

BIOTECH GAZETTE

March 2025 Edition

An Initiative by the students of Centre for Molecular Biology

Guided by the motto '**बुद्धिर्ज्ञानेन शुद्ध्येहती**' (**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

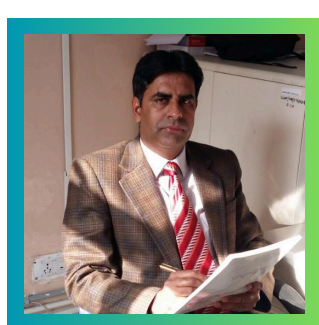
We are immensely proud to have Prof. Sanjeev Jain at the helm of our institution. Under his visionary leadership, we have witnessed remarkable growth and progress in both academic and research excellence. His unwavering dedication to fostering a culture of innovation and inclusivity has significantly 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 have fostered a vibrant learning environment that encourages growth and discovery.



Dr Narendra K Bairwa
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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

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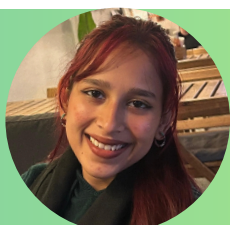
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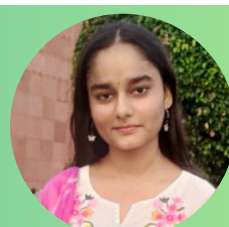
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We are incredibly proud of the outstanding work done by our dedicated editorial team, Genetic Guild. Their passion for excellence and commitment to delivering high-quality content have been instrumental in shaping our newsletter. Through their meticulous attention to detail and unwavering dedication, they have ensured that every issue is both informative and engaging for our readers.



National vaccination Day

16th March 2025

Shots of Protection, Steps to Progress—A Healthier India, No More Distress!



With a vision of 100% vaccine coverage, National Vaccination Day 2025 reinforced the message that vaccines save lives, protect communities, and pave the way for a healthier India.

As the country moves forward, the collective effort of the government, healthcare workers, and citizens will play a crucial role in ensuring a disease-free tomorrow.

Addressing the nation, Union Health Minister Mansukh Mandaviya stated, **“India has made tremendous strides in immunization, and our goal remains clear – to protect every individual from preventable diseases. Vaccination is not just a shot; it’s a shield for a healthier future.”**



This year’s theme, “Immunization for All: Reaching Every Citizen,” underscored the need to bridge vaccination gaps and ensure healthcare access for all sections of society. Major Highlights of National Vaccination Day 2025:-

- **Nationwide Mega Vaccination Drive:** The government organized free immunization camps across urban and rural areas, targeting newborns, children, pregnant women, and senior citizens for essential vaccinations, including polio, measles, rubella, HPV, and influenza.
- **Launch of the 'Vaccine Tracker Portal':** To promote digital healthcare, the Ministry of Health introduced a real-time vaccination tracking system to help individuals monitor their immunization status and upcoming vaccine schedules.
- **Recognition of Healthcare Heroes:** The government honored ASHA workers, nurses, and immunization officers for their relentless efforts in ensuring last-mile vaccine delivery, even in the remotest regions of India.
- **Student-Led Awareness Campaigns:** Schools and colleges across the country participated in poster-making competitions, debates, and street plays highlighting the importance of vaccines in preventing life-threatening diseases.
- **WHO and UNICEF Acknowledgment:** Global health organizations lauded India's Mission Indradhanush 2.0, emphasizing its role in eliminating vaccine-preventable diseases and setting a global benchmark for immunization programs.
- **Public Figures Join the Movement:** Celebrities, cricketers, and influencers took to social media, urging citizens to stay up-to-date with their vaccinations, making #VaccineForAll2025 a trending topic.

World Down Syndrome

Theme for 2025:

For World Down Syndrome Day 2025, we call on all Governments to Improve Our Support Systems.



World Down Syndrome Day is a globally recognized event observed annually on March 21st. This significant day aims to raise awareness about Down syndrome, promote inclusivity, and advocate for equal rights and opportunities for individuals with the condition.

Global Scenario

Globally, Down syndrome occurs in approximately 1 in every 1,000 to 1,100 newborns, making it one of the most common chromosomal disorders. Each year, an estimated 3,000 to 5,000 infants are born with this condition worldwide. In India, the prevalence is slightly higher, with nearly 1 in every 830 live births affected by Down syndrome. This genetic condition results from the presence of an extra copy of chromosome 21, leading to developmental delays, characteristic physical features, and potential health complications. Despite these challenges, early intervention, medical advancements, and inclusive support systems have significantly improved the quality of life for individuals with Down syndrome.

