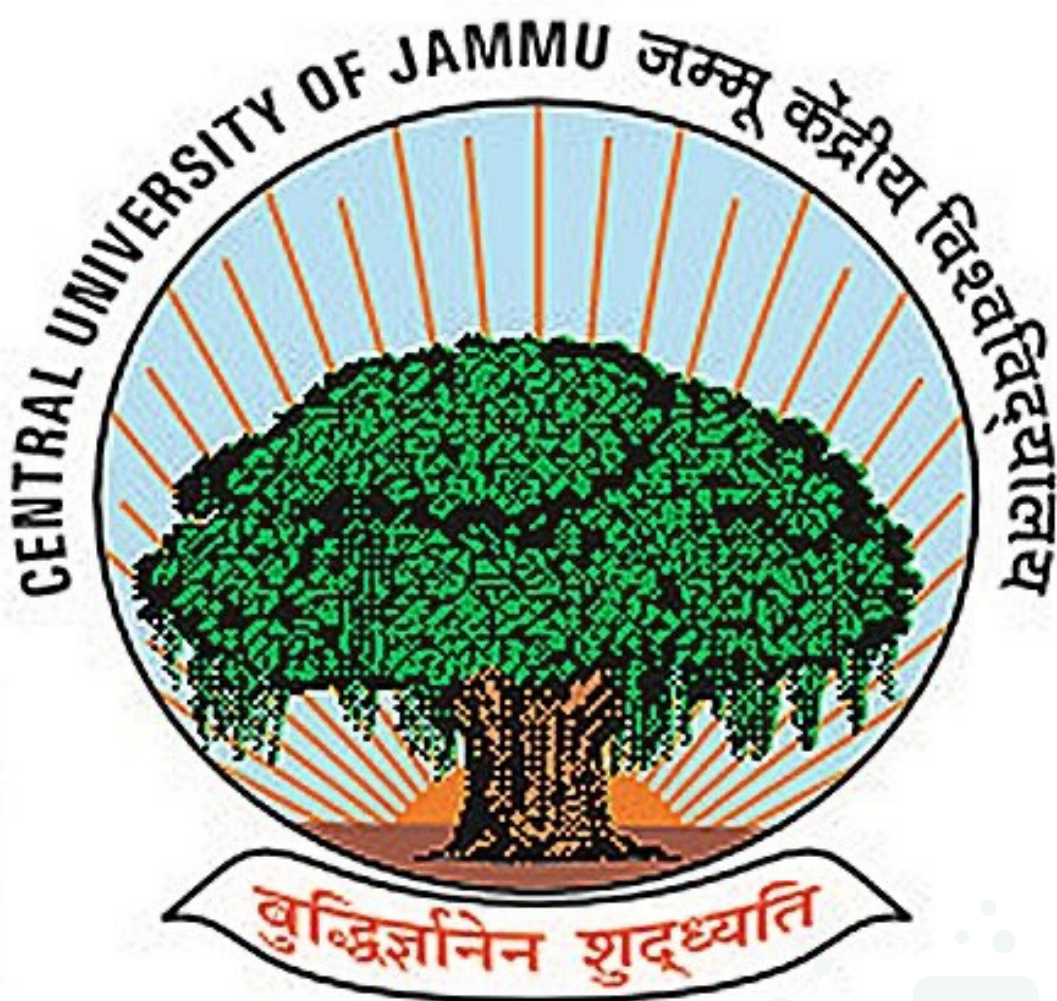


By Students of CMB (Centre for Molecular Biology)

MONTHLY MAGAZINE 2025 EDITION



POWERED BY CUROSITY,
DRIVEN BY STUDENTS

BIOTECH GAZETTE

April 2025 Edition

An Initiative by the students of Centre for Molecular Biology

Guided by the motto 'बुद्धिर्जनं 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

MENTORS



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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.

