNUAL REPORT 2025 – 2026



MARKAZ ARTS AND SCIENCE COLLEGE

(Affiliated to the University of Calicut)

Markazu Tharbiyyathil Islamiyyah, Athavanadu, Near Valanchery

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ANNUAL REPORT 2025 - 2026

PG DEPARTMENT OF BIOCHEMISTRY

The Department of Biochemistry was established in 2003 with main subject General Biochemistry and subsidiary subjects Chemistry and Microbiology. The three year UG program involves about twenty papers of the core subject. The PG program in Biochemistry was established in 2016. The program outcome is to provide knowledge of Biochemistry in all life science areas such as genetics, physiology, pharmacology, toxicology and pathology. The main vision of the Department is to achieve academic excellence in Biochemistry facilitating research activities. The main mission of the Department is to provide a learning environment that helps the students to enhance problem solving skills, theoretical and practical foundation in various disciplines of Biochemistry and educating them about their professional and ethical responsibilities. Biochemistry is a laboratory based course and hence the PG Department of Biochemistry has got well equipped separate UG and PG laboratories with all the sophisticated instruments needed for the Curriculum prescribed by the Calicut University norms.

The college reopened for the academic year 2025-2026 on 2nd June Monday.

STAFF AND STUDENTS

Biochemistry Department has 6 faculty members and 1 lab attender. Dr. Seena P was the Head of the Department. Other faculties were Dr.Arifa P.P., Jaseela K.P., Rincy CK., Maneesha Mohan and Dr.Sri Rashmy Madathil. Abitha PP was the Lab attender.

Dr.Arifa PP continued as Department Secretary for the academic year 2025-2026 also. Mrs. Jaseela K.P was the Department IQAC Coordinator for the academic year 2025-2026.

The department has 56 students on roll of which 34 are degree students, in which there were 2 boys and 32 girls and 22 are PG students (1 boys & 21 girls).

TOTAL NUMBER OF STUDENTS B.Sc. BIOCHEMISTRY DEGREE PROGRAMME 2025-2026

SL . NO	CLASS	NO: OF BOYS	NO. OF GIRLS	TOTAL STUDENTS
1	First Year	NIL	5	5
2	Second Year	0	10	10
3	Third Year	2	17	19

Table 1: Number of students in B.Sc. Programme 2025-26

TOTAL NUMBER OF STUDENTS M.Sc. BIOCHEMISTRY DEGREE PROGRAMME 2025-2026:

SL .NO,	CLASS	NUMBER OF BOYS	NUMBER OF GIRLS	TOTAL
1	First year	0	10	10
2	Second year	1	11	12

Table 2: List of students in PG during academic year 2025-2026

ADVISORY DETAILS

The details of advisors were as follows; Mrs.Jaseela KP was assigned the advisory duty for first year B.Sc., Mrs.Maneesha Mohan was assigned the duty of advisor of second year

B.Sc. and Dr.Arifa PP was the advisor of third year B.Sc. Mrs. Rincy CK & Dr. Seená P were the advisors of first and second year PG respectively.

LAST YEAR ACADEMIC RESULT

DEGREE

The number of candidates registered for the final year UG University examinations were 17. 17 students appeared for the examination and 10 passed for the examination with a pass percentage 59%.

POST GRADUATION

This academic year Department bagged six ranks (third, fourth, fifth, sixth, seventh, eighth and ninth ranks) for PG examination under Calicut University.

In PG, 14 students appeared for final year University examination and 14 passed. The pass percentage was 100%. Nihala K secured third position with CGPA 4.04 and overall grade A+. Fathima Fidha KP secured fourth position with CGPA 4.00 and overall grade A+. Hafeena K secured sixth position with CGPA 3.88 and overall grade A+. Kadeeja Sherry C secured seventh position with CGPA 3.83 and overall grade A+. Muhammed Swalih Shahad V and Swetha S bagged eighth and ninth position with CGPA 3.82 and 3.78 respectively.



Figure 1: PG Toppers Poster

**UNIVERSITY OF CALICUT
(Pareeksha Bhavan)**

No. 89755/PG-I-ASST-II/2022/PB

Calicut University.P.O

Date : 22.08.2025

POSITION LIST (FINAL)
M.Sc. BIOCHEMISTRY (CBCSS) Examination April 2025

Sl No.	Name & Reg. No	College/Centre	CGPA	Grade	Position
1.	PZAXMBC005 HASNA P	PAZHASSI RAJA COLLEGE PULPALLY	4.12	A+	I
2.	PZAXMBC004 FATHIMA NISHIN E T	PAZHASSI RAJA COLLEGE PULPALLY	4.05	A+	II
3.	MZAXMBC008 NIHALA K	MARKAZ ARTS AND SCIENCE COLLEGE ATHAWANAD	4.04	A+	III
4.	MZAXMBC002 FATHIMA FIDHA K P	MARKAZ ARTS AND SCIENCE COLLEGE ATHAWANAD	4.00	A+	IV
5.	PZAXMBC002 ARCHA K R	PAZHASSI RAJA COLLEGE PULPALLY	4.00	A+	IV
6.	PZAXMBC011 SIDHARTH THAYAMBATH	PAZHASSI RAJA COLLEGE PULPALLY	3.92	A+	V
7.	MZAXMBC005 HAFEENA K	MARKAZ ARTS AND SCIENCE COLLEGE ATHAWANAD	3.88	A+	VI
8.	MZAXMBC007 KADEEJA SHERRY. C	MARKAZ ARTS AND SCIENCE COLLEGE ATHAWANAD	3.83	A+	VII
9.	MZAXMBC013 MUHAMMED SWALIH SHAHAD V	MARKAZ ARTS AND SCIENCE COLLEGE ATHAWANAD	3.82	A+	VIII
10.	PZAXMBC010 VYSHNA K T	PAZHASSI RAJA COLLEGE PULPALLY	3.82	A+	VIII
11.	MZAXMBC011 SWETHA S	MARKAZ ARTS AND SCIENCE COLLEGE ATHAWANAD	3.78	A+	IX
12.	PZAXMBC009 UMMUSALMA M	PAZHASSI RAJA COLLEGE PULPALLY	3.74	A	X

** CGPA and grade are computed excluding improvement chance.
** Generated based on the consolidation done on 22.08.2025.

22/08/25



CONTROLLER OF EXAMINATIONS

(Handwritten signature)

Figure 2: PG Position list

DETAILS OF WEBINARS/SEMINARS ATTENDED BY TEACHERS

- . Dr.Seena P and Dr.Arifa PP has participated in the National Seminar on “Microbiome and Human Health” organized by Centre of Excellence in

Microbiome (CoEM)- KSCSTE, Govt. Of Kerala, Jubilee Mission Medical College and Research Institute, (JMMC & RI), ON 27th June 2025 at JMMC & RI, Thrissur.

- Mrs.Maneesha Mohan has participated in two day National Webinar Series – “Beyond the lab:Mastering Scientific Communication and Research Funding Strategies” organized by Union Christian College, Aluva, St.Stephen College, Kottayam with Lore E& D Research Associates, Kottayam, on 18th & 19th August 2025.
- Dr.Seena P has participated in the National Symposium “Taming Cancer: Progress and Promises 2025” organised by Amala Cancer Research Centre, Thrissur in collaboration with Dept. of Oncology, Amala Institute of Medical Sciences, Thrissur, held on 27-28 November 2025.
- Dr.Seena P, Dr.Arifa PP and Mrs.Maneesha Mohan has actively participated in the “International Experts Lecture Series (IELS) – GEMS 2025, organized by GEMS Arts and Science College (Autonomous) in collaboration with the Society of Biological Chemists - India, On 17th , 18th December, 2025 and 5th , 6th , 7th , 8th , 9th , 12th and 19th January, 2026.

