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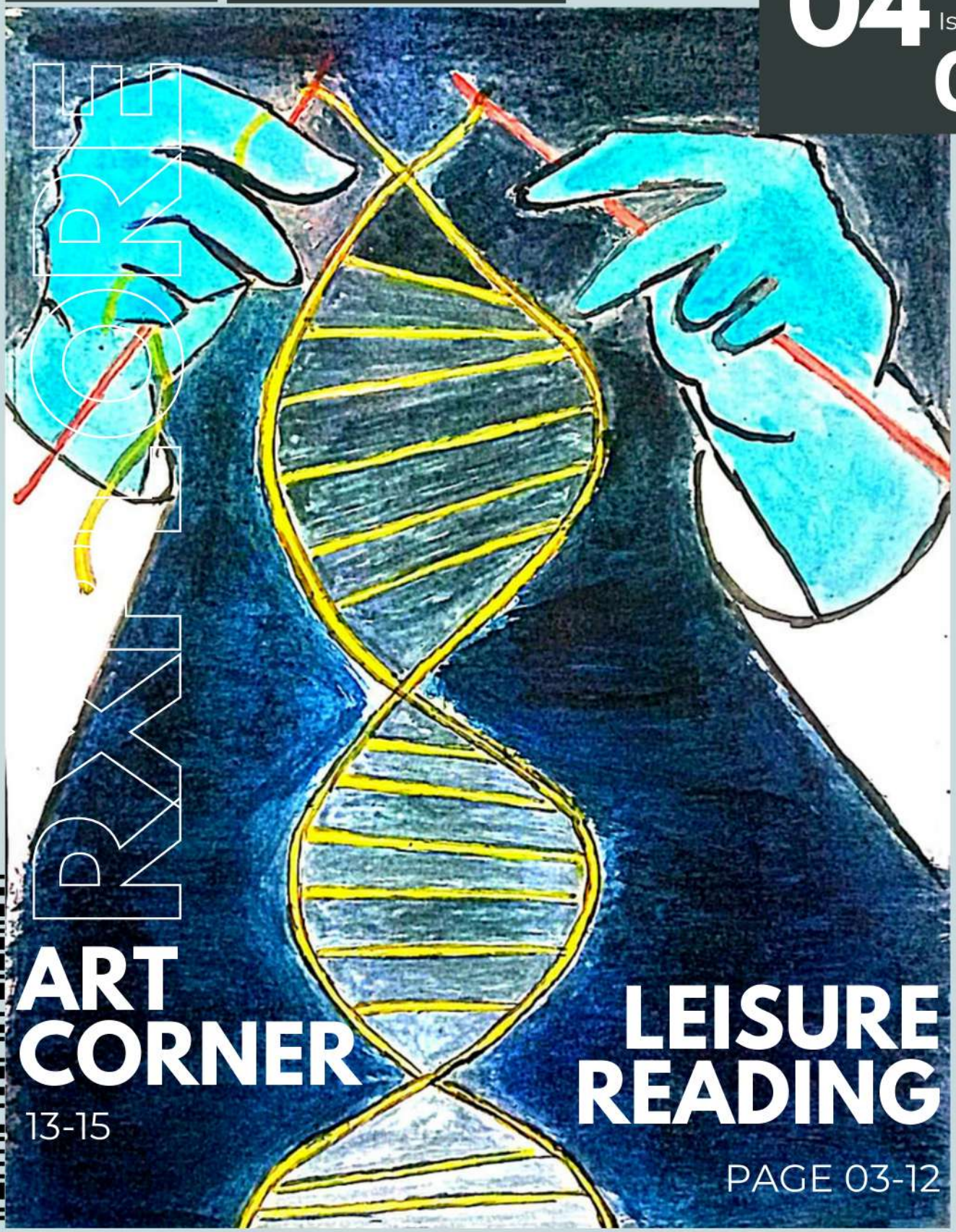
JANUARY 2025

COVER ART BY DISHITA SARMAH NIPS, MIRZA



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RxPLORE

THE OFFICIAL NEWSLETTER OF NETES INSTITUTE OF PHARMACEUTICAL SCIENCE, MIRZA, ASSAM

EDITOR-IN-CHIEF'S MESSAGE

Dear Readers,

It is with immense pleasure and pride that we welcome you to the latest edition of Rxplore, the newsletter of NETES Institute of Pharmaceutical Science, Mirza. Each page within these reflects the collective enthusiasm, creativity, hard work and dedication of our students and faculty, who continuously strive for excellence in all spheres.

This issue highlights the significant milestones, events, and initiatives that have shaped the past semester. From academic excellence and extracurricular accomplishments to insightful workshops our newsletter reflects the diverse and dynamic environment that defines our institution.

We hope you enjoy reading this newsletter as much as we enjoyed creating it. Let it serve as a source of inspiration and a reminder of the incredible community we are all a part of.

