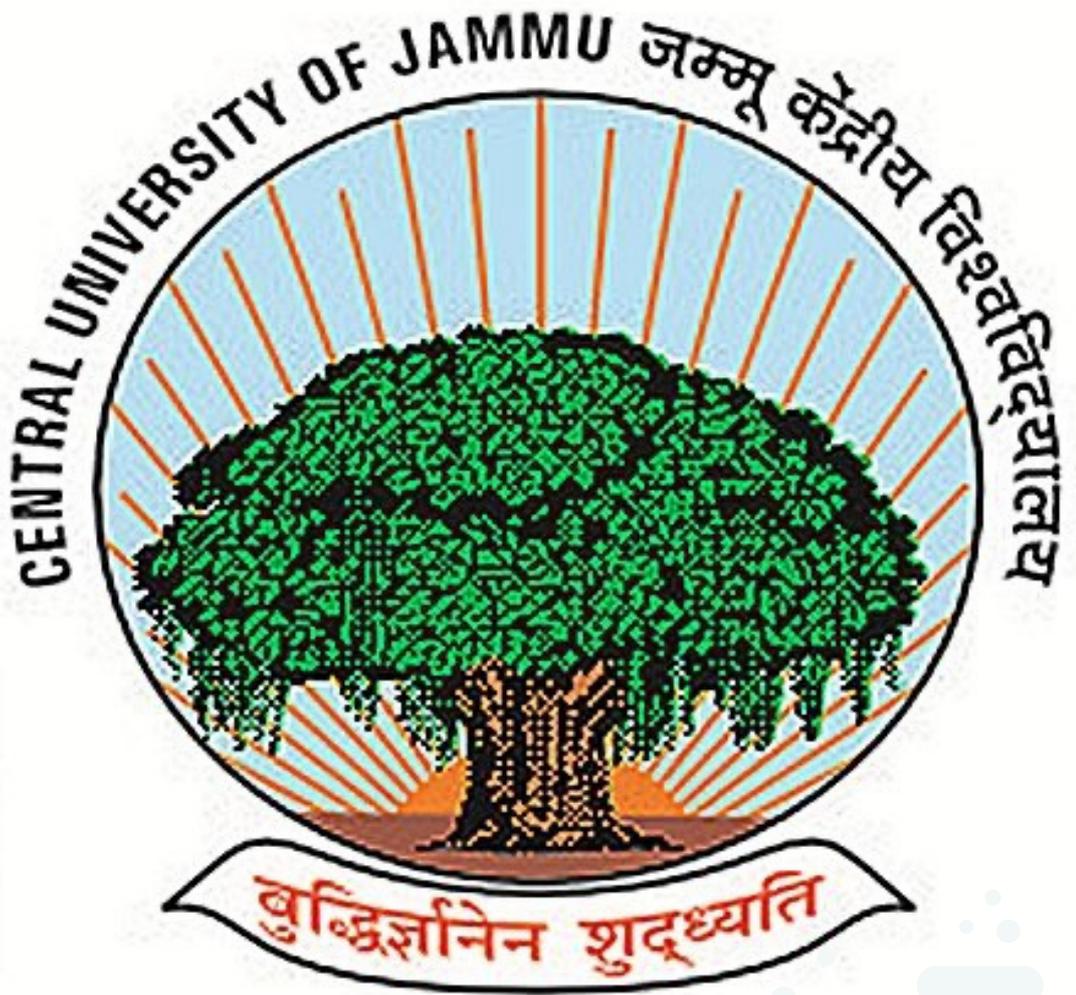


By Students of CMB (Centre for Molecular Biology)

MONTHLY MAGAZINE 2025 EDITION



POWERED BY CUROSITY,
DRIVEN BY STUDENTS



BIOTECH GAZETTE

September 2025 Edition

An Initiative by the students of Centre for Molecular Biology

Guided by the motto 'बुद्धिर्जननं शुद्ध्यति' (**Knowledge refines, purifies, and sharpens the mind**), Central University of Jammu celebrates a decade of academic excellence. Embracing NEP 2020, we prioritize high-quality teaching, impactful research, and community engagement to bridge the student-institution gap. Central University of Jammu empowers students with knowledge and skills to become critical thinkers, ethical leaders, and responsible citizens, contributing to a brighter future for India.



