

CENTRE FOR MOLECULAR BIOLOGY



Welcome to Centre for Molecular Biology

The Centre for Molecular Biology (CMB) aims at carrying out research in the basic as well as applied biological sciences and use this knowledge to advance our understanding of the biological world and help to improve human health. Our mission is to create a highly competitive research and teaching environment that will help the students as well the faculty members to excel in this field of biological science. The teaching fraternity of this centre is committed collectively and individually in achieving the above goals and to maintain the highest standard of teaching and research. The objectives of the Centre are to conduct high quality basic research and training in frontier areas of modern biology, and promote centralized facilities for new and modern techniques in the inter-disciplinary areas of biology.





Introduction

- Welcome to the Centre for Molecular Biology (CMB), Jammu.
- We are excited to present an opportunity for students who have recently cracked the GAT B exam to take admission at our prestigious institution.
- In this brochure, we will explore the key features, benefits, and reasons why you should choose CMB for your higher education in molecular biology.

About CMB

- CMB is a renowned institute committed to excellence in molecular biology education, research, and innovation.
- Our state-of-the-art facilities, cutting-edge research, and experienced faculty members make CMB an ideal place for budding scientists to thrive.
- Our goal is to provide you with a strong foundation in molecular biology and equip you with the skills necessary to make groundbreaking contributions to the field.


Programs Offered

- CMB offers DBT Govt. of India supported M.Sc. Biotechnology and Ph.D. program in Biotechnology.
- Our curriculum is designed to provide a holistic learning experience, integrating theory, practical sessions, and research projects.
- We also offer opportunities for specialized training and internships with leading research institutions and industries.

Faculty and Research

- At CMB, you will have the privilege of learning from a distinguished faculty with expertise in various areas of molecular biology.
- Our faculty members are actively involved in cutting-edge research and have made significant contributions to the field.
- As a student, you will have the opportunity to collaborate with them, participate in research projects, and gain valuable hands-on experience.

Infrastructure

- CMB boasts state-of-the-art infrastructure, including well-equipped laboratories, advanced research facilities, and a comprehensive library.
 - Our laboratories are equipped with the latest technologies and instruments necessary for molecular biology research.
 - The library houses a vast collection of scientific literature, journals, and online resources, enabling you to stay at the forefront of knowledge in the field.
- 



Career Opportunities

- A degree from CMB opens up a world of exciting career opportunities in molecular biology. With the increasing demand for molecular biologists in academia, healthcare, pharmaceuticals, and biotechnology industries, your skills will be highly sought after.
- We have a strong network of industry collaborations and partnerships, providing you with excellent placement opportunities.

Research and Innovation

- CMB encourages a culture of research and innovation, where students are motivated to explore new frontiers and push the boundaries of scientific knowledge.
- Our institution supports and nurtures groundbreaking research projects, providing funding and resources to passionate students. You will have the opportunity to publish research papers, present at conferences, and contribute to the scientific community.

CMB Community

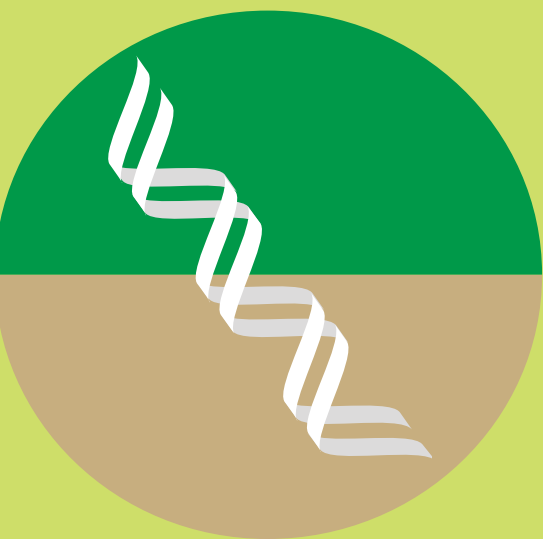
- Joining CMB means becoming part of a vibrant and supportive community of like-minded individuals who share your passion for molecular biology.
- Engage in stimulating discussions, collaborate on research projects, and forge lifelong connections with fellow students and faculty members. Our alumni network is extensive and offers mentorship, career guidance, and networking opportunities.