Ms. Abhijita Talukder
Assistant Professor
NETES Institute of Pharmaceutical Science

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LEISURE READING:

THE SCIENCE BEHIND OUR SLEEP & DREAMS

By- Kaayra Rani Konwar B.pharm ,1st Sem

After a long day of work, all we can think about is getting home quickly, lying down in our cosy bed, and falling asleep to enter the world of dreams without any worries. But have we ever stopped to consider why we feel such a strong urge to sleep after a tiring day? Why do we dream, and why are our dreams often inconsistent? Sleep and dreams are two interconnected processes that play a crucial role in our physical and mental health. According to Dr. Matthew Walker, "Sleep is a highly active and dynamic process, essential for cleaning waste from the brain, consolidating memories, and regulating emotions." Why do we fall asleep? Human sleep patterns are regulated by two competing networks of chemical and electrical signals in the brain. During our waking hours, neurotransmitters are released deep within the brain, keeping the cerebral cortex alert and prepared for consciousness. However, throughout the day, as our neurons break down ATP for energy, the byproduct adenosine accumulates. This build up activates sleep control neurons near the hypothalamus—a special region at the centre of the brain that acts as our master biological clock. Light-sensitive cells in our retina send signals deep into the hypothalamus, training neurons to sync with the 24-hour cycle of day and night. These rhythms serve as the "control switch" that indicates when we should feel awake or asleep. As darkness falls, the hypothalamus signals the pineal gland to increase levels of the hormone melatonin in the bloodstream, which leads to feelings of fatigue. Additionally, body temperature slightly lowers, and this heat loss is a key factor contributing to the urge to fall asleep.

Stages of Sleep

• Stage I: N1 (Non-Rapid Eye Movement Sleep) This stage can last from 1 to 7 minutes. During this stage, a person experiences light sleep and can be easily awakened.

• Stage II: N2 This stage can last from 10 to 25 minutes. In this phase, a person's body temperature drops slightly, heart rate slows, and brain waves begin to slow down.

• Stage III: N3 This stage can last from 20 to 40 minutes. Here, a person enters deep sleep, characterized by slow delta brain waves, and it becomes difficult to awaken them.

• Stage IV: REM (Rapid Eye Movement Sleep) This stage can last from 10 to 60 minutes. During this phase, brain activity increases, and vivid dreams occur.

Dreams: Dreams are undoubtedly the best part of sleeping! Where we are no less than a Christopher Nolan movie with no end of imagination. But what dream truly is? According to Dr. Giulio Tononi, "Dreams are a result of the brain's attempt to make sense of the world, even when we're not consciously aware of it". Based on various research and experiments most dreams occur during the REM stage of sleep. Types of dreams: Dreams can be classified into several types based on their content, intensity, and frequency. Some of the main types of dreams are :

1. Lucid Dreams Lucid dreams are dreams in which the person is aware that they are dreaming. During lucid dreaming, the person may be able to control the content of the dream.
2. Vivid Dreams Vivid dreams are dreams that are particularly vivid and detailed. They can be very realistic and may be difficult to distinguish from reality.
3. Nightmares Nightmares are dreams that are disturbing or frightening. They can cause the person to wake up feeling anxious or upset.
4. Recurring Dreams: Recurring dreams are dreams that repeat themselves over time. That might be similar or identical to previous dreams. 5. Prophetic Dreams Prophetic dreams are dreams that seem to predict future events. They can be unsettling or exciting, depending on the content of the dream. Why do we dream? To this date, there have been no confirmed reasons behind why we dream. Various scientific have various theories behind it, but unfortunately, there is still no proof for it. There is still ongoing research on this topic but we have gotten some believable theories like:
1. Memory Consolidation Theory
This theory was proposed by Maquet et al. (2005). According to this, dreams help us process and consolidate memories, transferring information from the hippocampus to the neocortex for long-term storage.
2. Emotional Regulation Theory
This theory was proposed by Antti Revonsuo (2000). According to this, dreams allow us to regulate our emotions, processing and managing our feelings in a safe environment.
3. Problem-Solving Theory
This theory was proposed by J. Allan Hobson (1988). According to this, dreams help us find creative solutions to problems, allowing our unconscious mind to work through challenges and find better solutions.
4. Evolutionary Theory
This theory was proposed by Antti Revonsuo (2000). According to this, dreams served an evolutionary purpose, allowing our ancestors to rehearse and prepare for potential dangers and threats in a stressful environment.
5. Psychoanalytic Theory
This theory was proposed by Sigmund Freud (1900). According to this, dreams are a way for our unconscious mind to communicate with our conscious mind, revealing repressed thoughts, desires, and conflicts.