Team Genetic Guild

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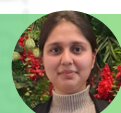
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We are incredibly proud of the outstanding work done by our dedicated editorial team, Genetic Guild. Their passion for excellence and commitment to delivering high-quality content have been instrumental in shaping our newsletter. Through their meticulous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

World Parkinson's Day

11th April 2025

The theme for 2025-
"Shine a Light on Parkinson's"

On April 11, 2025, the world comes together, spotlight the challenges faced by over 10 million individuals living with Parkinson's disease globally. This year's theme, "Shine a Light on Parkinson's", emphasizes the importance of awareness, early diagnosis, and the collective effort to support those affected by this neurodegenerative condition.

**"Not Just Tremors — It's
Time We Understand
Parkinson's"**



Parkinson's disease happens when certain nerve cells in the brain, especially in an area called the substantia nigra, start to break down or die. These cells normally produce a chemical called dopamine, which helps control smooth and balanced body movements. When dopamine levels drop, it disrupts the brain's ability to manage movement, leading to symptoms like tremors (shaking), stiffness, and slow movements. Tremors occur because the muscles receive confused or excessive signals, making them move uncontrollably.

World Parkinson's Day 2025 served as a poignant reminder of the ongoing need for research, support, and understanding. By illuminating the realities of Parkinson's disease, the global community reaffirmed its commitment to improving the lives of those affected and striving towards a future without Parkinson's.

The Silent Struggle Behind the "Shaking Hands"

Behind every visible tremor lies a world of invisible battles. Parkinson's disease isn't just about shaky hands — it's a slow, progressive loss of control over one's own body. Everyday tasks become challenges, emotions fluctuate, and confidence often fades in the face of misunderstanding. While symptoms are seen, the pain, resilience, and quiet courage of those living with Parkinson's often go unnoticed. **On this World Parkinson's Day, let's look beyond the surface, listen to their stories, and stand beside them in empathy and action.**



World Earth Day

22nd April 2025

Theme for 2025
Our Power, Our Planet- A Global Call for Climate Action



The theme for Earth Day 2025 highlights the collective strength of humanity to act in defense of the planet, underscoring the need for immediate climate action.

← HISTORY



Earth Day originated in the United States in 1970, over half a century ago, as a grassroots movement driven by social and student unrest in response to environmental damage. Although International Mother Earth Day was officially adopted by the UN General Assembly in 2009, Earth Day has been observed since April 22, 1970.

The first Earth Day was initiated by Senator Gaylord Nelson, who aimed to mobilize the energy of student-led anti-war protests to raise awareness about environmental issues. That first event saw 20 million Americans take to the streets demanding environmental reforms, making it the largest civic demonstration in U.S. history at the time.

Since then, Earth Day has evolved into a global movement, observed in more than 190 countries and championed by EarthDay.org, driving change through education, innovation, and activism.

"From rising heat to rising risk—climate is the 'silent patient' in every clinic."

Earth Day goes beyond symbolism- it's a powerful call to action. Its significance includes:

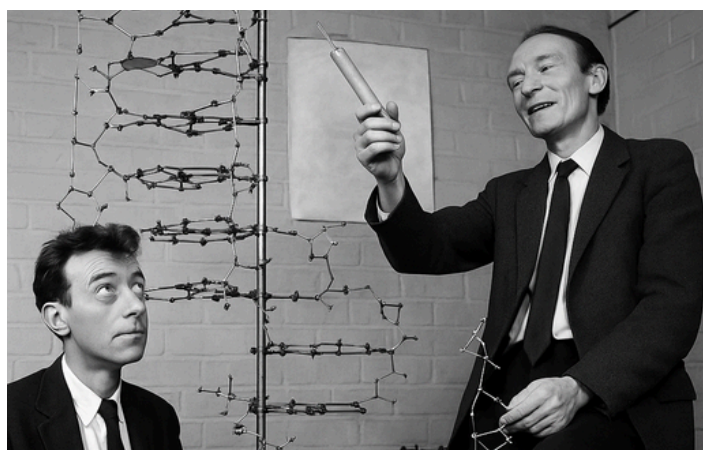
- Promoting environmental awareness across all generations.
- Encouraging policy changes that support sustainability.
- Motivating actions such as climate advocacy, reforestation, clean energy adoption, and waste reduction.
- Emphasizing the connection between the planet's health and our own well-being.