DETAILS OF FDP /WORKSHOP ATTENDED BY FACULTIES

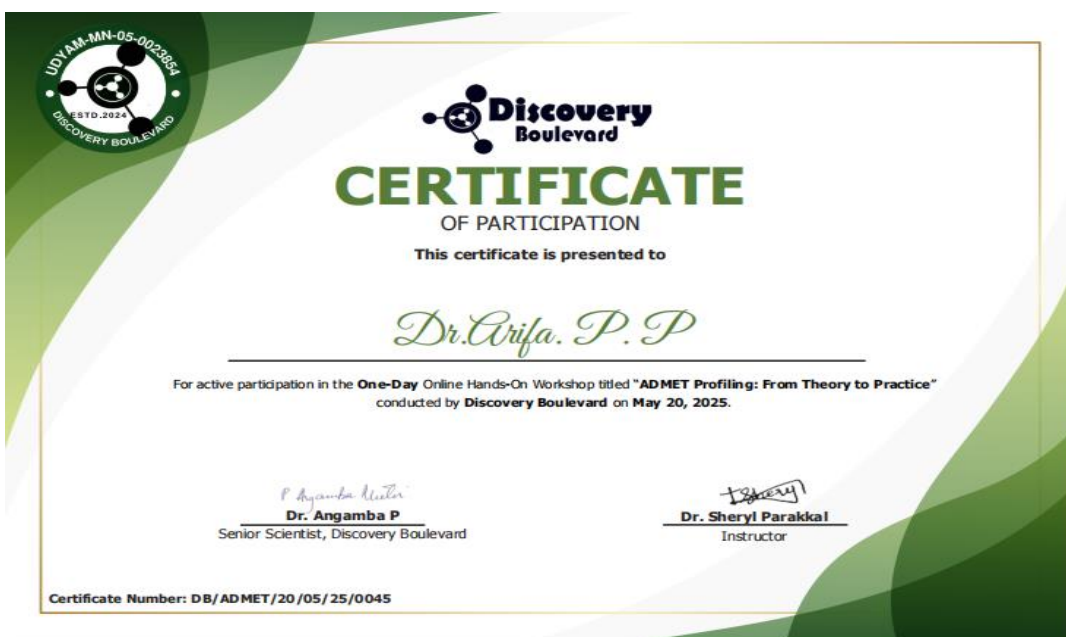
- Dr.Seena P has participated in the five days Faculty Development Program on “Revolutionizing Life Sciences: Emerging Frontiers in Biological and Food Science Research” organized by Centre for Bioscience and Nanoscience Research (CBNR), Coimbatore, conducted from 14th May to 18th May 2025.
- Dr.Arifa PP has participated in the One-Day Online Hands-on Workshop on “*ADMET Profiling: From Theory to Practice*” conducted by Discovery Boulevard on 20th May 2025.
- Mrs.Jaseela KP has participated in a 5 Day Guided Hands on Training Programme on Instrumental Chemical Analysis in the instruments ICP-OES, AAS, LC-HRMS, GC-MS/MS, FTIR-ATR, UV- Vis organized by the Department of Chemical Oceanography, School of Marine Sciences, CUSAT from 16th June to 20th June 2025.

- Dr. Seena P has completed the NEP 2020 Orientation & Sensitization Programme (MMC-049-2025-JUN-B-03293) under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organised by UGC - Malaviya Mission Teacher Training Centre (MMTTC), University of Calicut from 17-06-2025 to 26-06-2025.
- Dr. Seena P has participated in the one day National Level Workshop on “Demystifying outcome based education” held on 20th June 2025, organized by the Internal Quality Assurance Cell (IQAC) of MES Keveeyam College, Valanchery, in association with IPSR Solutions Ltd.
- Mrs. Maneesha Mohan has participated in four day National Online Workshop on “From prompt to publication: Smart AI integration for Academics” organized by Fisat Business School, Angamaly in Association with Lore E&D Research Associates, Kottayam from 26th -30th June 2025.
- Dr. Arifa PP & Mrs. Jaseela KP has attended and successfully completed a Hands-on Certification on DNA Sequence Analysis conducted by Barcode Biotechnology from 7th to 11th August 2025. The programme provided practical training in bioinformatics tools including Chromas Pro, BioEdit, BLASTn, ClustalX, and MEGA, enhancing skills in DNA sequence analysis and species identification.
- Mrs. Maneesha Mohan has participated in One day FDP on “Smart Learning System for future classrooms” organized by Dept of BBA in association with IQAC, Muhammed Ali Shihab Thangal Memorial Arts and Science College, PMNA with Pencilbitz, on 13th August 2025.
- Dr. Arifa PP has participated in a 7-Day International Online FDP on “*Emerging Trends in Bioinformatics for Life Science Educators*” organized by the Department of Botany and Computational Biology, St. Aloysius College, Elthuruth, from 26th January to 1st February 2026.
- Dr. Seena P has successfully completed the two days offline workshop on “Bioinformatics and Computational Biology for Drug Discovery” conducted by Ethical Edu fabrica Pvt. Ltd. in association with Petrichor, IIT, Palakkadon 21st -22nd February 2026.
- All the faculties of the Department successfully completed six days Faculty Development Program on “REIMAGINING HIGHER EDUCATION: Integrating IKS, Inclusive Pedagogy, Research and Digital Learning” organized by the

Internal Quality Assurance Cell (IQAC) of our college, conducted from 23rd March 2026 to 28th March 2026

- Mrs.Maneesha Mohan has participated in Online workshop on “Cellular Toxicity Studies” organized by Centre for Molecular and Nanomedical Science,Satyabhama Institute of Science and Technology on 28th March 2026.





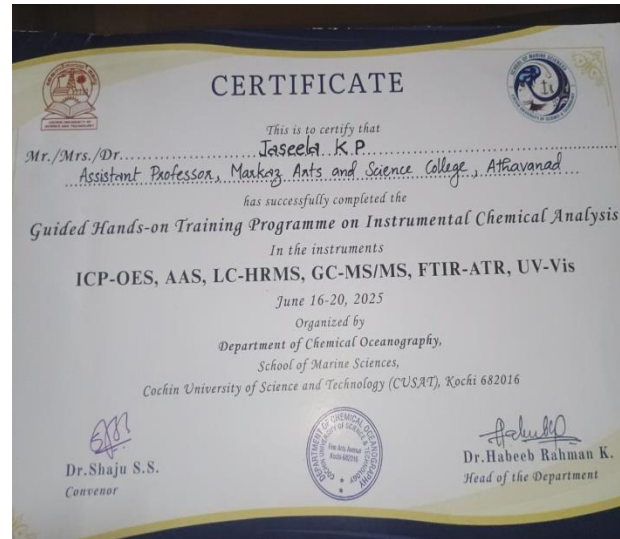




Figure 3: Certificates of Faculties attended seminars & FDPs

DETAILS OF PRESENTATIONS / INVITED LECTURES BY FACULTIES

- Dr. Seena P has presented a paper entitled “Effect of Ethoxyquin on Hematological Parameters of Fresh Water Fish, *Oreochromis mossambicus*” in the 6th National Conference on “Frontiers in Combating Antibiotic Resistance Exploring Microbial Bioactives and Nanoparticles – FCAR:EMBN” held at Centre for Bioscience and Nanoscience Research (CBNR), Coimbatore on 26th and 27th September 2025..

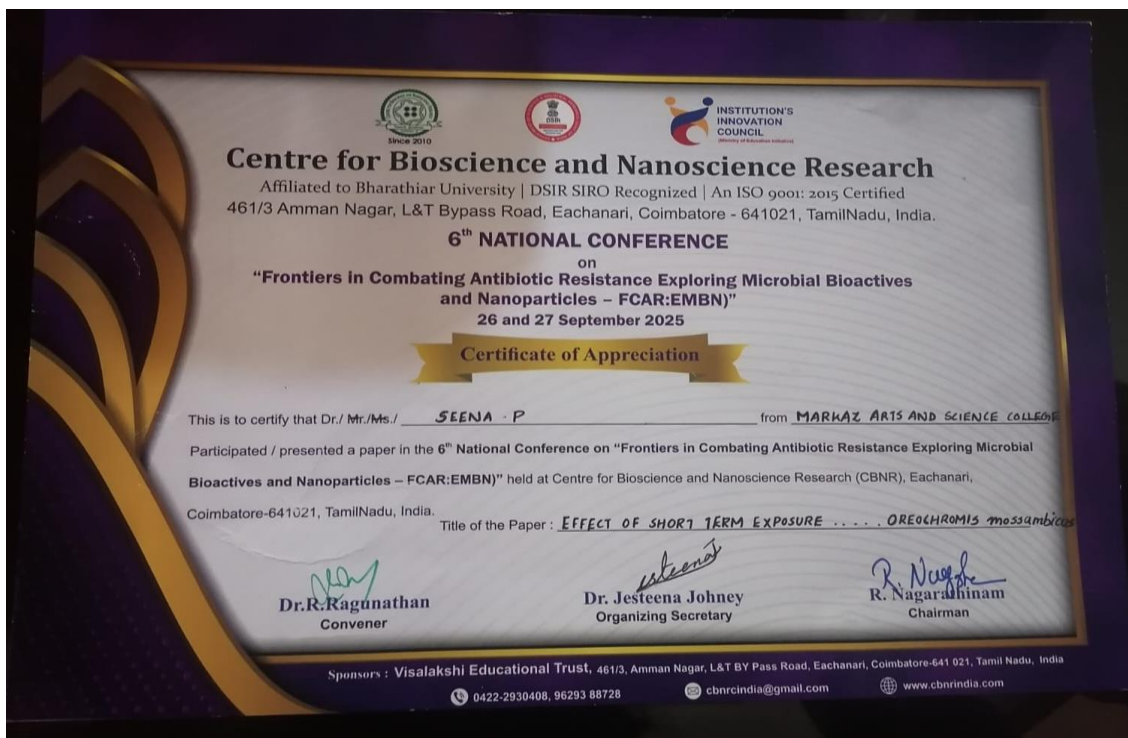


Figure 4: Certificate of Paper Presentation by faculty – Dr. Seena P

DETAILS OF STUDENTS ATTENDED SEMINARS/ PRESENTATIONS/ WORKSHOPS

- Seven students of second year M.Sc.Biochemistry has attended 6th National Conference on “Frontiers in Combating Antibiotic Resistance Exploring Microbial Bioactives and Nanoparticles – FCAR:EMBN” held at Centre for Bioscience and Nanoscience Research (CBNR), Coimbatore on 26th and 27th September 2025.