It's fascinating to learn about the research and theories surrounding sleep and dreams. Science will continue to provide answers to the undiscovered truths about these topics. In the meantime, we can all conduct our experiments and form our theories

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'THE BIG BANG THEORY'

Examining the evidence and implications of universe origin

- By Supriya Kachari (B.Pharm,1st Sem)

The Big Bang Theory is the leading explanation for the origin of our universe, suggesting that it began as an infinitely hot and dense single point around 13.7 billion years ago. This singularity expanded rapidly, and as it did, it cooled and formed subatomic particles, atoms, and eventually the stars and galaxies we see today.

The Timeline of the Big Bang

- The Singularity: Around 13.7 billion years ago, everything in the universe was condensed into an infinitesimally small point.
- Expansion and Cooling: The universe expanded and cooled, leading to the formation of subatomic particles, atoms, and eventually the stars and galaxies.
- Cosmic Microwave Background Radiation: About 380,000 years after the Big Bang, the universe had cooled enough for electrons and protons to combine into neutral atoms, allowing light to travel freely through space. This light, known as the cosmic microwave background radiation, is still detectable today.

Theories of Big Bang

1. Inflation Theory: The universe underwent a rapid expansion in the first fraction of a second after the Big Bang, known as inflation. This theory helps explain why the universe appears to be so homogeneous and isotropic on large scales.
2. Multiverse Hypothesis: Some theories suggest that our universe is just one of many in an infinite multiverse, where different universes have different physical laws and properties.
3. Cyclic Model: The universe undergoes cycles of expansion and contraction, with the Big Bang being the latest expansion event.
4. Brane Cosmology: Our universe is a four-dimensional brane, or membrane, floating in a higher-dimensional space called the "bulk."

Mysteries !

1. What Caused the Big Bang?: The trigger that set off the Big Bang is still unknown.
2. What is Dark Matter?: The universe is thought to be made up of around 27% dark matter, but its nature and properties are still unknown.

3. What is Dark Energy?: The universe is thought to be made up of around 68% dark energy, but its nature and properties are still unknown.
4. The Horizon Problem: The universe appears to be homogeneous and isotropic on large scales, but the Big Bang theory predicts that different regions of the universe should have different properties.

5. The Flatness Problem: The universe appears to be flat, but the Big Bang theory predicts that it should be curved.

Evidences Supporting The Big Bang Theory

- The Cosmic Microwave Background (CMB) Radiation: In the 1960s, scientists Arno Penzias and Robert Wilson discovered a persistent background noise in their radio telescope, which was later confirmed to be the residual heat from the initial explosion. This CMB radiation is thought to be the oldest light in the universe, dating back to around 380,000 years after the Big Bang.
- Abundance of Light Elements: According to the Big Bang Theory, the universe was once so hot that it formed light elements, such as hydrogen, helium, and lithium, from protons and neutrons. The abundance of these elements in the universe matches the predictions of the Big Bang Theory.
- Large-scale Structure of the Universe: The universe is made up of vast galaxy clusters and superclusters, which are separated by vast distances. The Big Bang Theory predicts that these structures formed from the gravitational collapse of tiny fluctuations in the universe's density.

Implications Of The Big Bang Theory

- The Universe is Still Expanding: The Big Bang Theory predicts that the universe is still expanding, with galaxies moving away from each other at an ever-increasing rate.
- The Universe Had a Beginning: The Big Bang Theory suggests that the universe had a definite beginning, which raises questions about what existed before the Big Bang and what caused it. - The Multiverse Hypothesis: Some theories suggest that our universe is just one of many in an infinite multiverse, where different universes have different physical laws and properties.

The Big Bang Theory is the leading explanation for the origin and evolution of our universe, proposing that it began as an infinitely hot and dense single point around 13.7 billion years ago. The theory is supported by overwhelming observational evidence from many fields of science, including cosmology, astronomy, and particle physics. It has revolutionized our understanding of the universe, revealing a dynamic and ever-changing cosmos. From the formation of subatomic particles to the emergence of complex life forms, the universe has undergone a remarkable transformation since its inception. While the Big Bang Theory provides a framework for understanding the origins of our universe, it also raises fundamental questions about the nature of space, time, and matter. Ongoing research and new discoveries continue to refine our understanding of the universe, revealing new mysteries and challenges to be addressed. Ultimately, the Big Bang Theory is a testament to human curiosity and ingenuity, demonstrating our ability to explore, understand, and describe the workings of the universe. As we continue to explore the cosmos and push the

boundaries of human knowledge, we may yet uncover even more profound secrets about the origins and destiny of our universe.

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THE NATURE OF LIGHT: UNDERSTANDING ITS DUAL NATURE

By- Ankur Kakati B.Pharm 1st sem

Light, one of the most fundamental phenomena in the universe, has intrigued scientists for centuries. From the ancient Greeks to modern physicists, understanding light has led to profound insights into the nature of the universe itself. In this article, we will explore the dual nature of light, its wave-particle duality, and its significance in modern physics.