"As the planet warms, so do the risks to our health. But within us lies the power to change the story. Not just for ourselves, but for generations to come. Let this World Earth Day be more than a date on the calendar. Let it be a turning point."

National DNA Day

25th APRIL 2025

Unlocking the Power of Gene: Past to Precision



National DNA Day is celebrated every year on April 25 to commemorate two landmark achievements in the field of genetics:

- The discovery of the DNA double helix structure by James Watson and Francis Crick in 1953.
- The completion of the Human Genome Project in 2003, which successfully mapped all the genes in the human genome.

Established by the National Human Genome Research Institute (NHGRI) in 2003, National DNA Day serves to educate the public about the importance of genetics and genomics in our lives.

“DNA is not just a molecule—it is an identity. It is the silent witness in the quest for truth and justice.”

Dr. Lalji Singh (Pioneer of DNA Fingerprinting in India)

“The genome is not an end point, but a starting line—from here, we chart the future of medicine, biology, and human understanding.”

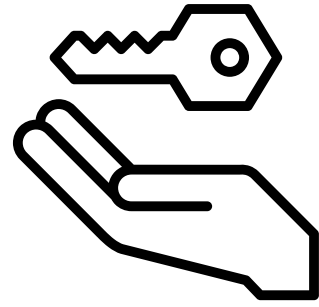
This year’s theme, “Unlocking the Power of Genes: From Past to Precision,” resonates deeply with India’s ambitious Genome India Project.

- National DNA Day marks the discovery of DNA’s double helix—celebrating a scientific milestone that transformed our understanding of life.
- India commemorates this day through the Genome India Project (GIP), a visionary initiative to decode the genetic diversity of its population.
- In tune with the 2025 theme, “Unlocking the Power of Genes: From Past to Precision,” GIP connects ancestral genetic traits to the future of personalized medicine.
- The project has sequenced over 10,000 genomes from 99 distinct population groups, uncovering vital links between genes and major diseases.
- GIP is enabling precision healthcare by supporting early disease prediction, customized treatments, and future applications like pharmacogenomics and AI-driven diagnostics.
- With data stored at the Indian Biological Data Centre (IBDC) and a growing ecosystem of trained genomic researchers, India is emerging as a global leader in genomic science



World IP Day

26th April 2025



Theme for 2025:
For **World Intellectual Property day 2025**, "IP and Music: Feel the Beat of IP" is the set theme .

World Intellectual Property (IP) Day is celebrated every year on April 26 to raise awareness about the importance of intellectual property rights in encouraging creativity and innovation. The day was established by the World Intellectual Property Organization (WIPO) in 2000, marking the date on which the WIPO Convention came into force in 1970.

World Intellectual Property Day 2025 is being celebrated across the globe today under the powerful theme "IP and Music: Feel the Beat of IP." This year's focus highlights how intellectual property (IP) plays a vital role in the music industry by encouraging creativity, protecting artists' rights, and fostering innovation across various sectors.



Invent, Inspire, Impact: Your Ideas Matter!"

From startups to scientists, and from artists to agricultural innovators, IP is the shield and spotlight that turns imagination into impactful reality. The day emphasizes the need to foster a balanced and accessible IP system that nurtures creativity while ensuring knowledge and technology are shared to solve global challenges—climate change, health care, clean energy, and beyond.

Major Highlights of World IP Day 2025:

- **Global Youth Video Competition:** Young creators worldwide showcased how IP powers music through short videos, with winners announced on April 25, receiving prizes including digital equipment and training opportunities.
- **FICCI Conference in New Delhi:** India's Federation of Indian Chambers of Commerce & Industry (FICCI) hosted a conference celebrating the nation's vibrant music industry, emphasizing the role of IP in fostering creativity and innovation.
- **Global Events Calendar:** Numerous events worldwide, including workshops and exhibitions, highlighted the importance of IP in music, encouraging participation from artists, entrepreneurs, and legal professionals.