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

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

We are delighted to recognize the exceptional leadership of our esteemed Head of Department, Dr Narendra K Bairwa. His dedication to academic excellence and unwavering commitment to advancing our field have been truly inspiring. Through his innovative approaches and collaborative spirit, he has fostered a vibrant learning environment that encourages growth and discovery.



Dr Narendra K Bairwa
Director CMB

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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.

• Abhishek Kumar Verma



• Karanjot Singh



• Aditri Dixit



• Kumari Satya



• Amrita Banerjee



• Mithun Kumar



• Anjali Mishra



• Ruchika Sharma



• Ankita



• Saakkshi Sharma



• Anshula Pal



• Sanskriti Jain



• Anushka Dobhal



• Siya Sharma



• Chesta Madan



• Smriti Sharma



• Isha Sharma



• Vidhi Sharma



“Goodbyes are not the end; they simply mean we’ll carry a part of you with us wherever we go.”

We would like to express our heartfelt gratitude to our dear seniors and former members of Biotech Gazette, who have always worked wonderfully with us. You trusted us with important responsibilities and always placed us before everything else. Your guidance, support, and professionalism have truly shaped us for the better. Because of you, we learned the real meaning of teamwork, discipline, and dedication. Now, we feel proud to carry this forward by building a new, strong team with our juniors. Your legacy will always continue to inspire us.

• Amrita Banerjee



• Mithun Kumar



• Anjali Mishra



• Prachi Sharma



• Anshula Pal



• Sanjukta Ray



• Fathimi N



• Sanskriti Jain



• Isha Sharma



• Shaweta Barkulia



• Karanjot Singh



• Shibani Das



• Kumari Satya



• Vidhi Sharma



• Maira Sajawal Sharma



“Every new beginning brings new energy, new ideas, and new opportunities together, let’s make this the start of something great.”To our new team, we are excited to begin this journey with you. Together, we hope to build a space filled with teamwork, creativity, and mutual respect. Each one of you brings something unique, and that makes our team stronger. Let’s support each other, learn from one another, and set examples just like our seniors did for us. Here’s to new beginnings, new responsibilities, and a successful year ahead!

World Physical Therapy Day

8th sept



HEALTHY AGEING: PREVENTING FRAILTY AND FALLS



WHY THIS YEAR'S THEME MATTER?

By 2050, the world will have about 2.1 billion people aged 60 and above, and the number of people over 80 will triple to nearly 426 million. As we age, problems like frailty, weak muscles and a higher risk of falls become more common. Falls are a major cause of injury and loss of independence among older adults. Physiotherapists play a key role in addressing these issues. Through strength training, balance exercises and mobility programs, they help older people stay strong, active and confident. "Age is inevitable. Frailty is not."

GLOBAL AND INDIAN PERSPECTIVE

- Across the world, physiotherapy helps prevent falls and supports healthy ageing.
- In India, there are over 142 million people aged 60 and above. Cases of joint pain, fractures and mobility loss are increasing.
- A study found that among Indian seniors who fall, about 66% suffer injuries, 34% have lower limb injuries and 12% experience fractures.

HOW PHYSIOTHERAPY HELPS?

Prevention: Regular exercises that improve balance and strength help reduce the risk of falls. In Chandigarh, 31% of seniors reported one or more falls in a year, often during daily activities like bathing or walking.

Healing and Recovery: After fractures, surgeries or strokes, physiotherapy helps patients regain movement, reduce hospital stays and rebuild independence.

Innovation: The use of online exercise programs, modern therapy equipment and community fitness groups has greatly improved the quality of life for older adults.

CALL TO ACTION

- Students: Spread awareness through posters, talks or social media using #MoveForLife.
 - Families: Encourage elders to stay active. Even short walks or simple chair exercises can help.
 - Policy Makers: Include physiotherapy in public health and ageing programs to support independent living.
- World Physical Therapy Day reminds us that movement is medicine. Staying active helps us age with dignity, strength and confidence. "We cannot stop ageing, but we can stop it from stopping us."

"Physiotherapists don't just add strength to muscles ,they add strength to lives."