The Wave Theory of Light

The earliest theory about light came from ancient Greek philosophers who believed light was made of particles. However, in the 17th century, the Dutch scientist Christiaan Huygens proposed that light behaves as a wave. Huygens' wave theory suggested that light could travel through a medium (which he termed the "ether"), much like sound waves travel through air. This wave theory was supported by experiments such as Thomas Young's double-slit experiment in 1801, which demonstrated that light can interfere with itself, a property typical of waves. When light passes through two narrow slits, it creates an interference pattern on a screen placed behind the slits, much like the ripples on a water surface. This result showed that light behaves as a wave, capable of interference and diffraction.

The Particle Nature of Light

While the wave theory of light explained many phenomena, it could not account for all of them. One major issue arose with the photoelectric effect, where light shining on a metal surface ejects electrons from the metal. According to classical wave theory, increasing the intensity (or brightness) of light should increase the energy of ejected electrons. However, experiments showed that only light above a certain frequency could cause the ejection of electrons, regardless of its intensity. In the early 20th century, Albert Einstein resolved this puzzle by proposing that light is quantized and behaves like a particle. He suggested that light is made of discrete packets of energy, which he called "quanta" or photons. Each photon carries energy proportional to the frequency of light, and this energy is sufficient to eject electrons from the metal when the light's frequency is above a certain threshold. Einstein's work on the photoelectric effect earned him the Nobel Prize in Physics in 1921 and demonstrated the particle-like behavior of light.

Wave-Particle Duality

The realization that light exhibits both wave and particle properties led to the concept of wave-particle duality, a cornerstone of quantum mechanics. This duality suggests that light can exhibit wave-like behavior in some situations and particle-like behavior in others, depending on how it is observed. In addition to light, other particles, such as electrons, also exhibit waveparticle duality. In experiments such as the electron double-slit experiment, electrons create interference patterns, just like light waves. However, they also show discrete interactions, behaving like particles when detected.

Quantum Theory and the Role of Light

The advent of quantum mechanics in the early 20th century further expanded our understanding of light and its behavior. Quantum theory posits that energy levels in atoms are quantized, and when electrons transition between these levels, they emit or absorb photons. This process is central to phenomena such as atomic emission and absorption spectra. The famous Heisenberg uncertainty principle, which states that the position and momentum of a particle cannot both be precisely determined simultaneously, applies to photons as well. This principle reveals that the act of measuring light influences its behavior, leading to the strange and counterintuitive properties observed in quantum mechanics.

Applications of Light

The understanding of light's dual nature has led to numerous advancements in technology and science. The invention of the laser, for example, relies on the quantum mechanical properties of light. Lasers are used in countless applications, from medical treatments to telecommunications and entertainment. Additionally, our understanding of light has revolutionized fields such as astronomy. Telescopes and other instruments that detect electromagnetic radiation have allowed scientists to observe distant stars, galaxies, and even exoplanets, helping us to better understand the universe's origin and structure.

Conclusion: The study of light has transformed our understanding of the physical world. From its wave-like behavior, demonstrated by interference and diffraction patterns, to its particle-like nature, explained by the photoelectric effect and quantum theory, light remains a key element in the quest to understand the universe. As our exploration of quantum mechanics deepens, new discoveries continue to challenge and expand our comprehension of light's true nature, confirming that light is not just a source of illumination, but a window into the fabric of reality itself. Understanding light and its behavior continues to inspire research and innovation in science and technology, proving that even the most familiar phenomena can lead to the most groundbreaking discoveries

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BLOCK CHAIN - THE TECHNOLOGY OF FUTURE

-By Dipankar Kalita , D. Pharm 1st Year

Blockchain technology has emerged as a groundbreaking innovation with the potential to reshape industries across the globe. Initially introduced as the underlying technology for Bitcoin in 2008, it has now grown into a versatile and powerful tool with applications spanning across industries and revolutionizing how businesses and individuals interact.

What is Blockchain?

Blockchain is a system of recording information in a way that makes it almost impossible to hack or cheat. It is like a digital notebook shared across a network of people. Instead of keeping all the information in one place, blockchain stores it on multiple computers around the world, making it impossible for hackers to manipulate the system.

Key Features:

- Decentralized: No single person or organization controls it.
- Secure: Transactions are locked with codes that make them tamper-proof.
- Transparent: Everyone on the network can see the records.
- Permanent: Once something is recorded, it cannot be deleted or changed.

Applications of Blockchain Technology:

1. Cryptocurrency: Bitcoin, Ethereum, and other digital currencies rely on blockchain for secure and transparent transactions.

2. Supply Chain Management: Blockchain technology helps manage supply chains, enhancing efficiency in tracking goods from origin to destination.

3. Healthcare: It plays a major role in tracking patient records and enabling efficient data sharing among healthcare providers.