Figure 5: Students at CBNR,Coimbatore

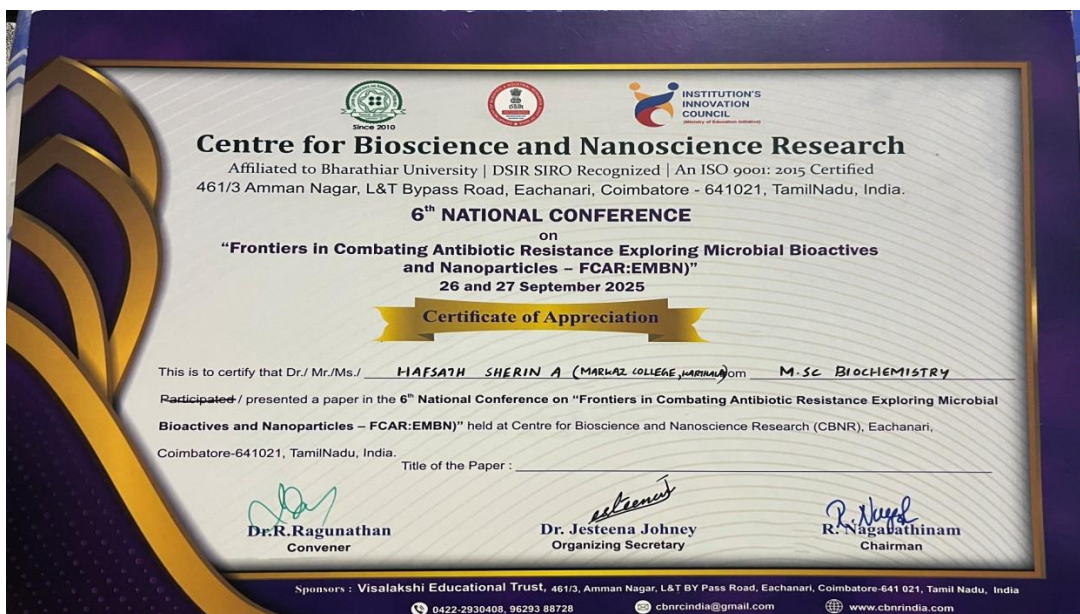


Figure 6: Students participation certificate

- Nayana Sharin, Najiya Nasarin TP and Safa Minnath TP of second year M.Sc. Biochemistry has presented papers in the 6th National Conference on “Frontiers in Combating Antibiotic Resistance Exploring Microbial Bioactives and Nanoparticles – FCAR:EMBN” held at Centre for Bioscience and Nanoscience Research (CBNR), Coimbatore on 26th and 27th September 2025.

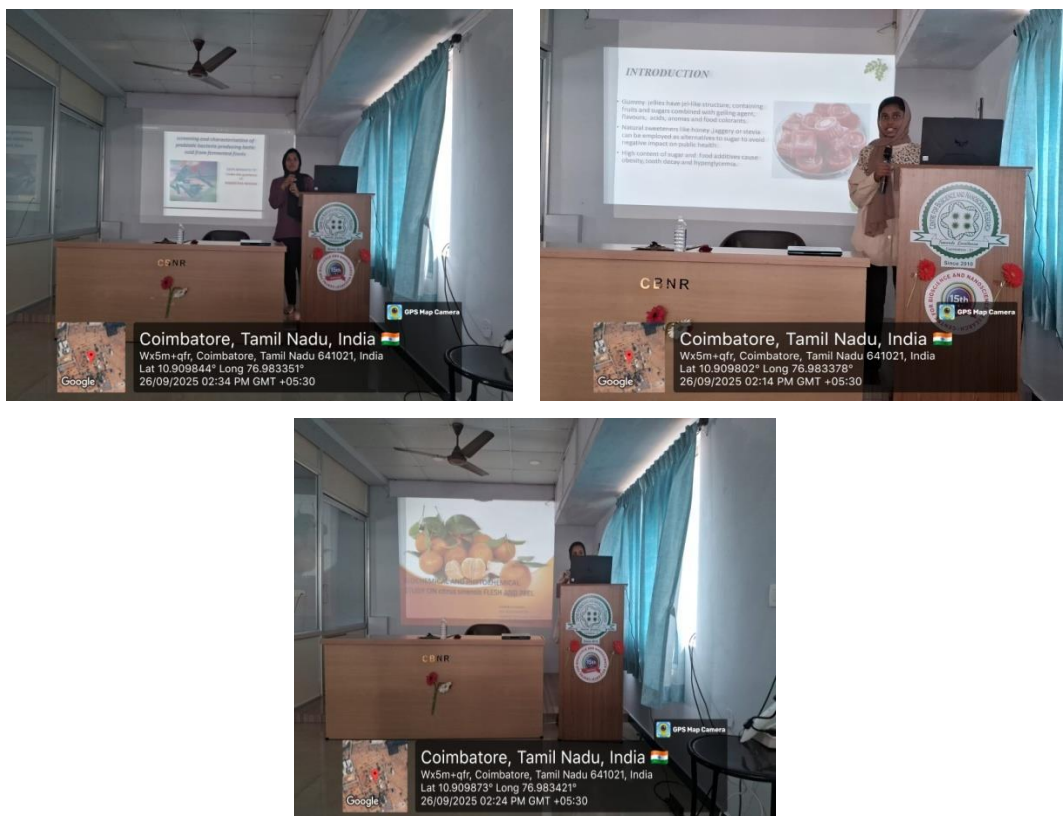


Figure 7: PG Students presenting paper in National Conference at CBNR, Coimbatore

- Nayana Sharin got best paper award for her presentation on the topic entitled “Biochemical and Phytochemical Study of *Citrus sinensis* Flesh and Peel”



Figure 8: Best Paper Award Certificate & trophy for Nayana Sharin for her presentation in National Conference

- Eight students of second year M.Sc. Biochemistry has participated in the National Symposium “Taming Cancer: Progress and Promises 2025” organised by Amala

Cancer Research Centre, Thrissur in collaboration with Dept. of Oncology, Amala Institute of Medical Sciences, Thrissur, held on 27-28 November 2025.



Figure 9: Students participation certificate in the National Symposium at Amala Cancer Research Centre, Thrissur

DETAILS OF DEPARTMENT ACTIVITES

1) WORLD ENVIRONMENT DAY CELEBRATION

The PG Department of Biochemistry celebrated World Environment Day on 5th of June 2025, Thursday, in a significant manner. The main focus of the celebration was aligning with the global theme “Beat Plastic Pollution”.

As a part of the celebration, second year PG students organized and delivered an awareness class for other students of the department, focusing on the urgent need to reduce plastic use and its harmful impact on ecosystems and human health. The session covered key environmental issues such as plastic waste management, climate change and sustainable living practices. They emphasised on practical measures including reducing single use plastics, promoting recycling and encouraging environmentally responsible behaviour in daily life. Interactive discussions in the session helped engage students and inspired them to adopt eco-friendly alternatives.

The session not only enhanced awareness about plastic pollution but also fostered a sense of responsibility and collection action among the students. They winded up the session by advising the audience by the quote “Beat Plastic Pollution Before it Beats Us” to save our environment and Earth. Overall, the program was well-received and contributed positively to promoting environmental consciousness within the student’s community.

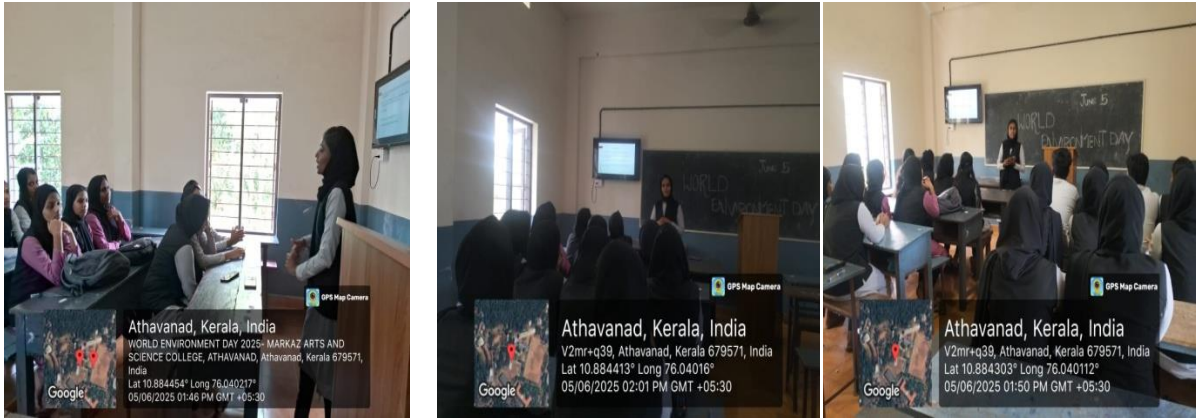


Figure 10: World Environment Day Celebration

2) WORLD HEPATITIS DAY OBSERVANCE

As a part of World Hepatitis Day observation PG Department of Biochemistry organised a poster making competition on the theme “Hepatitis – Lets Break it Down” On 29th July 2025 at PG Biochemistry lab at 1.30pm. World Hepatitis Day is important because it educates, prevents, detects and drives action against hepatitis that affects millions worldwide but is often overlooked.