Conclusion

- As you embark on your journey in the world of molecular biology, the Centre for Molecular Biology, Jammu, stands as your gateway to excellence.
- We invite you to join us in this exciting adventure, where you will gain knowledge, expertise, and experiences that will shape your future. Do not miss this opportunity to be a part of CMB and make your mark in the field of molecular biology.

Mission

- Create a highly competitive research and teaching environment. Conduct basic as well as advance research and training in frontier areas of modern biology.
- Impetus to generate a workforce that could turn into a substantially trained pool to meet the population demands.



Faculty Profile



**Prof. Mushtaq
Ahmed**

Designation

Professor

Qualification

Ph.D

Research Interest

Molecular Biology, Bioinformatics,
Environmental, Microbiology, Bio control
agents & Sustainable Agriculture

Areas of Teaching

Microbiology, Environmental microbiology,
Bioinformatics

Publication

40

Experience

20+ years



**Dr. Narendra
Kumar Bairwa**

Designation

Associate Professor

Qualification

M. Sc., Ph. D., Postdoc.

Research Interest

Marine Biotechnology, Life Sciences,
Cancer Genetics, Yeast Genetics

Areas of Teaching

Microbiology, Genetic engineering &
Application, Recombinant DNA
technologies, Synthetic Biology
and Bioinformatics

Publication

30

Experience

20+ years

Faculty Profile



**Prof. Praveen
Kumar Mehta**

Designation

Associate Professor

Qualification

M. Sc., Ph. D., Postdoc.

Research Interest

Microbial enzyme technology, Bioprocess technology, Microbial Biotechnology, Nanobiotechnology,

Areas of Teaching

Enzyme Technology, Biochemistry, Protein Engineering, Fermentation technology, Omics, Nanobiotechnology

Publication

39

Experience

11 years



Dr. Audesh Bhat

Designation

Assistant Professor

Qualification

Ph.D., Postdoc

Research Interest

Genetics, Cancer biology

Areas of Teaching

Molecular and cell Biology, Genetics, Genetic engineering

Publication

45

Experience

20+ years

Faculty Profile



Dr. Shelly Sehgal	Designation	Assistant Professor
	Qualification	Ph.D., Postdoc
	Research Interest	Precision medicine, Oncology Virology
	Areas of Teaching	Medical Biotechnology, Biochemistry, Plant and Animal Biotechnology, Food Biotechnology
	Publication	23
	Experience	10



Dr. Sudhir Singh	Designation	Assistant Professor
	Qualification	M. Sc., Ph.D
	Research Interest	Molecular Microbiology
	Areas of Teaching	Biochemistry and Genetic Engineering
	Publication	11
	Experience	One year

Faculty Profile



Ms. Fareeda Akhter

Designation

Assistant Professor

Qualification

M. Sc

Research Interest

Plant stress physiology and green nanosynthesis

Areas of Teaching

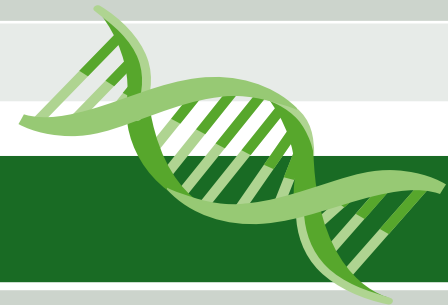
Environmental Microbiology, Developmental biology, Nanobiotechnology