4. Finance: In the finance sector, blockchain reduces losses and provides decentralized financial services to people.

5. Voting System: It ensures transparency and prevents tampering in elections.

Advantages of Blockchain:

- The decentralized and cryptographic nature of blockchain makes it highly resistant to cyberattacks.
- This technology is very cost-effective.

- Transaction systems are very fast in blockchain, especially for international transactions.

The Future of Blockchain:

Blockchain technology is still in its early stages, but its potential is immense. It is reshaping the global economy and how we interact. By providing transparency, security, and efficiency, it is driving innovation in industries ranging from finance to healthcare. The smart contract systems of blockchain offer a future where transactions are faster, fairer, and more accessible. As these technologies evolve, they promise to build a more inclusive and trustworthy digital world.

Conclusion:

Blockchain technology is not just a trend; it is a global shift. With continuous advancements and increasing adoption, it promises to redefine how we interact, transact, and trust in the digital era.

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MEDICINE ABUSE: A GROWING THREAT TO PUBLIC HEALTH

-By Himjyoti Sarmah, B.Pharm 1st sem

Medicine abuse, or the misuse of prescribed and over-the-counter drugs, is a pressing global concern. While medications are designed to alleviate pain, treat illnesses, and save lives, their misuse can have devastating consequences. Medicine abuse affects individuals across all demographics and has far-reaching implications for families, communities, and healthcare systems.

What is Medicine Abuse?

- Medicine abuse occurs when drugs are used in a manner not intended by the prescribing doctor or recommended guidelines. This includes:

- Taking medications without a prescription.

- Using higher doses than prescribed.

- Consuming medicines for purposes other than intended, such as achieving a euphoric high.

The most commonly abused classes of medicines include:

1. Opioids (e.g., morphine, oxycodone) – prescribed for pain relief but often misused for their euphoric effects.
2. Benzodiazepines (e.g., diazepam, alprazolam) – used for anxiety and sleep disorders but frequently abused for their sedative effects.
3. Stimulants (e.g., amphetamines) – prescribed for ADHD but misused to enhance focus or energy.
4. Over-the-counter (OTC) drugs (e.g., cough syrups containing codeine or dextromethorphan) – easily accessible and prone to misuse, especially among teenagers.

Why Do People Abuse Medicines?

Several factors contribute to medicine abuse:

- Ease of Access: Many medicines, especially OTC drugs, are readily available without strict regulations.
- Perceived Safety: People often believe prescription drugs are safer than illicit drugs, leading to misuse.
- Peer Pressure: Especially among young individuals, the desire to fit in or experiment can drive misuse.
- Self-Medication: Some individuals misuse medicines to cope with stress, anxiety, or depression.

Health Consequences of Medicine Abuse:

The consequences of medicine abuse can be severe, ranging from mild side effects to life-threatening conditions:

1. Physical Health Risks: Overdose, organ damage (e.g., liver or kidney failure), respiratory depression, and heart issues are common outcomes.
2. Mental Health Impact: Long-term misuse can lead to addiction, cognitive impairment, and psychiatric disorders.
3. Dependency and Addiction: Chronic misuse of medicines, especially opioids and benzodiazepines, can result in physical and psychological dependence.
4. Social and Economic Burden: Medicine abuse often leads to job loss, strained relationships, and financial difficulties.

Medicine Abuse Among Youth:

One alarming trend is the rising misuse of medicines among teenagers and young adults. The allure of experimentation, peer influence, and misconceptions about drug safety contribute to this issue. Studies reveal that adolescents often misuse cough syrups, painkillers, or sedatives, which can lead to long-term addiction.

Combating Medicine Abuse

Addressing medicine abuse requires a multi-pronged approach:

1. Education and Awareness

- Public awareness campaigns to educate individuals about the risks of medicine misuse.
- School-based programs to inform students about the dangers of abusing OTC and prescription drugs

2. Regulation and Control

- Implementing stricter controls on the sale and distribution of prescription and OTC medicines.
- Monitoring prescriptions to prevent overprescribing by healthcare providers.

3. Proper Disposal of Medicines

- Encouraging safe disposal methods to prevent unused medications from falling into the wrong hands.

4. Support for Affected Individuals

- Providing counseling and rehabilitation for those struggling with medicine addiction.
- Offering support groups for families affected by medicine abuse.