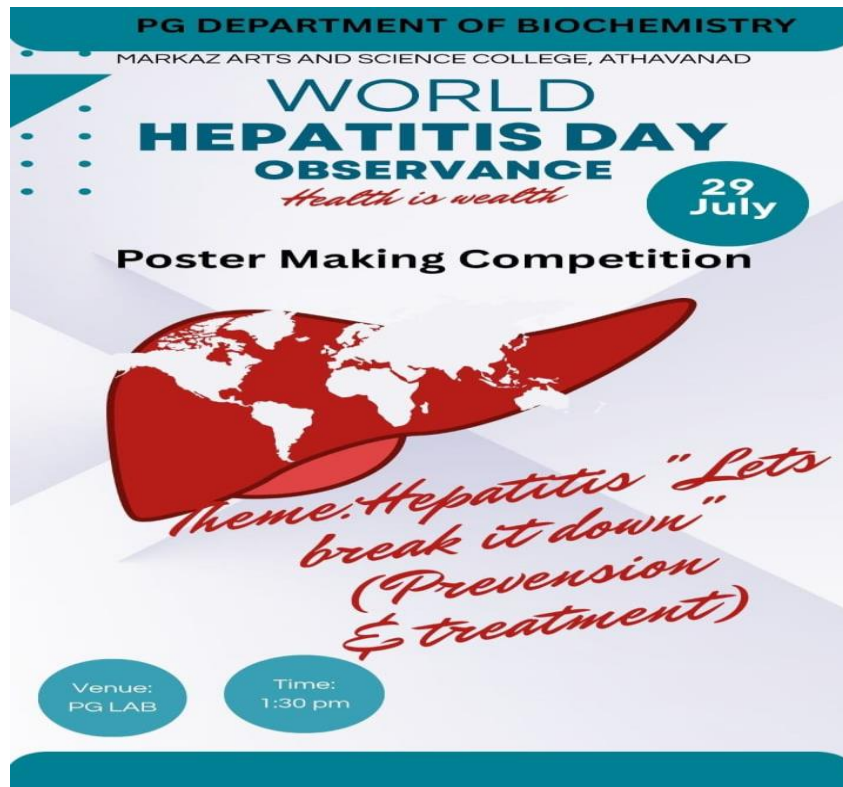


Figure 11: Poster of World Hepatitis Day Observance

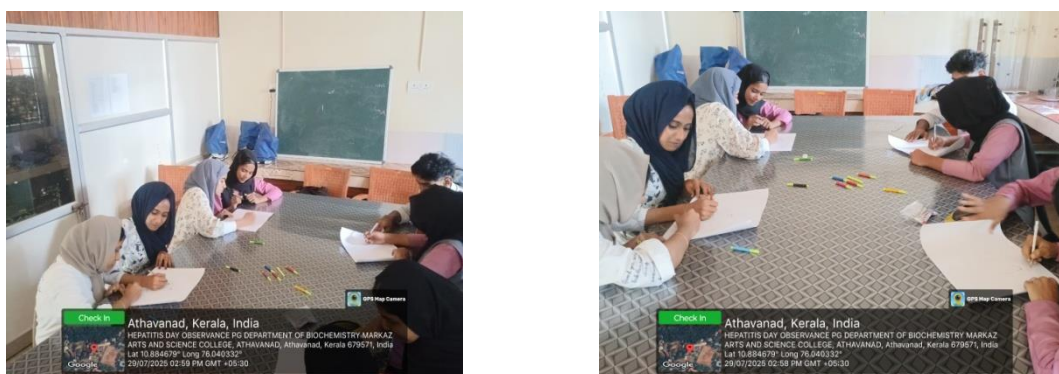


Figure 12: Photos of poster making competition

3) WORLD HEART DAY OBSERVANCE

The Department observed World Heart Day on 29th September 2025, Monday, with the objective of creating awareness about cardiovascular health and promoting preventive care through traditional practices. As part of the observance, a seminar was organized on the topic **“A Healthy Heart through Ayurveda”**. The session was led by Dr. Manzoor Ali Gurukkal C.H., Senior Physician and Medical Superintendent, Changampally Ayurveda Nursing Home, a resource person with expertise in Ayurveda, who delivered an insightful talk on maintaining heart health through natural and holistic approaches. The speaker emphasized the importance of balanced diet, regular physical activity, stress management, and the use of Ayurvedic herbs in preventing cardiovascular diseases. The seminar highlighted key Ayurvedic principles such as maintaining *dosha balance*, adopting a heart-friendly lifestyle (*Hridya lifestyle*), and incorporating herbal remedies like Arjuna, Ashwagandha, and Triphala for improving cardiac function. The role of yoga and meditation in reducing stress and enhancing overall well-being was also discussed. Students and faculty members actively participated in the session, making it interactive and informative.

A total of 68 participants benefited from the program. The program successfully enhanced awareness about the significance of heart health and encouraged participants to adopt healthier lifestyle practices rooted in Ayurveda.

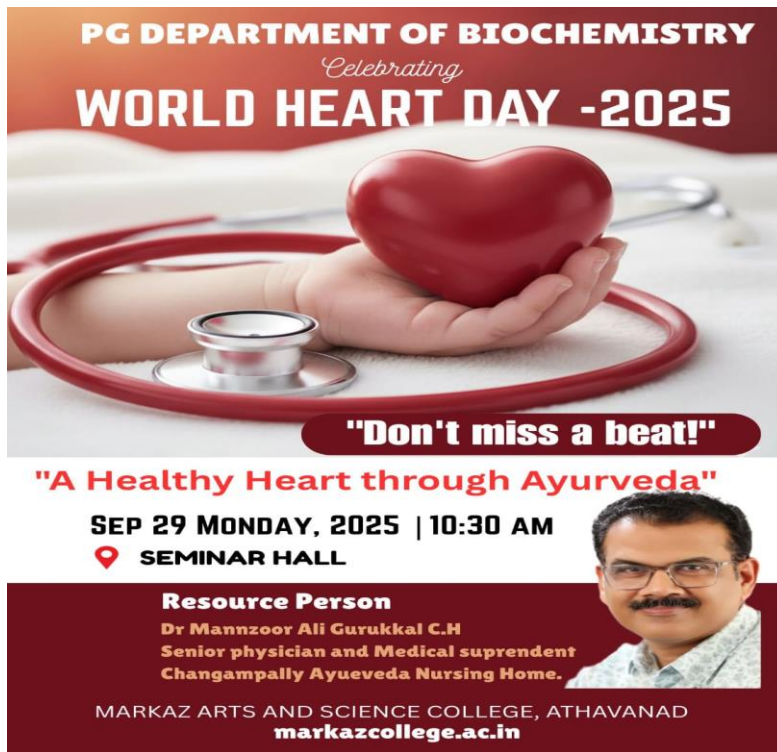


Figure 13: Poster of World Heart Day -2025 Programme

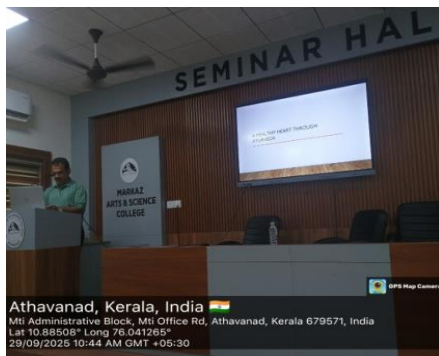


Figure 14: Photos of talk on “A Healthy Heart through Ayurveda”

4) SEMINAR ON "APPLICATIONS OF BIOINFORMATICS IN BIOMEDICAL RESEARCH"

The Department of Biochemistry organized a seminar on "APPLICATIONS OF BIOINFORMATICS IN BIOMEDICAL RESEARCH" on 10th November 2025 at seminar hall. The program aimed to provide insights into the growing role of bioinformatics in modern biomedical research and its impact on healthcare advancements. The seminar was delivered by Dr.Sahila M, Assistant Professor in Bioinformatics, Safi Institute of Advanced Study, Vazhayoor, who is an expert in the field of bioinformatics. The session covered key topics such as sequence analysis, genomics, proteomics, drug discovery, and the use of computational tools in disease diagnosis and treatment. The speaker also highlighted how bioinformatics contributes to personalized medicine and the analysis of large biological datasets. The presentation was supported with real-time examples and case studies, which helped the audience, understand the practical applications of bioinformatics in research and clinical settings. The seminar was highly informative and beneficial, enhancing the participants' knowledge and encouraging them to explore research opportunities in bioinformatics. A total of **30** students were benefited from the programme.

MARKAZUTHARBIYYATHIL ISLAMIYYAH
Markaz tharbiyyathil islamiyyah is a society established in 1984 under the patronage of Pannakkad Syed Muhammad Ali Shahab Thangal. In its attempt to spread the religious and moral values in the society the society holds the patronage of a wide range of educational institutions. The sprawling 30 acre Markaz campus has achieved continuing snowball progress and this Aspiration to move far ahead. An eye vision of this large and spacious campus condenses the concept that knowledge is the greatest pleasure.