Publication

7

Experience

4 months



Supporting Staff



Designation

LDC

Contact number

60067551318

Mrs. Seema Devi



Designation

Technical Assistant

Contact number

84920090075

Mr. Amit Sharma



Designation

Attendant

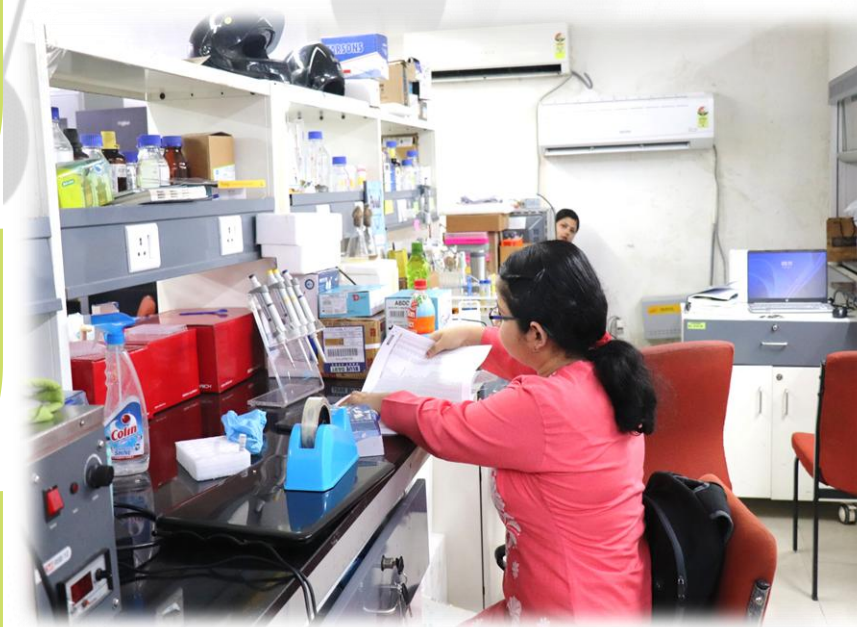
Contact number







7051760746

Ms Anjana Kumari







S. No.	Name	Research Field	Supervisor Name
1	Nabendu Debnath 	Probiotics and Metabolites	Dr. Ashok Kumar Yadav
2	Shivangi 	Virology (Hepatitis)	Dr. Shelly Sehgal
3	Jyotsna Kiran Peter 	Industrial Metabolites and Enzymes	Dr. Praveen Kumar Mehta
4	Kavinay 	Human genetics (Hypertension)	Dr. Audesh Bhat
5	Divya Sharma 	Secondary Metabolites (Trichoderma)	Prof. Mushtaq Ahmed
6	Sonali Bhan 	Molecular Genetics (Male Infertility)	Dr. Audesh Bhat

7

Pooja Yadav



Probiotics (Extracellular Vesicles)

Dr. Ashok Kumar Yadav

8

Manish Kumar Mishra



Head & Neck Cancer (lncRNAs)

Dr. Shelly Sehgal

9

Arun Kumar



Prebiotics (Biopolymers)

Dr. Praveen Kumar Mehta

Mansi Rajput



Type 2 diabetes (Genomic landscape)

Dr. Shelly Sehgal

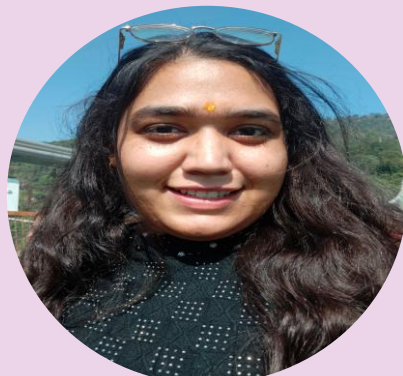
Shreya Mangotra



Thyroid Cancer and Biology

Dr. Shelly Sehgal

Preeti Rani



Head & Neck Cancer

Dr. Shelly Sehgal

Number of research projects per teacher funded by government and non-government agencies during the last five years