5. Healthcare Provider Responsibility

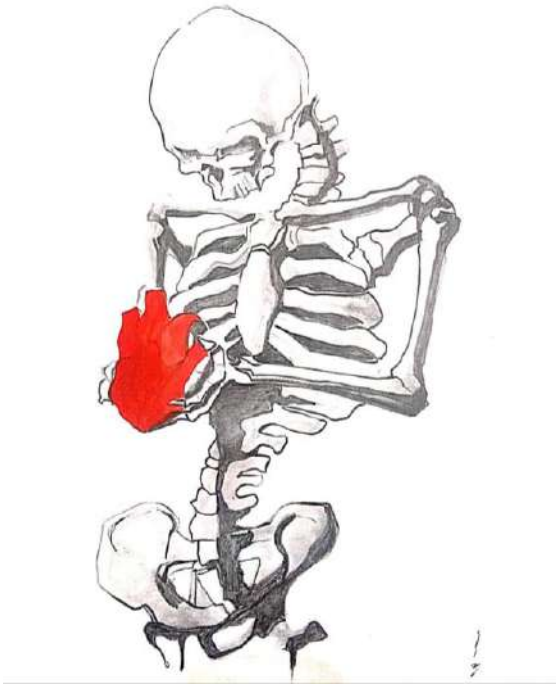
- Training doctors and pharmacists to identify signs of misuse and educate patients on proper medicine use.
- Encouraging the use of non-addictive alternatives where possible

Conclusion

Medicine abuse is a silent epidemic with significant consequences for individuals and society. While medicines are a vital part of healthcare, their misuse undermines their purpose and poses a grave threat to public health. By fostering awareness, enhancing regulations, and supporting affected individuals, we can mitigate this growing issue and promote safer use of medications

ART CORNER:

Alokananda Baruah
(B. Pharm 1st Semester)



Chinmoy Das
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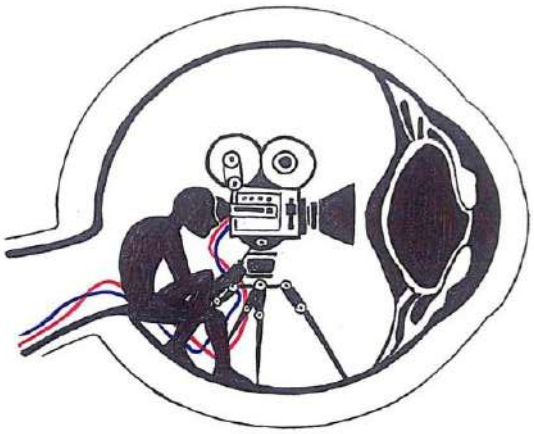

Debakshi Sarmah
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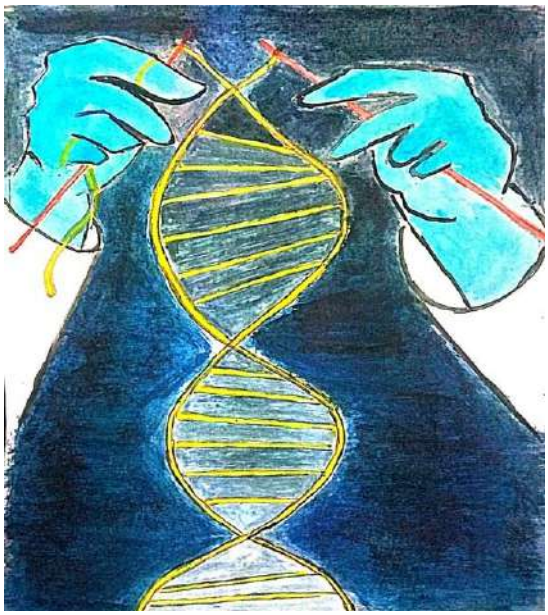

Dishita Sarmah
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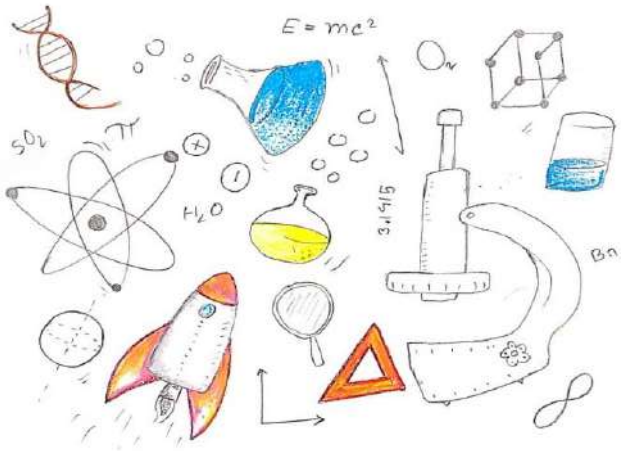

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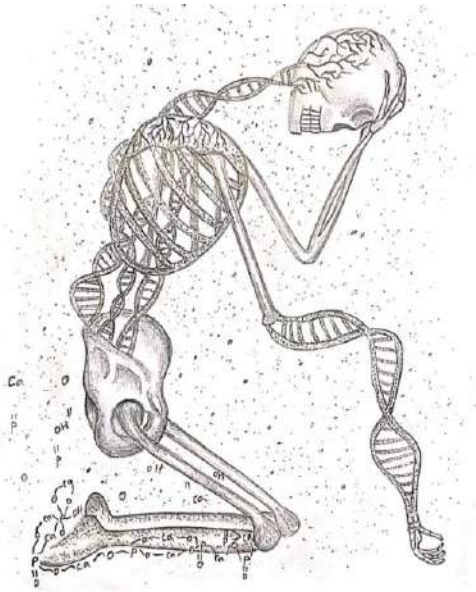