World Suicide Prevention Day 2025

10 September



“Suicide prevention is a shared commitment that unites us across borders, cultures, and communities. As we continue our journey to change the narrative on suicide, let us ensure our message of hope and understanding reaches everyone – in every corner of the world,”
-Professor Jo Robinson, IASP President.

Theme For 2025

- Every year, people around the world come together on 10 September to mark World Suicide Prevention Day (WSPD). The theme for 2025, Changing the Narrative on Suicide, encourages us to challenge myths, break stigma, and talk openly about suicide with empathy and understanding.
- Changing the narrative means replacing silence with support. It calls for communities, organisations, and governments to prioritise mental health and take action to make help more accessible for everyone in need

How we can help

- The WHO’s LIVE LIFE approach suggests four key steps:
 - 1. Limit access to means such as pesticides and firearms.
 - 2. Promote responsible media reporting.
 - 3. Build coping skills among young people.
- Reach out early to those who may be struggling

Who is at risk

- Over 720,000 people die by suicide each year.
- Suicide is the third leading cause of death among people aged 15 to 29.
- 73% of suicides occur in low- and middle-income countries.
- Causes are complex and linked to social, emotional, and environmental factors.
- For every suicide, many more people attempt it, showing the urgent need for prevention.

Why it matters

- Suicide is rarely caused by a single event. Common triggers include:
 - Financial or relationship stress
 - Substance use
 - Legal or criminal problems
 - Previous suicide attempts
- People facing discrimination, isolation, or conflict including refugees, migrants, Indigenous peoples, LGBTQ+ individuals, and prisoners are at higher risk.

Everyone has a role

- Individuals: Check in with loved ones, stay informed, share your story, and support mental health awareness.
- Communities: Host events, share resources, and create safe spaces for open talk.
- Organisations: Train staff, build supportive workplaces, and include mental health in CSR.

Suicide is preventable. Together, we can build understanding, compassion, and connection , so no one feels alone or afraid to ask for help.

Let’s change the narrative. Let’s save lives.



WORLD FIRST AID DAY

Theme: "First Aid and Climate Change"

September 13

A Day That Saves Lives

Every year on the second Saturday of September, people around the world come together to celebrate World First Aid Day. In 2025, the message is clear: first aid begins at home. When families learn how to handle everyday accidents and medical emergencies, we build safer and stronger communities.

Skills Everyone Should Know

Essential first aid skills everyone should know include Cardiopulmonary Resuscitation (CPR), how to control bleeding and treat wounds, and what to do for common emergencies like burns, fractures, and choking. It's also vital to recognize early signs of life-threatening events such as a stroke or heart attack, and to know ways to comfort someone experiencing anxiety or panic.

How It All Began

World First Aid Day was introduced in 2000 by the International Federation of Red Cross and Red Crescent Societies (IFRC). The goal was simple and powerful: to make life-saving knowledge available to everyone. Since then, it has grown into a global movement that reminds us that emergencies can happen anywhere, and being prepared can make all the difference.

What's New in 2025

The new element for 2025 was the theme: "First Aid and Climate Change." This theme highlighted a push for communities to become more resilient to the increasing number and intensity of climate-related disasters

Why It Matters

Knowing basic first aid is crucial because it goes beyond simple techniques, empowering individuals to act confidently during emergencies. Quick and informed action can effectively prevent injuries from worsening, shorten recovery times, and ultimately save lives before professional help arrives. Experts agree that equipping more people with these skills could significantly reduce the number of avoidable deaths from accidents or sudden illnesses.

"You don't have to be a doctor to save a life. You just need to know what to do."





INTERNATIONAL DAY OF SIGN LANGUAGE

23 SEPTEMBER



Theme For 2025 : "No Human Rights Without Sign Language Rights."

For Deaf people, the fundamental right to sign language is essential for fully enjoying all human rights from birth. Achieving true equality means continuing to work toward a world where sign language rights are universally protected, promoted, and respected.

What is Sign Language?

- A visual language that speaks through hands, facial expressions, and body movements instead of voice.
- It allows millions of deaf and hard-of-hearing people to communicate, learn, and belong.
- It's not just about words – it's about breaking silence and building bridges between people.