President: Sayyid Muzammir Ali shahab Thangal
General Secretary: ad/issat/ Hamza lussy Baqat

Markaz Arts and Science College
A Minority educational institution recognized by the national commission for minority educational institutions. No. 1673 of 2009. The college was started in 2003 at Markaz campus. one of the most important educational missions of Markaz tharbiyyathil islamiyyah society. The college emphasizes offering innovative and fruitful courses to lead the new generations to brighter future. The Markaz Arts and Science College aims at forming leaders of tomorrow who are intellectually competent, spiritually mature, psychologically strong, physically healthy and socially acceptable who will spread the message of love, truth, justice and peace in our society. The college is located at Karchala 5.5 km away from Kozhikode and 5 km from Vazhayoor. The doors of the institution are opened to all students irrespective of their caste and creed.

Principal: Dr CP Mohamed Nussy
Markazcollege.ac.in
Biochemistry.markaz@gmail.com

MARKAZ ARTS AND SCIENCE COLLEGE, ATHAVANAD
Karchala post, Malappuram Dist, 679571
Affiliated to University of Calicut

DEPARTMENT OF BIOCHEMISTRY
Organizing
'APPLICATIONS OF BIOINFORMATICS IN BIOMEDICAL RESEARCH'
10 NOV 2025
SEMINAR HALL | 10:00 AM

EXPERT
Dr.Sahila.M
Assistant Professor in
Bioinformatics
Safi Institute of Advanced
Study, Vazhayoor

Bioinformatics is the interdisciplinary science that combines biology, computer science, and data analysis to interpret and manage biological information for understanding life processes.

Importance in Biological Research: Bioinformatics plays a vital role in analyzing and interpreting complex biological data, enabling discoveries in genomics, proteomics, drug development, and personalized medicine.



Figure 15: Program brochure & photo of program

5) DIABETIC DAY OBSERVANCE

As a part of Diabetic Day observance (14/11/2025), PG Department of Biochemistry conducted Blood Glucose detection for the local people near to college premises. Second year PG students actively participated in checking the blood glucose levels of people in the premises using glucometer under the supervision of Dr. Sri Rashmi, Department faculty. A large number of individuals took part in the screening. Following the screening, the students also gave awareness class to people based on this year theme “Diabetes across life stages”. They highlighted how diabetes can affect children, adults and the elderly different. Topics such as risk factors, symptoms, preventive measures and management strategies were explained by the students in a simple and understandable manner. The Diabetic Day observance program, centred on the theme “Diabetes across life stages”, was highly effective in spreading awareness and encouraging healthy habits. The program also enhanced student’s practical skills and sense of community service.

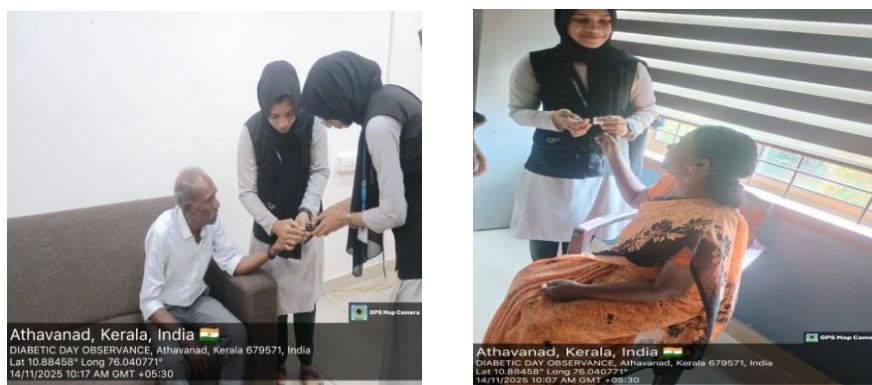


Figure 16: Blood glucose monitoring – Diabetic Day Observance

6) WORLD AIDS DAY OBSERVANCE

PG Department of Biochemistry organized an awareness program on the occasion of **World AIDS Day** on 1st December 2025, Monday, with the theme “**Awareness for Change.**” The program aimed to educate students and staff about HIV/AIDS, its prevention, and the importance of eliminating stigma and discrimination associated with the disease. Second year M.Sc. students handled the session and provided valuable insights into the modes of transmission, preventive measures, early diagnosis, and available treatment options. They emphasized the significance of awareness in reducing the spread of HIV and highlighted the importance of safe practices and regular health check-ups. Students actively participated and clarified their doubts, making the program informative and impactful. The observance successfully created awareness and encouraged responsible behaviour among students, promoting a compassionate and informed approach towards individuals living with HIV/AIDS.

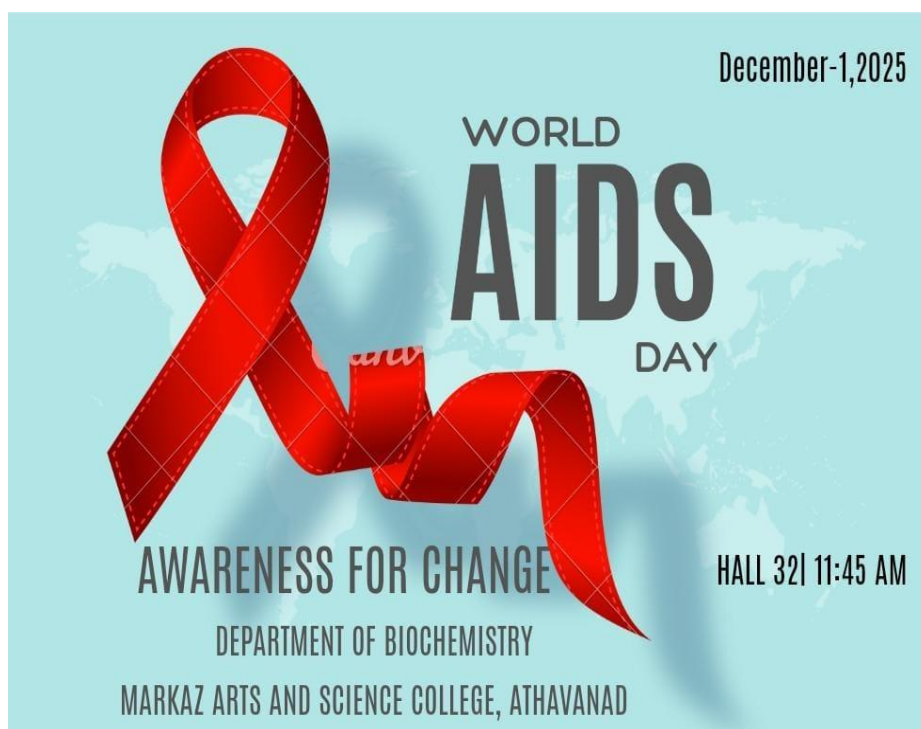


Figure 17: Poster of World AIDS Day Awareness Programme



Figure 18: Photos of AIDS Day Awareness Class taken by PG students

7) INTERNATIONAL WEBINAR ON “MOLECULAR BASIS OF DIABETES AND ITS COMPLICATIONS”

PG Department of Biochemistry hosted a International Webinar on “Molecular Basis of Diabetes and Its Complications”, on 25th January 2026, Sunday at 7 pm. The webinar aimed to enhance understanding of the molecular mechanisms underlying Diabetes Mellitus and its associated complications. The session was delivered by Dr.Sandeep Moothedath Subrahmanian, Department of Cell and Biological Systems, Milton S. Hershey Medical Center, Penn State College of Medicine Hershey, PA, United States, who is an eminent expert in the field. The speaker elaborated on key aspects such as insulin signaling pathways, genetic and environmental factors influencing diabetes, and the molecular changes leading to complications like neuropathy, nephropathy, and cardiovascular disorders. The importance of early diagnosis, lifestyle management, and recent advances in therapeutic strategies were also highlighted. The interactive session allowed participants to engage with the speaker and clarify their queries. The webinar was highly informative and enriched the participants understanding of the disease at a molecular level, encouraging further research in this field. A total of 55 peoples including students and faculties were benefited from the programme.