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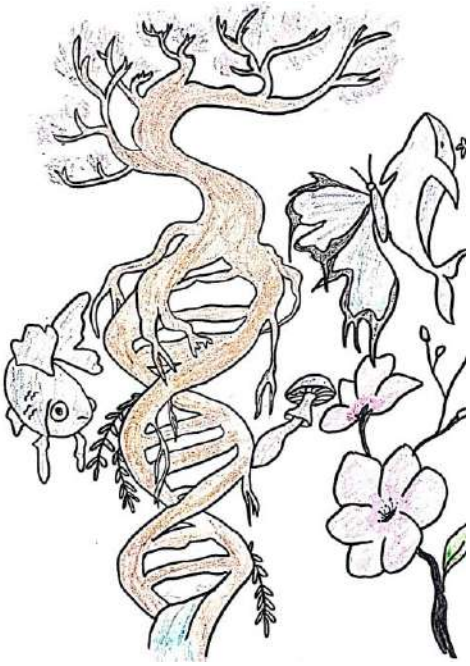

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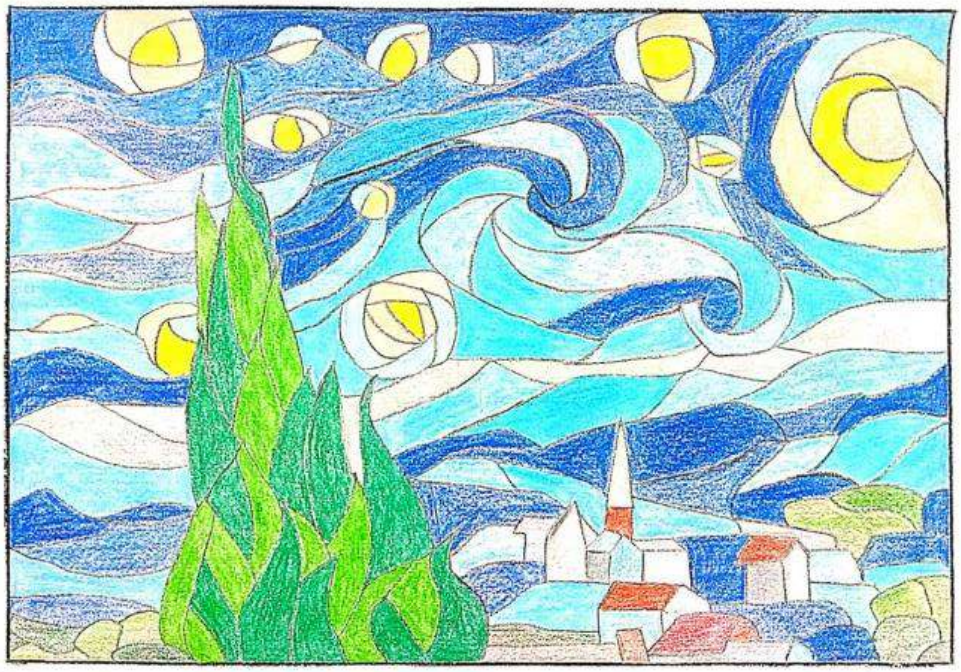

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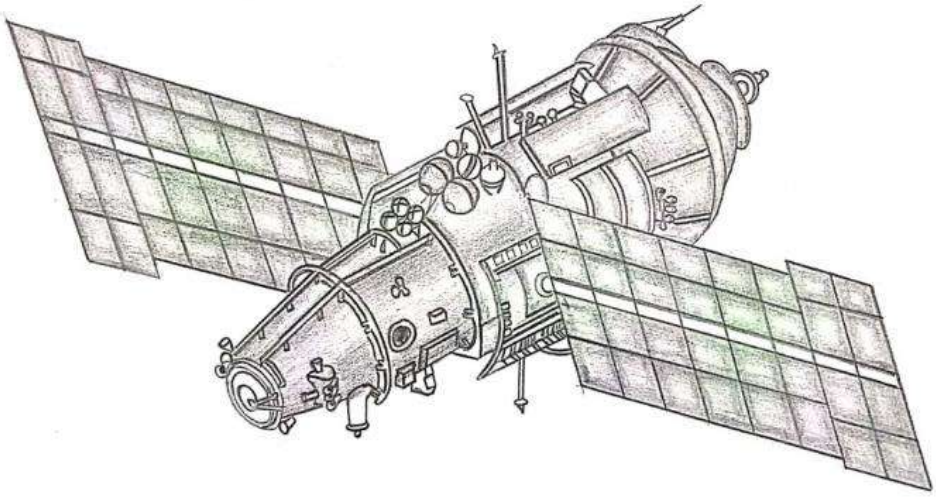

Iftikar Abbash
(D. Pharm 1st Year)

INSTITUTIONAL ACTIVITIES:

AUGUST,2024

Our faculty members and research fellows attended two days workshop on Pharmaceutical additive manufacturing under anusandhan national research foundation(ANRF) SERB-Scientific social responsibility (SSR) held at NIPER Guwahati on August 23 and 24 2024.