So, in simple words: Sign language is the voice you can see, the sound you can feel, and the language that proves communication is more than just spoken words.



Importance

The International Day of Sign Languages is crucial because it protects the human rights of over 70 million deaf people, ensuring their equal access to communication, education, and jobs. It actively promotes inclusion by breaking down barriers between deaf and hearing communities. The day also raises awareness that sign languages are complete, natural languages, not just gestures, thereby celebrating the richness of human diversity.

Who Declared the International Day of Sign Languages?

The United Nations General Assembly (UNGA) officially declared the International Day of Sign Languages in 2017. This declaration, which recognizes sign languages as equal to spoken languages and vital for the human rights of deaf people, was strongly supported by the World Federation of the Deaf (WFD). The world first celebrated this day on September 23rd in 2018.

WHO Data

Over 5% of world's population (430 million) require rehabilitation

By 2050, 2.5 billion projected to have hearing loss.

WHAT CAN WE DO?

-  LEARN THE BASICS
-  BE PATIENT AND OPEN
-  SUPPORT ACCESSIBILITY
-  RESPECT SIGN LANGUAGES

CREATE A WORLD WHERE NO ONE LEFT OUT OF A CONVERSATION.

"Let us build the bridge to a truly audible world, together"

Theme: Think Health, Think Pharmacist

The 2025 theme, Think Health, Think Pharmacist, highlights the essential role pharmacists play not just in dispensing medicines but as trusted healthcare professionals who improve patient outcomes and strengthen healthcare systems



World Pharmacists Day is observed every year on 25 September to honour the vital contribution of pharmacists to global health. The day marks the anniversary of the International Pharmaceutical Federation (FIP), founded in 1912, and has been celebrated worldwide since 2009. Pharmacists are often the most accessible health professionals in communities. They go beyond providing medicines to offering counselling, vaccinations, chronic disease management, and promoting medication safety. This day is a reminder of their dedication, expertise, and commitment to public health

A Brief History

- World Pharmacists Day was established by the International Pharmaceutical Federation (FIP) to recognise the profession's vital role in healthcare. Headquartered in the Netherlands, FIP represents over 144 national organisations and millions of pharmacists worldwide. Its mission is to advance pharmacy practice, education, and science through innovation and global collaboration

Why Pharmacists Are Essential

- Most accessible healthcare professionals for patients.
- Experts in medication safety and error prevention.
- Educators who help patients use medicines correctly.
- Bridges between doctors and patients for better coordination of care.

Key contributors to public health through screening and health promotion

Key Roles of Pharmacists

- Ensure safe and effective use of medicines.
- Provide health advice and patient education to improve adherence.
- Support public health programs, including immunisations and health screenings.
- Engage in research, pharmacovigilance, and development of new medicines.
- Promote the responsible use of antibiotics and advocate for health policy improvements.

The COVID-19 pandemic further demonstrated how pharmacists play a frontline role in addressing global health emergencies and ensuring continued access to essential medicines.

Pharmacists are at the heart of every healthcare system. Their knowledge, compassion, and professionalism ensure that medicines are used safely and effectively. On this World Pharmacists Day, let's celebrate their contribution and recognise them as true partners in promoting health and well-being for all.



WORLD CONTRACEPTION DAY

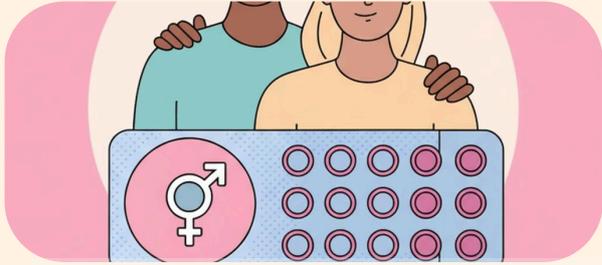
26 SEPTEMBER

"Healthy families are created by choice, not by chance."
-Dr. Nafis Sadik



IMPORTANCE

THEME FOR 2025:



Most of us only consider contraception to be a means of preventing pregnancy. However, this is a larger picture.