Need for world down syndrome day is to advocate for:

- **Equal Human Rights:** Ensuring that people with Down syndrome are treated with the same dignity and respect as everyone else, rather than being seen as different or lesser.
- **Fair Employment Opportunities:** Creating inclusive workplaces where individuals with Down syndrome are given the same chances to secure jobs and work alongside others, rather than being denied opportunities due to intellectual disabilities.
- **Autonomy and Decision-Making Freedom:** Empowering individuals with Down syndrome to make their own choices about their lives, rather than restricting their independence or making decisions on their behalf.

Down Syndrome is not a disease, it is a condition that requires understanding, early intervention, and continuous support. Here's how awareness and compassion can help those with Down Syndrome lead healthy, independent, and fulfilling life.



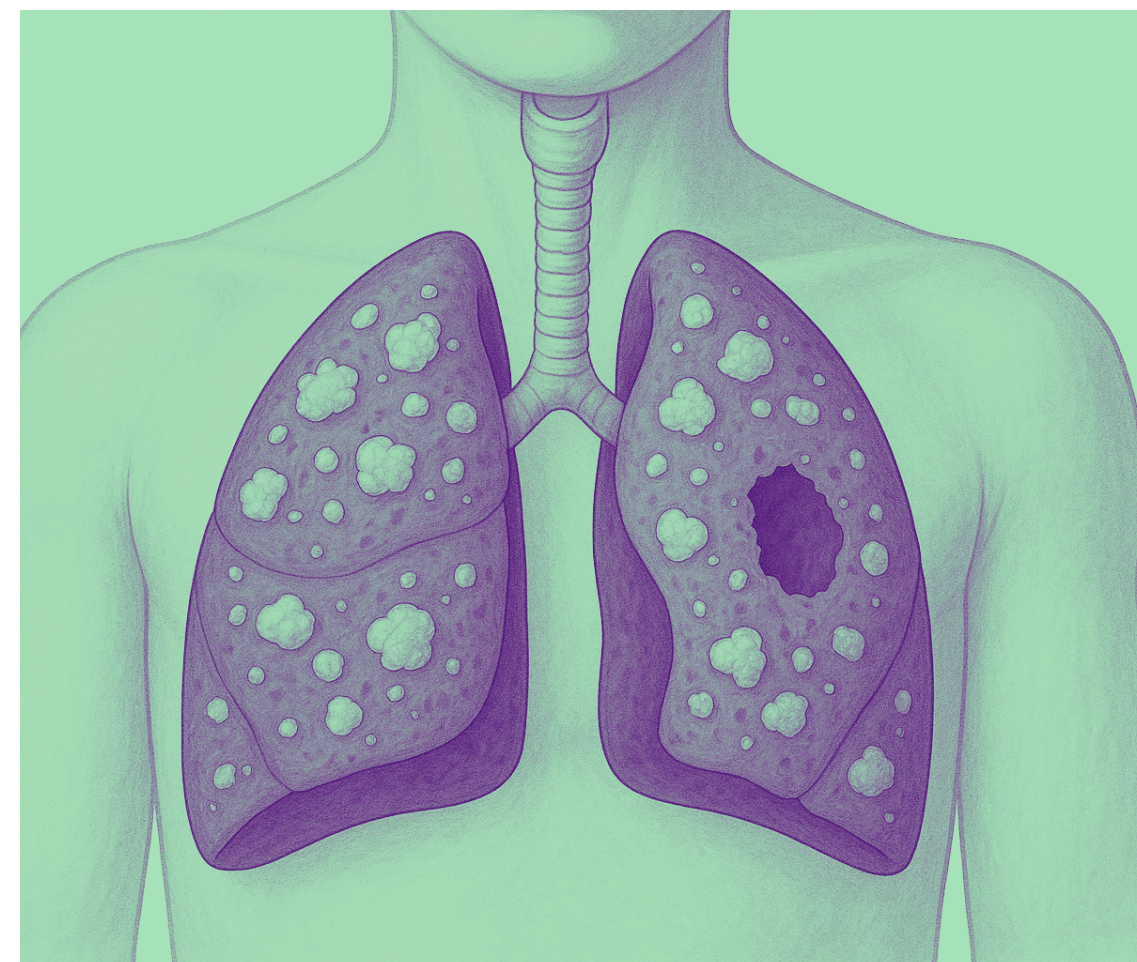
People with Down syndrome often face significant challenges in gaining acceptance within society, particularly infants born with the condition. From the moment of prenatal diagnosis, families may encounter complex moral and ethical dilemmas that persist throughout the newborn stage and beyond. Societal biases and misconceptions further contribute to these challenges, as many organizations are reluctant to hire individuals with Down syndrome, limiting their opportunities for meaningful inclusion in the workforce. This lack of acceptance not only hinders their personal and professional growth but also reinforces outdated stereotypes, preventing society from recognizing the valuable contributions they can make.