Everyone—from students to CEOs—has a part to play in transforming ideas into sustainable actions that shape a better tomorrow .

**WORLD
INTELLECTUAL
PROPERTY DAY
2025**

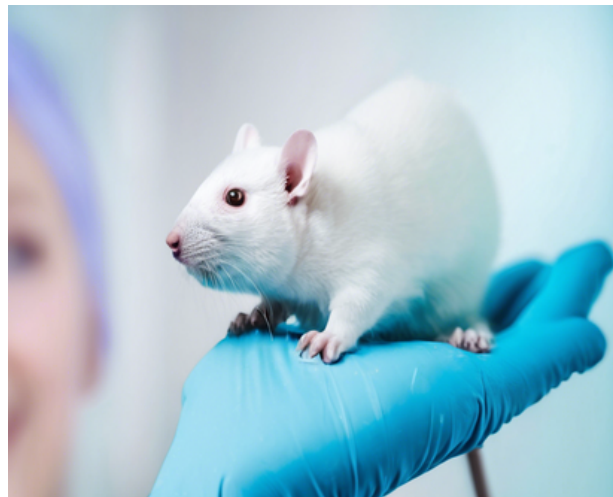


**IP AND MUSIC:
FEEL THE BEAT OF IP**

Theme: “Ethical Science: Innovation with Empathy.”

World Day for Animals in laboratories

24 March 2025



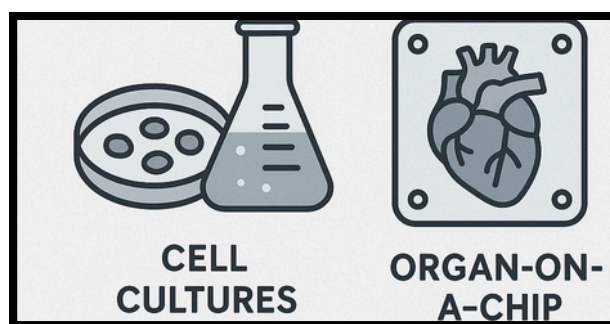
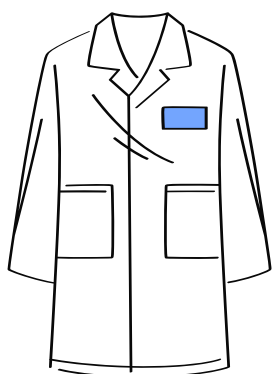
2025 Theme highlights:

- **Promote Humane Research Practices:** Encourage the scientific community to adopt research methods that do not involve animal testing, such as in-vitro studies and computer modeling.
- **Highlight Scientific Advancements:** Showcase innovative technologies that provide more accurate and human-relevant data, reducing the reliance on animal models.
- **Foster Global Collaboration:** Unite researchers, policymakers, and the public in a collective effort to transition towards ethical and empathetic scientific practices.