"A Choice for All" is the theme for 2025. "Freedom to Plan, Power to Choose" and emphasizes how important it is that everyone have equal access to safe, reliable birth control. Contraceptives can have a major impact on menstrual health, cycle regulation, pain relief, and even the treatment of conditions like PCOS, in addition to preventing unintended pregnancy.

Contraception isn't just about family planning, it's about life planning



Contraceptives are life saving and empowering, especially in crisis areas, by reducing the risks of pregnancy and childbirth and fostering personal autonomy for women through education and employment. Access to safe options and accurate information is crucial for informed reproductive choices, yet millions still face challenges leading to unwanted pregnancies. Contraceptives significantly improve maternal and child health, prevent unsafe abortions, and offer STI protection through barrier methods. Despite UNFPA's success in preventing millions of maternal deaths and unsafe abortions in 2024, declining global funding now jeopardizes these essential gains.

Contraception: Debunking Common Myths

Misinformation often surrounds contraceptives, but facts clarify their safety and efficacy.

- **Myth vs. Fact (Weight Gain):** The belief that hormonal birth control causes excessive weight gain is generally unfounded; a 2021 review found insufficient evidence to support this conclusion.
- **Myth vs. Fact (Fertility):** Birth control does not reduce long-term fertility. The effects of hormonal, copper IUDs, and barrier methods are reversible, with fertility typically returning to its prior level within 6 to 12 months of stopping hormonal methods.
- **Myth vs. Fact (IUDs):** An IUD cannot get lost inside your body; while rare, it can fall out or move, especially soon after insertion. Users can feel for the strings, but a healthcare professional should be contacted immediately if movement is suspected.
- **Myth vs. Fact (Missed Pills):** Do not simply double your next dose if you miss a birth control pill. Missing a dose reduces its effectiveness, and the next steps depend on the pill type and when the dose was missed, requiring specific instructions.

World Rabies Day

28 SEPTEMBER

THEME: ACT NOW: YOU, ME, COMMUNITY

The 2025 theme, Act Now: You, Me, Community, encourages everyone to take responsibility for rabies prevention.

- You: Get your pets vaccinated and learn what to do after a bite.
- Me: Be a role model by sharing knowledge and promoting awareness.
- Community: Work together to organise vaccination drives, improve access to treatment and strengthen disease tracking.

For the first time, the theme does not include the word “rabies,” showing that the focus has shifted from fear to action and shared responsibility.

A shot today can save a life tomorrow.

INDIA'S PROGRESS AND CHALLENGES



India has the world's highest rabies burden, with 18,000 to 20,000 deaths every year, nearly 36% of global cases. Around 9 million dog bites occur annually.

However, deaths have fallen by nearly 75% in the past decade thanks to vaccination campaigns and greater public awareness.

Projects like Mission Rabies, which has vaccinated more than 5 million dogs, and local programs that capture, sterilise and vaccinate stray animals, show the power of teamwork between communities, NGOs and government bodies.

- About 59,000 people die from rabies every year, and 95% of these deaths occur in Asia and Africa.
- Over 99% of human rabies cases are caused by dog bites.
- Children under 15 years are among the most affected, especially in rural and underserved areas.
- Rabies is still found in more than 150 countries, creating serious health and social challenges.

Rabies is 100% fatal, but it is also 100% preventable

GLOBAL EFFORTS AND GOALS

- Zero by 30: The goal to end human deaths from dog-transmitted rabies by 2030.
- Mass Dog Vaccination: Reaching 80% of dogs can stop the spread of the virus.
- Post-Exposure Treatment: Quick access to preventive treatment after a bite saves lives.
- Better Reporting: Stronger surveillance helps track progress and identify high-risk areas.

WHAT YOU CAN DO

- Vaccinate your pets and remind others to do the same.
- Teach children and neighbours about rabies prevention and wound care.
- Take part in vaccination drives and awareness events.
- Ask local authorities to ensure vaccines and treatment are available.



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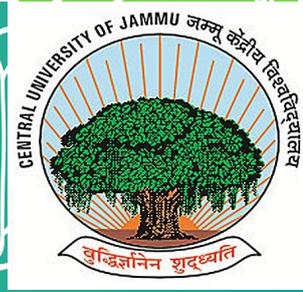
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