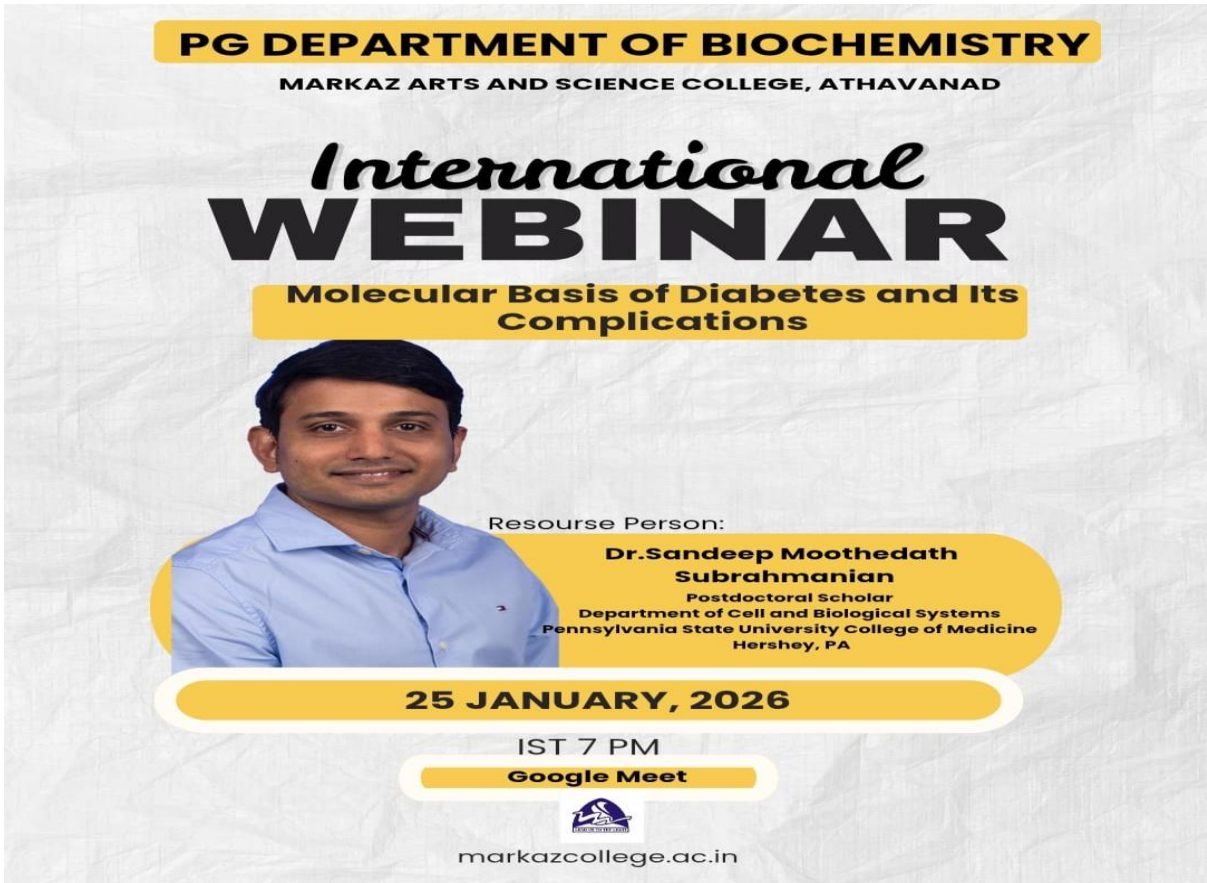


Figure 19: International Webinar Brochure

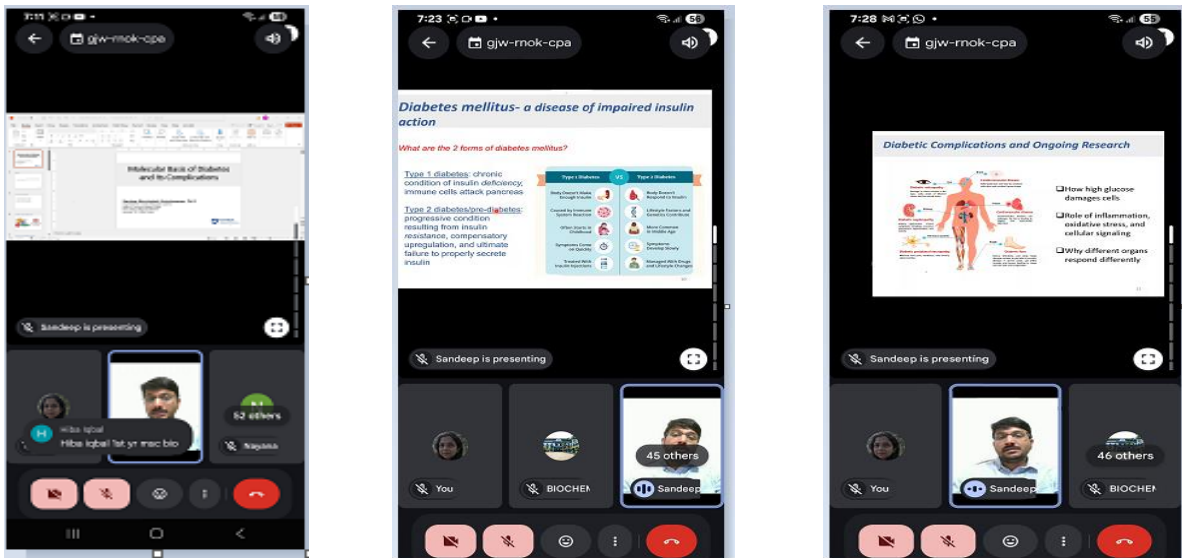


Figure 20: Screenshots of International Webinar

8) WORLD CANCER DAY

As a part of World Cancer Day a cancer awareness programme “Early awareness, timely care and hope can save lives” was organized by the department on 4th February 2026 at 11.30 am at seminar hall. The resource person for the session was Dr.N.Mohammed Ali, Managing Director, Nadakkavil Hospital Valanchery. The session aimed to create awareness about common types of cancer, their risk factors, warning signs, and preventive measures. Emphasis was placed on the significance of early diagnosis, regular health check-ups, and adopting a healthy lifestyle to reduce cancer risk. The resource person delivered an informative and engaging talk highlighting the importance of timely medical intervention and dispelling common myths associated with cancer. The session also stressed the role of mental strength, support systems, and hope in the journey of cancer treatment and recovery. Students actively participated in the programme, making it interactive and impactful. The awareness programme successfully enhanced participants’ understanding and encouraged them to spread awareness within their communities. The Head of the Department, Dr.Seena P, presented a memento to the resource person as a token of gratitude. All the students of Department attended the program.





Figure 21: Poster and Photos of Cancer Awareness program

8) ASSOCIATION INAUGURATION

The Department Association, **M3 – Where Molecules Meet Mind**, was formally inaugurated on the same day as the Cancer Awareness Programme by the esteemed resource person, Dr.N.Mohammed Ali, Managing Director, Nadakkavil Hospital Valanchery., adding significance to the occasion. The inauguration ceremony was held on 4th February 2026 at seminar hall with the objective of fostering academic excellence, encouraging student participation, and promoting co-curricular activities within the department. The resource person officially inaugurated the association and addressed the gathering, emphasizing the importance of active student involvement in academic and extension activities for holistic development.

The session also highlighted the vision, mission, and proposed activities of **M3 – Where Molecules Meet Mind** for the academic year. The event was well-organized and marked a meaningful beginning for the association, inspiring students to actively engage in its initiatives.



Figure 22: Association Inauguration

9) NATIONAL SCIENCE DAY CELEBRATION –TALK ON RESEARCH PROCESS

The Department celebrated National Science Day 2026 by organizing an insightful talk on the topic **“From Idea to Innovation: The Research Process”** with the aim of promoting scientific temper and encouraging research-oriented thinking among students. The programme was conducted on 2nd March 2026 at seminar hall. The session focused on guiding students through the various stages of the research process, starting from the generation of ideas to the development of innovative outcomes. Emphasis was placed on critical thinking, problem identification, literature review, experimentation, data analysis, and the importance of ethical practices in research.

The resource person, Dr. Bindiya E.S, Project Scientist, Department of Biological Sciences, Rajagiri College of Social Sciences, Kalamassery, delivered an engaging and informative lecture, highlighting real-life examples and practical approaches to conducting meaningful research. The talk inspired students to explore new ideas and actively participate in research activities. The session successfully enhanced awareness about the significance of research in scientific advancement and innovation. **All the students of the department attended the session.**



Figure 23: poster and photos of science day program

10) EXTENSION ACTIVITIES

A) DIABETIC DAY OBSERVANCE

As a part of Diabetic Day observance (14/11/2025), PG Department of Biochemistry conducted Blood Glucose detection for the local people near to college premises. Second year PG students went to the nearby houses and performed the blood glucose detection using glucometer. Dr.Sri Rashmi, Department faculty coordinated the program. The theme for this year was “Diabetes and Well-being” and the slogan is “Diabetes across life stages”, emphasizing that diabetes management requires integrated care at every stage of life. As awareness is the first step towards prevention, the students also gave awareness class to people by going to their houses. The students advised the people to take control of diabetes to protect their future



Figure 24: Blood glucose determination - Diabetic Day Observance

B) OPEN HOUSE 2025 -2026

2025-2026 Open house exhibitions were conducted on 13th January 2026. Students of the Biochemistry department actively participated in the exhibition and exhibited several models and charts. As a part of the programme, blood glucose detection, blood group determination, blood pressure determination and basic food adulterant checking was done. Many parents and students visited the stall.



Figure 25: Photos of Open House Exhibition

11) CERTIFICATE COURSES FOR THE STUDENTS

In this academic year Certificate Courses were not provided by the Department. Second year UG students were enrolled for ASAP Course and the first year PG students were admitted for Certificate Course Water Quality Assessment.

12) INDUSTRIAL VISIT TO PASTEUR INSTITUTE OF INDIA, COONOOR

As part of the department's academic enrichment and experiential learning activities, an industrial visit was organized to Pasteur Institute of India, Coonoor, on Friday, 23rd January 2026. The visit aimed to provide students with practical exposure to vaccine production, microbiological research, laboratory practices, and public health-oriented biomedical activities. The program enabled participants to bridge the gap between theoretical concepts learned in classrooms and their real-world applications in biomedical and pharmaceutical sciences. The faculties of the institute gave an introductory session on the history, mission, and activities of the institute. They gave a detailed lecture on vaccine production and preservation techniques. The students got an opportunity to interact with scientists and technical personnel regarding current research activities and career opportunities in biomedical sciences. A total of 33 students from first and second year UG & PG visited the institute. Dr. Seena P & Dr. Arifa PP – Department faculties accompanied the students. The industrial visit was highly informative and beneficial for the students and faculty members. The visit offered an excellent opportunity to observe scientific and industrial practices in a reputed biomedical institute.