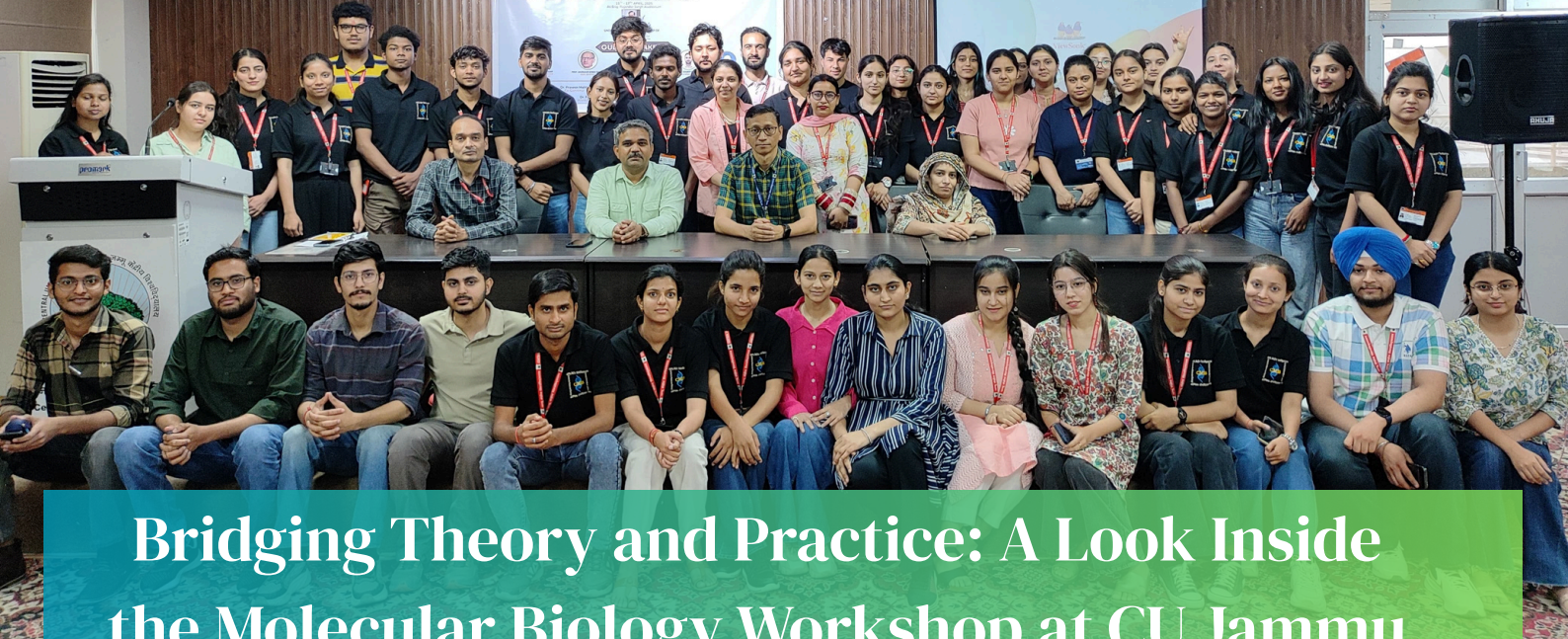
PEOPLE OBSERVE THIS DAY BY-

- Educational events and seminars spread awareness of cruelty-free research methods.
- Petitions and social media campaigns are used to push for changes in laws and research practices.
- Academic institutions and organizations promote discussions on the importance of ethical science.



“Science with Compassion: Choose Humane Research”

“This day is a reminder to move closer to a future where no animal suffers in the name of science.”



Bridging Theory and Practice: A Look Inside the Molecular Biology Workshop at CU Jammu

Title: "Molecular Biology Tools and Genome Editing – A Hands-on Workshop Experience"

Organized by: Centre for Molecular Biology, Central University of Jammu

In collaboration with: Directorate of Internal Quality Assurance (DIQA)

Dates: April 15–17, 2025

Nurturing the Next Generation of Molecular Biologists

In a fast-evolving scientific landscape, practical experience is key to true learning. The Centre for Molecular Biology (CMB), under the visionary leadership of Prof. (Dr.) Sanjeev Jain (HVC), hosted a comprehensive 3-day hands on training workshop on Molecular Biology Tools and Genome Editing, designed to equip budding researchers and students with essential laboratory skills in molecular biology and biotechnology.

With over 30 participants from diverse academic backgrounds—including undergraduate, postgraduate, PhD scholars, and early-career researchers from institutions across Jammu, Himachal Pradesh, and beyond—the event was both intellectually stimulating and technically enriching.