Name of the Funding agency	Year of Award	Funds provided (INR in lakhs)	Duration of the project
UGC	2017	10	2 years
UGC	2017	10	2 years
SERB	2017	37.65	3 years
SERB	2017	48.65	3 years
SERB	2018	46.56	3 years
ICMR	2019	950	5 years
ICMR	2021	35	3 years
DBT	2022	180	5 years

Number of workshops/seminars conducted on entrepreneurship; skill development year wise during the last five years

Year	Name of the workshop/ seminar	Number of Participants	Date From - To	Link to the Activity report on the website
2018	National Science day	135	28-Feb-18	Welcome to Central University of Jammu (cujammu.ac.in)
2018	World Health Day-2018	89	09-Apr-18	https://drive.google.com/file/d/1IBSN7ylbqRMpnqeiOEmu7V9Aya8LxP3L/view?usp=sharing
2021	National Science day	150	28-Feb-21	https://drive.google.com/file/d/1kb5zXHHatiw8HHuFMv2xulBLFakmInp9/view
2021	Awareness camp on Polycystic ovarian syndrome	140	11-Dec-21	https://drive.google.com/file/d/1vu_1F97DSJYf8eAR6UKNFh1coRSoJF8B/view?
2022	One week capacity building program	230	13 to19 feb 2022	https://drive.google.com/file/d/1y_3-4XkUUFIAh58_VWByLVJBfKX40RVj/view?usp=sharing
2021	JKDST webinar on Women	97	10-Feb-21	https://drive.google.com/file/d/1DqGh9_Wr6ksRmJhLg0Y_mIH2srnj1JL-/view?usp=sharing

Events and activities held in Centre for Molecular Biology

ADVISORY COMMITTEE

- Prof. H.B. Singh, Former Professor, Institute of Agri. Sciences, BHU, Varanasi
- Prof. Manoj K Dhar, Former Vice Chancellor University of Jammu
- Prof. Arvind Kumar Bhat, Dept. of Biotechnology, HPU, Shimla
- Prof. R. K. Salgotra, Head, Dept. of Biotechnology, SKUAST Jammu
- Prof. Kanti Prakash Sharma, Head, Nutrition Biology, Central University of Haryana
- Prof. Tabreiz Ahmed Khan, Faculty of life Sciences, AMU, Aligarh
- Dr. Hemalatha R., ICMR-NIN Hyderabad
- Dr. Ashok K. Mohanty, ICAR-IVRI, Mukteswar Campus, Nainital
- Dr. Yusuf Akhtar, Dept of Biotechnology, BBAU, Lucknow
- Dr. Subhankar Chatterjee, School of Life Sciences, University of Pondicherry

ORGANIZING COMMITTEE

Chief Patron

Prof. Sanjeev Jain, Vice-Chancellor

Patron

Prof. B.S. Bhau, Dean, School of Life Sciences

Convener

Prof. Mushtaq Ahmed, Director, Centre for Molecular Biology

**Co-Convener cum Organizing Secretary
Dr. Shelly Sehgal**

Organizing Secretaries

**Dr. Ashok Yadav, Dr. Parveen Mehta,
Dr. Audesh Bhat, Dr. Anjali Dhar**

**Organizing Team
Scholars (CMB)**

ABOUT CENTRAL UNIVERSITY OF JAMMU

Established under the Central Universities Act, 2009 (Act No.25 of 2009) read with the Central Universities (Amendment) Act, 2009 (Act No.38 of 2009), the Central University of Jammu came into existence on 8th August 2011 with the appointment of its first Vice-Chancellor. Presently the University is offering various Integrated UG-PG, PG and Ph.D. programs in Sciences, Social Sciences and Humanities. The campus of Central University of Jammu is located at Rahya-Suchani in District Samba, which is at an approximate distance of 25 Km from Jammu city.