Figure 26: Photos of Industrial Visit to Pasteur Institute

13) INDUSTRIAL VISIT TO CWRDM, KOZHIKODE

An industrial visit was organized for second year PG students to Centre for Water Resources Development and Management (CWRDM), Kozhikode, on 26th July 2025. The visit provides the students practical exposure to water resource research, environmental management practices, laboratory techniques, and sustainable development technologies. The program helped students to understand the scientific approaches used in water conservation, hydrology, environmental monitoring, and resource management. The students got familiarized with research and development activities related to water resources and environmental management and gained awareness about sustainable water management practices and environmental protection. **Seven** students of second year PG Biochemistry along with PG Chemistry students visited the institute. Dr.Arifa PP, department faculty accompanied the students.

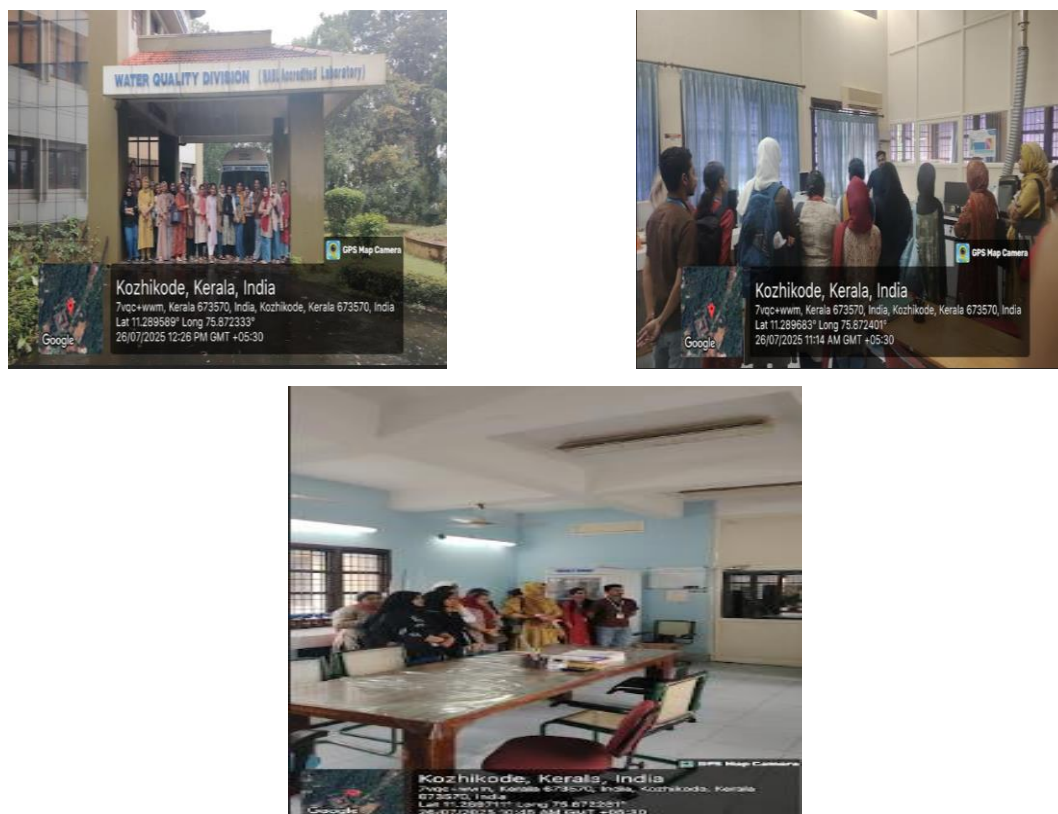


Figure 27: Photos of Industrial Visit to CWRDM, Kozhikode

15) DETAILS OF SWAYAM COURSE ENROLLMENT

35 students and five faculties of the Department enrolled for Swayam Course in this academic year. Details of faculties enrollment for Swayam Course are as follows; Dr.Seena – Biochemistry, Jaseela – Molecular Biology, Rincy –Biochemistry, Maneesha – Cancer

Fundamentals and Dr.Arifa- Bioinformatics: Algorithms and Applications. Details of students enrolled for Swayam Course in this academic year were given in the table below:

Sl.No.	Name	Class	Course Enrolled
1.	Fathima Minha. C. P	1 st year B.Sc. Biochemistry	Cell Biology
2.	Hamna Mujeeb M	1 st year B.Sc. Biochemistry	Cell Biology
3.	Riza Fathima	1 st year B.Sc. Biochemistry	Cell Biology
4.	Sajna. N V	1 st year B.Sc. Biochemistry	Cell Biology
5.	Fahmida Farhath	1 st year B.Sc. Biochemistry	Cell Biology
6.	Fabeela Mol N	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
7.	Fathima Nifla P	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
8.	Fathima Shanha K	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
9.	Husna Nasreen	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
10.	Kadeejathul Kubara	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
11.	Misna	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
12.	Naja Rahman C K	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
13.	Nidha A K	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
14.	Shahana K P	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
15.	Fathima Mehna M	2 nd year B.Sc. Biochemistry	Human Nutrition and Biochemistry
16.	Aaysha A M B	1 st year M.Sc. Biochemistry	Cell Biology
17.	Fathima Hiba Muhammed Iqbal	1 st year M.Sc. Biochemistry	Molecular Biology
18.	Fathima Nida	1 st year M.Sc. Biochemistry	Cell Biology
19.	Fathimath Shakkira K P	1 st year M.Sc. Biochemistry	Cell Biology
20.	Fida Thasni V V	1 st year M.Sc. Biochemistry	Cell Biology
21.	Fidha Fathima	1 st year M.Sc. Biochemistry	Cell Biology
22.	Hasna Sherin M V	1 st year M.Sc. Biochemistry	Cell Biology
23.	Hiba Rahman C	1 st year M.Sc. Biochemistry	Cell Biology
24.	Jahana Shirin C	1 st year M.Sc. Biochemistry	Cell Biology
25.	Shaniba Dilsha K	1 st year M.Sc. Biochemistry	Cell Biology
26.	Nayana Sharin	2 nd year M.Sc. Biochemistry	Biochemistry - IITM
27.	Safa Minnath T P	2 nd year M.Sc. Biochemistry	Biochemistry – IITM
28.	Afeefa Sharin C C	2 nd year M.Sc. Biochemistry	Biomolecular Spectroscopy

29.	Najiya Nasrin T P	2 nd year M.Sc. Biochemistry	Biomolecular Spectroscopy
30.	Shamri N	2 nd year M.Sc. Biochemistry	A Study Guide in Organic Retrosynthesis
31.	Hafsath Sherin A	2 nd year M.Sc. Biochemistry	Cell Biology
32.	Ruksana K	2 nd year M.Sc. Biochemistry	Air Pollution and Control
33.	Shifana K V	2 nd year M.Sc. Biochemistry	Biochemistry -IITM
34.	Muhammed Shakkir M	2 nd year M.Sc. Biochemistry	Food Science and Technology
35.	Afreena Hameed TV	2 nd year M.Sc. Biochemistry	Biochemistry - IITM

Table 3: Details of Swayam Enrollment 25-26 academic year

RECOGNITIONS AND AWARDS OF FACULTIES

- 1) Dr.Seena P continued as Chairman of PG Biochemistry at University level since April 2023
- 2) Dr.Seena P appointed as the question paper setter for the Second Semester FYUGP/CBCSS-PG Examination, April 2026 at Safi Institute of Advanced Study, Vazhayoor
- 3) Dr.Seena P acted as question paper setter for B.Sc Microbiology of Majlis Arts and Science College (Autonomous), Puramannur, for the paper- BCH3MN200 – Enzymology and Metabolism .
- 4) Dr.Seena P published a paper entitled “ Nanotechnology and Green Nanomaterials: Modern Ecofriendly Sustainable Approach for Combating the Environmental Effects of Climate Change” in the journal “International Journal of Environmental Sciences” ISSN:2229-7359; Volume 11.
- 5) Maneesha Mohan and Dr.Seena P published a paper entitled “Fabrication and Characterization of Silver Nanoparticles Produced by the Supernatant of *Lactobacillus gasseri* and Evaluation of their Potential Biomedical Activity” in the journal “South Asian Journal of Research in Microbiology” volume 19, Issue 8, page 39-49, 2025.
- 6) Dr.Seena P received certificate of patent of which a copy is annexed hereto has been registered as of the number and date given above in class 24-01 in respect of the application of such design to IV INFUSION DEVICE FOR PRECISION DRUG DELIVERY along with Dr. Murugananth Gopal Raj, Mrs. Varunadevi S and Dr. Reji Ravi.

7) Dr.Seena P have been nominated as a Member –Other State of the BoS in Biochemistry (PG) for a period of three years from 01-01-2025 to 31-12-2027.