Academic Rigor Meets Practical Learning

The workshop combined expert lectures, interactive sessions, and intensive lab training. Notable sessions included:

- PCR and Yeast Genomic DNA Extraction – Dr. Narendra K. Bairwa
- Microbial Isolation and Culturing from Soil – Dr. Praveen K. Mehta
- Blood Smear Preparation and Grouping – Dr. Shelly Sehgal
- Plasmid Isolation & Transformation – Dr. Sudhir Singh
- DNA Isolation from Blood and Quantification – Dr. Audesh Bhat
- CRISPR-Cas9 Genome Editing (In-silico gRNA Design) – Dr. Bairwa

Participants rotated through practical modules in small groups, ensuring individual attention and hands-on learning.



Insights from Global Experts

The workshop featured lectures from eminent scientists who brought cutting edge insights into molecular biology and its interdisciplinary applications. These lectures sparked rich discussions and inspired students to think beyond conventional boundaries:



Prof. Mrutyunjay Suar (KIIT University): Creating an Innovation enabling ecosystem.



Prof. Raghuvir Singh Tomar (IISER Bhopal): Epigenetic and Metabolic Regulation of Cellular Copper Homeostasis.



Dr. Samer Singh (BHU): Prospecting Plants for Antimicrobial Activity.



Dr. Admas Berhanu Berisso (University of New Hampshire, USA): Metagenomic Analysis of Heat-Disturbed Soil Microbial Communities

Valedictory & Reflections



The final day included a valedictory address and a special lecture by Dr. Bairwa on CRISPR-Cas9 technology and its revolutionary impact on biomedical research. Feedback was overwhelmingly positive, with participants appreciating the structured learning, personalized guidance, and interdisciplinary exposure.



Voices from the Workshop

- This was well organised and proper hands-on In future there should be advance level of experiments and this should be carried on time to time. -**Rakesh Ranjan (Central University of Jammu)**
- The workshop was insightful, especially the third day which provided extensive hands-on experience with key molecular techniques. It would be even more beneficial if the duration was extended to 5–7 days, allowing adequate time to cover all methods in depth. A more even distribution of practical sessions across all days would enhance the learning experience. Starting the sessions on time would also help make the most of each day. Grateful to attend this workshop and hope to join many more in the future. Thank You CMB team. -**Smriti (Jammu University)**

Behind the Scenes:

The Organizing Team, Led by Dr. Narendra K. Bairwa (Convenor), the workshop was seamlessly coordinated by Dr. Sudhir Singh (Organizing Secretary), with support from Dr. Shelly Sehgal, Dr. Audesh Bhat, Dr. Praveen Mehta, and student volunteers. The dedication and meticulous planning by the student volunteers—ranging from logistics to technical assistance—played a vital role in the workshop's smooth execution.

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World Earth Day

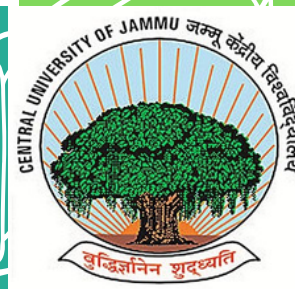
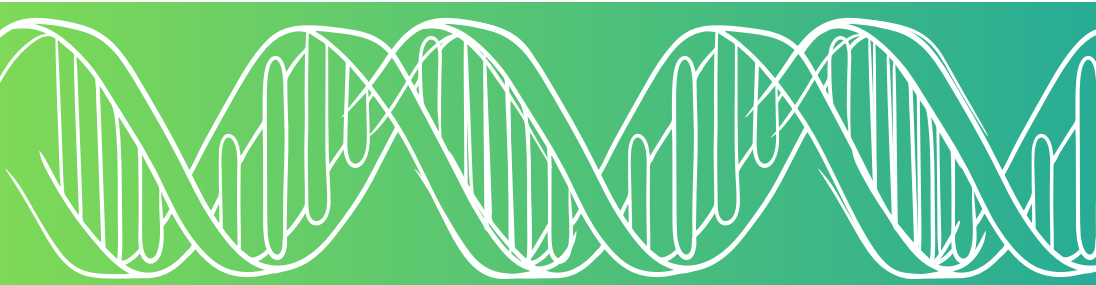
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