ABOUT THE CENTRE FOR MOLECULAR BIOLOGY

The Centre for Molecular Biology (CMB) was established in 2016 under the School of Life Sciences. The Centre is running PG and Ph.D programmes in Biotechnology. M.Sc Biotechnology programme offered by the Centre is supported by the Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India. Since its inception in 2016 to till date the Centre has mobilized ~5.00 crores as extramural funding from different funding agencies including DBT/ICMR/SERB/UGC and has established well equipped research labs. The Centre is determined to carry out cutting edge research and teaching and emerge as a Centre of Excellence in the frontier areas of Genetic Engineering, Microbiology, Molecular Biology, and Bioinformatics.

HOW TO REACH

Central University of Jammu is located at Rahya-Suchani in District Samba about 25 Km Jammu City.

Nearest Railway Station : **Jammu Tawi**

Nearest Bus Stand : **Jammu Bus Stand**

Nearest Airport : **Jammu Airport**

CONTACT:

9729096672, 9797673255

National Conference on Emerging Trends in Genetic Engineering & Molecular Biology [ETGMB - 2022]

28th - 29th September, 2022



Organized by:

Centre for Molecular Biology
Central University of Jammu
(J & K)

In Collaboration with



J & K Science, Technology and
Innovation Council
Department of Science and Technology



National Conference on Emerging Trends in Genetic Engineering and Molecular Biology



**Indian Council of Medical Research - Centre for Advanced Research Central University of Jammu
Awareness Camp on Polycystic ovarian syndrome (PCOS) and Amenorrhoea.**

In Collaboration with ICMR-CAR SoBT SMVDU Katra, University of Jammu, University of Kashmir, Department of Obstetrics and Gynecology GMC Kathua and SMGS hospital Jammu.



Polycystic Ovarian Syndrome

PCOS SYMPTOMS

Androgen excess symptoms

Hirsutism Acne Baldness

Acanthosis nigricans

Thick pigmented skin over nape of neck, inner thigh & axilla due to insulin resistance

Next time when you see a fat young girl, don't criticize! Because she might be in need of medical help!!!

Is she gaining weight rapidly?

Is she troubled by facial hair, acne and irregular menstrual periods?

If she is married, why can't she become pregnant?

She may be a victim of **PCOS!!!!**

Let's understand this way...

Long term risks

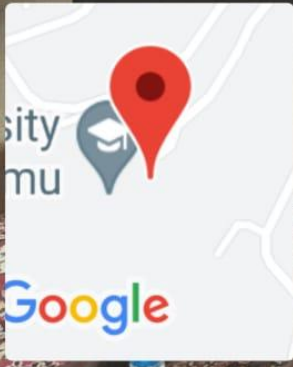
- Diabetes
- Heart diseases
- Hypertension
- Dyslipidemia
- Endometrial cancer
- Breast cancer
- Recurrent pregnancy loss
- Ovarian failure after surgery

God couldn't be everywhere
So He created women!

IN THE FIGHT TO WIN AGAINST PCOS

We acknowledge the Indian Council of Medical Research (ICMR) SoBT SMVDU Katra for financial support.
For any Queries Please Contact: 9419279629 and 9463131925

Awareness Camp sponsored by ICMR



Central university of Jammu, Molecular Biology
Bagla Suchani, J2M7+P5P, 181143
Lat 32.634553°
Long 75.013494°
14/02/23 02:32 PM GMT +05:30

Conference on Emerging Trends in Genetics Engineering and Molecular Biology [ETGMB-2022]