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Nanotechnology And Green Nanomaterials: Modern Eco-Friendly Sustainable Approach For Combating The Environmental Effects Of Climate Change

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Abstract
 Climate change poses an unprecedented threat to environmental stability, biodiversity, and human well-being. The acceleration of greenhouse gas emissions, global warming, and pollution necessitates the urgent adoption of innovative, sustainable technologies. Nanotechnology, particularly in the form of green nanomaterials, offers a transformative and eco-friendly solution to mitigate the adverse impacts of climate change. These nanomaterials, synthesized through biological or environmentally benign methods, provide enhanced efficiency in applications such as carbon capture,



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Fabrication and Characterization of Silver Nanoparticles Produced by the Supernatant of *Lactobacillus gasseri* and Evaluation of their Potential Biomedical Activity

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Authors' contributions
 This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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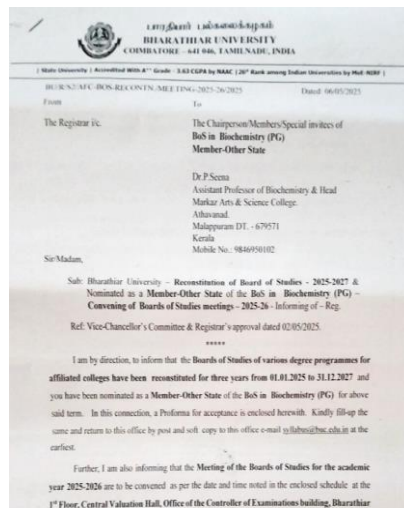
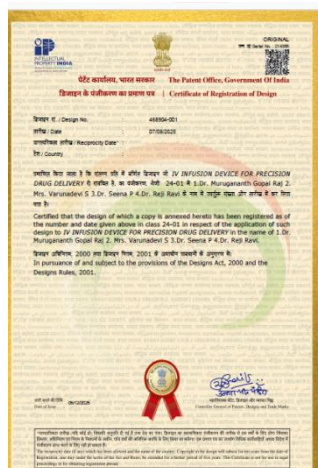


Figure 28: Recognitions of faculties

EXTRA CURRICULAR ACTIVITIES

Students of the department participated in various extracurricular activities organized by the department as well as by other departments. The details are given below:

- 1) **Oath taking ceremony** – As a part of International Day Against Drug Abuse and Illicit Trafficking, an Oath was taken by the students on 26th June 2025. The students took a solemn oath to combat drug abuse and promote a healthy, drug free environment.



Figure 29: Oath taking ceremony

- 2) **Valeed Omar Sherif Scholarship** - In loving memory of alumni Valeed, it was decided to give scholarship to the outstanding students in social service. Hasna, Musharaf, Fathima Sefna, Shahana Sherin of final year Biochemistry participated.
- 3) **National Space Day Celebration** - Department of Physics in association with IQAC commemorates the triumph of Chandrayan 3. As a part of the program, Quiz competition, astrophotography, painting competition were conducted on 7th and 8th August 2025. Kadeejathul Kubara and Misna of Second year Biochemistry won first prize in quiz competition. They were awarded with certificates



Figure 30: National space day winners certificate

- 4) **Hiroshima And Nagasaki Day** - Theatre and film club of Markaz Arts and Science College conducted several programmes on remembrance of Hiroshima and Nagasaki day on 6th and 7th August 2025. Fathima Hiba of third year Biochemistry got second prize in collage making competition.



Figure 31: Hiroshima And Nagasaki Day competition winners poster

- 5) **Fresher's day** – Fresher's day programme of the year 2025-2026 'FRESH FACE FIESTA' was celebrated on 13th August 2025. Various entertainment programmes were organised by third year students. Final year B.Sc. Biochemistry students also performed fabulous programs
- 6) **Convocation Ceremony** - Convocation ceremony of 2025 pass out PG batch was conducted on 23rd September 2025. Dr. Ayoob C P, Director, JAMIA HAMDARD KANNUR CAMPUS was the chief guest. The certificates to the pass out PG students were given.

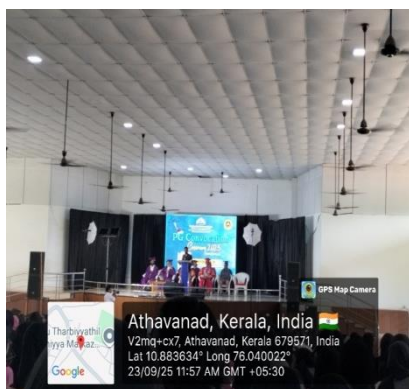
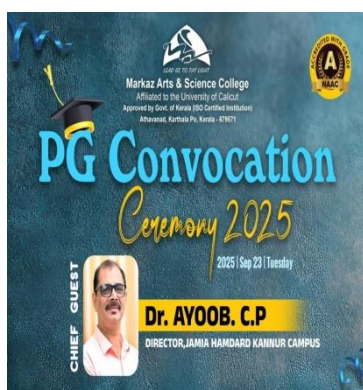


Figure 32: Convocation Ceremony

- 7) **International Mole Day-** PG Department of Chemistry conducted a quiz competition on account of international mole day on 23rd October 2025, Thursday at Seminar hall. It was an inter departmental quiz competition, Najiya Nasrin and Nayana Sharin of second MSc Biochemistry got first prize.



Figure 33: International Mole Day Quiz Competition Winners

- 8) **Union Inauguration - 2025-2026** Union Inauguration ‘Dhwani’ was done on 17th December 2025. Muhammed Shakir of second year M.Sc. Biochemistry was elected as the Secretary, and Fathima Hiba A P of final year B.Sc. Biochemistry was elected as Vice Chairperson. The Union Inauguration was done by the chief guest M. Noushad .Dr. C P Muhamed kutty, Principal and Markaz Institutions General secretary K T Azad Ali chaired the sessions. All the other elected members took oath. Fine arts inauguration was also done on the same day – ‘kalarang’ A music event by vocal dude was organised by the union.



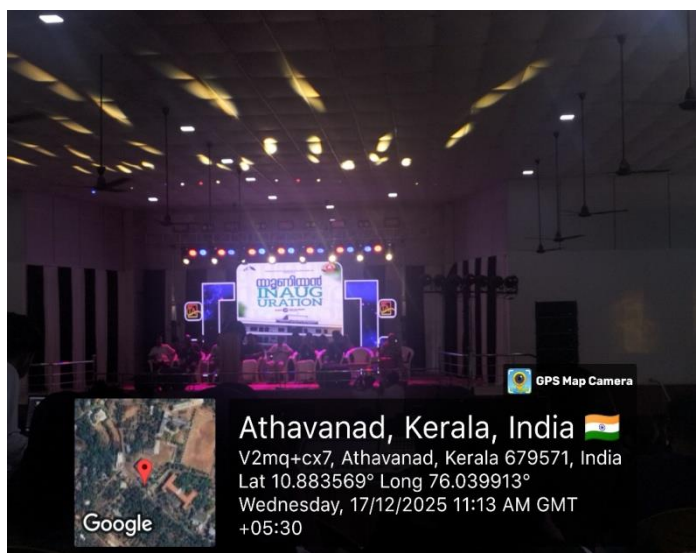


Figure 34: Union Inauguration

9) **Arts Fest 25-26** – DHWANI College Union 25-26 conducted FINE ARTS FEST 2K26 on 23rd December 2025. The students of Biochemistry department actively participated in both offstage and onstage items and won second prize. The offstage items was started from 12th December 2025.

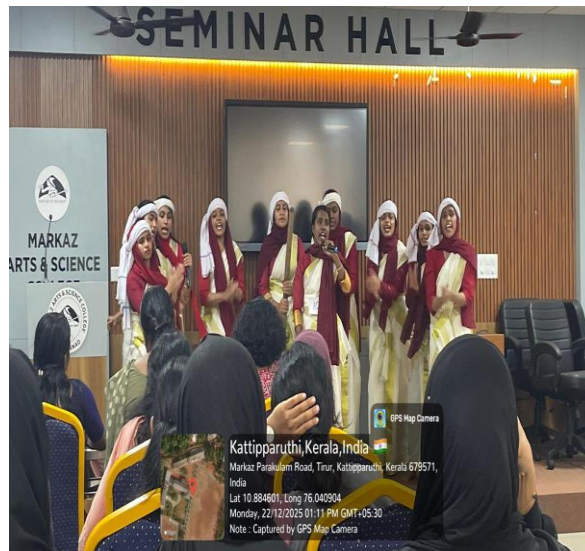


Figure 35: Arts Fest

10) **Management Fest-** Intercollegiate Management and Entrepreneurial fest – “ZAKRAM 2026” was conducted on 16th February 2026. The students of Biochemistry actively participated in the food fest programme and got third prize.



Figure 36: Management Fest

COCURRICULAR ACTIVITIES

1. NSS

Shahana K P, Fathima Shanha, Fathima Nifla, Naja Rahman C K, Nidha A K, Fathima Mehna of second year B.Sc. Biochemistry were the volunteers. They participated in various activities conducted by NSS which includes seven day camp from 24st December to 30th December 2025. Various seminar sessions, soil analysis, Gandhi Jayanthi celebrations which include tree plantation and essay writing competition, old-age day celebration, seminars on gender equality and traffic awareness, AIDS awareness session, environmental awareness session, led assembling class, eye camp etc..