"Yes! We Can End TB:
Commit, Invest, Deliver!"

World Tuberculosis Day 24 March 2025

This date marks the anniversary of Dr. Robert Koch's discovery of *Mycobacterium tuberculosis* in 1882, a breakthrough that paved the way for diagnosing and treating TB.



2025 Theme highlights:

- **Commit**: Governments and health organizations must keep their promises to fight TB.

- **Invest**: More funding is needed to improve TB treatment, diagnosis, and prevention.

- **Deliver**: Ensuring that people receive timely and effective TB care.

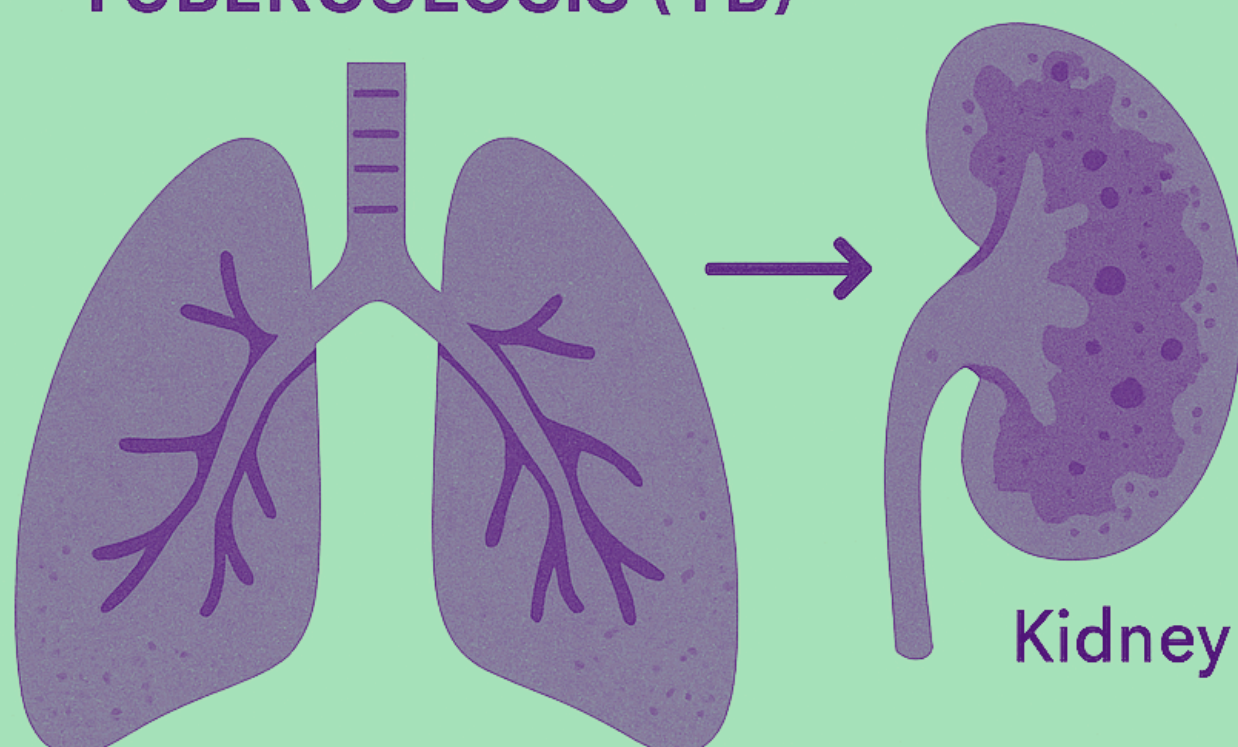
- TB remains a major health challenge, especially in South-East Asia, including India, where nearly 45% of global TB cases are reported.

- India has made progress, reducing TB cases by 17.7% from 2015 to 2023, but more work is needed.

- The BCG vaccine, good ventilation, and a healthy immune system can help prevent TB.