Workshop on Reproductive Wellness- 2023

Centre for Molecular Biology offers

1. DBT Govt. of India supported M.Sc Biotechnology

2. Ph.D program in Biotechnology



First Batch M. Sc. Batch (2020-2022) Industrial Visit-2021, CMB



Second M. Sc. Batch (2021-2023) IIIM Institute Visit-2022, CMB



Third M. Sc. Batch 2022-2024) students



Fourth M. Sc. Batch (2023-2025) students



CMB Students visit to IIM



CMB Students visit to Jammu University





First Batch M. Sc. Industrial Visit-2021, CMB



CMB students 3 days Educational visit to CSIR – IHBT Palampur

CUJ students 3-days Educational visit to CSIR-IHBT Palampur

HIMALAYAN MAIL NEWS
JAMMU, NOV 18

In a commendable initiative to provide experiential learning beyond the classroom, 53 students from the Centre for Molecular Biology at the Central University of Jammu, including M.Sc. Biotechnology students and Ph.D. research scholars, embarked on a 3 days educational trip to the CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT) in Palampur, Himachal Pradesh. The students were accompanied by faculty members, Dr. Shelly Sehgal and Dr. Swarkar Sharma, on this journey that combined academic learning, interactions beyond classrooms, fun activities with practical exposure to advanced research environments.

Upon their arrival at CSIR-IHBT, the students were introduced to cutting-edge laboratory facilities and advanced instrumentation. The institute, renowned for its research in Himalayan bioresources, provided them access to state-of-the-art labs, where students gained first-hand knowledge of sophisticated equipment and were briefed on the current research in biotechnology, molecular biology, and bioresource utilization. This interaction provided students with an understanding of the technical intricacies involved in biotechnological research



and offered them an invaluable opportunity to witness professional research methodologies. Throughout the visit, students interacted closely with IHBT faculty and research students, discussing ongoing projects, recent advancements in the field, and career possibilities in biotechnology. These exchanges provided the students with insights into research topics they might wish to explore in their own academic pursuits. Dr. Narendra Bairwa, Head of the Department at Central University of Jammu, lauded this interaction, stating, "Such engagements enable our students to broaden their perspectives, allowing them to see how theoretical concepts are applied practically and fostering a sense of curiosity and innovation in their minds."

In addition to their time at IHBT, the students explored the renowned tea gardens of Kangra, where they explored and discussed extensively the process of tea production,

As part of their itinerary, the group also visited Sourabh Van Vihar, a lush eco-park in Palampur, where they observed diverse species of flora and fauna, enriching their understanding of biodiversity and ecological conservation. This experience allowed them to appreciate the interconnectedness of biological ecosystems and the importance of preserving them in the face of increasing environmental challenges.

A visit to the Kangra tea factory outlet on the way back, provided students with insights into the economic impact of tea cultivation in the Himalayan region. This part of the tour emphasized the socio-economic value of biodiversity and demonstrated how traditional industries like tea production can contribute significantly to the economy. "It is crucial for students to understand that biotechnology is not only about research but also about how it can impact local economies and biodiversity, and students can

develop technologies to be converted in Startups" emphasized Dr. Swarkar Sharma, one of the faculty accompanying the students, who is also one of the Director of CUJ Startup Incubation and Technology Enablement Council, a section 8 company established at Central University of Jammu.

Central University of Jammu fully supported this educational tour, reinforcing its commitment to offering students diverse learning experiences. The Vice-Chancellor, Prof. Sanjeev Jain, expressed his pride in the initiative, stating, "Field trips like this are essential in equipping our students with practical knowledge and skills. They foster a deeper understanding of their academic subjects and prepare them to become future leaders in research and innovation."

Overall, the trip proved to be a significant learning experience for the students, blending theory with practice and deepening their appreciation of the natural and scientific world around





Workshop lecture for M. Sc. Biotechnology placement by Placement Cell Central University of Jammu



Hon'ble Vice Chancellor Sir appreciating Faculty members of CMB



E-NEWSLETTER DECEMBER EDITION

BIOTECH GAZETTE

WORLD AIDS DAY DECEMBER 1

Take the right path: My health, my right!

HISTORY

World AIDS Day, observed annually on December 1st, was established in 1988 by the World Health Organization to raise awareness about the HIV/AIDS epidemic, reduce stigma and honour those lost to AIDS. Initiated by James W. Bunn and Thomas Netter, it later became a part of UNAIDS in 1996.

	People living with HIV	People acquiring HIV	People dying from HIV-related causes
Total	39.9 million (36.1-44.6 million)	1.3 million (1.0-1.7 million)	630 000 (500 000-820 000)
Adults (15+ years)	38.6 million (34.9-43.1 million)	1.3 million (950 000-1.5 million)	560 000 (430 000-730 000)
Women (15+ years)	20.5 million (18.3-22.8 million)	530 000 (400 000-650 000)	240 000 (180 000-320 000)
Men (15+ years)	18.1 million (16.2-20.3 million)	600 000 (540 000-640 000)	320 000 (250 000-400 000)
Children (<15 years)	1.4 million (1.1-1.7 million)	120 000 (83 000-170 000)	70 000 (53 000-110 000)

PREVENTION

- Practice safe intercourse.
- Regularly get tested and treated for STDs.
- Maintain a single sexual partner.
- Avoid unhygienic practices like sharing needles.
- Get tested for HIV.
- Use HIV prevention medicines like pre- and post-exposure prophylaxis.

HIV CURE CASE, 2024

At the 25th International AIDS Conference (AIDS 2024) in Munich, Germany, a new case of long-term HIV remission was reported, sparking renewed hope for an HIV cure.

The patient, a 60-year-old German man living with HIV, underwent a stem cell transplant in 2015 to treat acute myeloid leukemia. The donor carried a single CCR5-delta 32 genetic mutation, which partially protects against HIV infection. The patient stopped antiretroviral therapy in 2018, and since then, no HIV has been detected in his body.

Using donors with a single CCR5 mutation could also expand the feasibility of this approach, as this mutation is more common than the double mutation.

Although this treatment method is risky and currently limited to those requiring transplants for other serious conditions, it highlights the potential for advancements in gene-editing techniques and alternative strategies to achieve long-term HIV remission.

BIOTECH GAZETTE 2025 Edition

'बुद्धिनिन शुध्येहती' (Knowledge refines, the mind), Central University of Jammu academic excellence. Embracing NEP 2020, quality teaching, impactful research, and commitment to bridge the student-institution gap. Jammu empowers students with knowledge, critical thinkers, ethical leaders, and contributing to a brighter future for India.

Prof. (Dr.) Sanjeev Jain
Hon'ble Vice Chancellor

It is a privilege to have Prof. Sanjeev Jain at the helm of our institution. Under his leadership, we have witnessed remarkable growth and progress in both academic and research domains. His unwavering dedication to fostering a culture of innovation and excellence has significantly enriched our community. The Hon'ble Vice-Chancellor's visionary leadership and young minds and promoting collaborative endeavors has set a high standard for us to aspire.

We recognize the exceptional leadership of our Vice-Chancellor, Dr Narendra K Bairwa. His academic excellence and unwavering commitment to the institution have been truly inspiring. Through his leadership and collaborative spirit, he has fostered an environment that encourages growth and innovation.

Dr Narendra K Bairwa
Director CMB

MENTORS

Dr. Praveen Kumar Mehta
(Associate Professor)

Dr. Aadesh Bhat
(Assistant Professor)

Dr. Shelly Sehgal
(Assistant Professor)

Dr. Sudhir Singh
(Assistant Professor)

Dr. Fareeda Akh
(Assistant Professor)

We are deeply grateful for the invaluable guidance and unwavering support provided by our esteemed faculty mentors. Their commitment to sharing knowledge, offering encouragement, and inspiring the next generation has left an indelible mark on our community.

Monthly E-Newsletter run by M Sc. Students of the Centre for Molecular Biology



Freshers Party



Teachers Day Celebration

Centre for Molecular Biology



CMB Students Participation in Sport meet 2025



Thanks