DAMAGED KIDNEY IN TB

TUBERCULOSIS (TB)



HOW TB AFFECTS THE KIDNEYS

TB bacteria spread through the blood from the lungs

TB bacteria

SIGNS OF KIDNEY DAMAGE

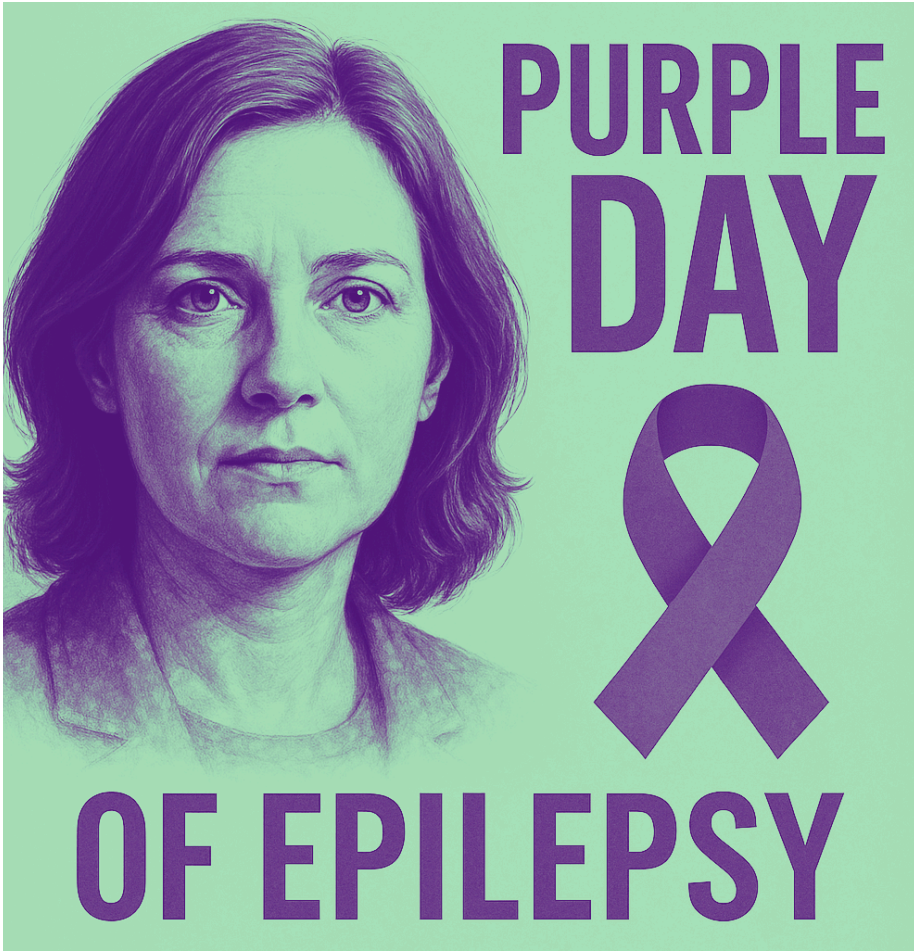
- ✓ Chronic kidney pain
- ✓ Blood in the urine
- ✓ Frequent urination
- ✓ Kidney scarring

"Stop TB Before It Stops You—Act Now, Breathe Tomorrow!"

"Awareness sparks change, and resilience drives progress—on Purple Day, we unite to turn knowledge into action and strength into advocacy."

PURPLE DAY OF EPILEPSY 2025

26th March 2025



The Global Landscape of Epilepsy.

Epilepsy affects nearly 50 million people worldwide, with around 80% of cases occurring in low- and middle-income countries, where access to diagnosis and treatment remains a challenge. Studies indicate that early intervention can reduce seizure frequency by up to 40%, making timely medical attention a key factor in improving patient outcomes. Additionally, epilepsy contributes to 5-10% of neurological disease burdens globally, reinforcing the need for enhanced awareness and care strategies.

Strength in Community: Advocacy & Public Engagement

Purple Day goes beyond awareness—it is a movement to empower those living with epilepsy:

Educational Outreach has led to a 20% increase in public understanding of epilepsy through workshops and awareness campaigns.

Social Media Advocacy has boosted online engagement by 25%, amplifying personal stories and research advancements.

Collaborative Initiatives between healthcare providers and advocacy groups have expanded telemedicine access in underserved areas, increasing treatment availability.

Call to Action

Purple Day 2025 is a reminder that knowledge fuels empowerment. By supporting research, spreading awareness, and strengthening communities, we can help ensure that individuals with epilepsy receive the care and recognition they deserve.

"Epilepsy does not define a person—resilience does. Let’s harness the Power in Purple to break barriers and transform lives."

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