M.Pharm Students participated in the One-day Facility Visit and Training Program under SERB-Sponsored science social responsibility (SSR) held on August 30,2024 at NIPER Guwahati.

Orientation Programme of B.Pharm held from (27/08/24 to 31/08/24) and D.pharm held from (30/8/24 to 5/9/24) in the presence of guests; Dr. Kamal Goswami, Mr. Hemakinkar Sarma

SEPTEMBER, 2024

The Training and Placement Cell, NGI organized the Skill Development Program 'SDP 0.1' on September 7, 2024, aimed at enhancing the practical skills of our D. Pharm final year students. As part of the initiative, students visited a hospital pharmacy to gain firsthand exposure to the critical functions of a hospital pharmacy and the pivotal role of pharmacists in healthcare delivery.

One-Day Special Plantation Drive - "Plant4Mother", held on 17th September 2024 at the (NIPS), Mirza. Under the initiative of IQAC, NIPS, and with the support of our esteemed partners, we organized this event to promote environmental sustainability. The drive, inspired by the theme "एक पेड़ माँ के नाम,," celebrated the nurturing power of nature and honored the bond we all share with our planet.

Vishwakarma puja celebration on 17 th September 2024 at NGI campus.

NGI Signed an agreement with the officials of CHEMEX Global,Palashbari Unit on 19th September 2024.As part of partnership CHEMEX Global will conduct analysis of active pharmaceutical ingredients at NEMCARE's state of the art facilities.

The 4th National Pharmacovigilance Week, 2024 was celebrated at the ADR Monitoring Centre of NETES Institute of Pharmaceutical Science, Mirza on 20th September, 2024 by organizing a Webinar on Pharmacovigilance with two eminent Scientist from PGIMER, Chandigarh. The Webinar was organised in collaboration with PGIMER, Chandigarh with Prof Bikash Medhi and Dr Ajay Prakash Sir briefing the students about PvPI and MVPI. The Webinar was a fruitful one with interaction among the M Pharm students and the eminent Speakers. The Co-ordinator of the ADR Monitoring Centre concludes the Webinar by urging the students to report ADR and increase the patient safety.

On 25th September 2024, we proudly organized a one-day celebration in collaboration with the Pharmacists' Professional Prosperity Platform. This year's theme, "Pharmacist: Meeting Global Health Needs", brought together passionate professionals and students to honor the vital role of pharmacists in healthcare.The event was graced by our Chief Guest: Dr. Pulak Deb, M. Pharm., Ph.D., Deputy Controller of Examinations, SSUHS. It was a wonderful opportunity for both faculty and NHM pharmacists to unite and celebrate. Different competition and events for our students, including Model Making, Debate, Quiz, Content Writing, Drawing, Paragraph Writing etc.

The NETES Institute of Pharmaceutical Science has cause for exceptional pride as their students demonstrated remarkable excellence at the prestigious 27th Annual National Convention of APTICON, which took place at Utkal University in Odisha on 27 and 28 September 2024. The students' stellar performance at this significant pharmaceutical conference stands as a testament to the institute's academic excellence and commitment to nurturing talented professionals in the field of pharmacy. These brilliant minds have showcased the power of research, innovation, and dedication. In a groundbreaking achievement, The Assam marked a historic milestone by receiving the prestigious APTI appreciation award.

NOVEMBER 2024

On November 6, 2024, NGI hosted "Cyber Jaagrookta Diwas" in AV Hall. This impactful event, organized by our IT Cell in collaboration with the Internal Quality Assurance Cell (IQAC), aligns with the Ministry of Education's initiative to promote cyber hygiene in educational institutions. The event featured the launch of the "Handbook on Basics of Cyber Hygiene for Higher Education Institutions" by the University Grants Commission (UGC), a valuable resource in enhancing cybersecurity awareness among students, faculty, and staff.

DECEMBER 2024

Faculty members from Pharmacology department attended 1st International conference on Experimental and Molecular pharmacology Interface in Drug Discovery and Development on 4th and 5th December 2024 at NIPER Guwahati

4 faculty members from chemistry department attended the training Programme on Small Molecules And Drug Quantification Using Liquid Chromatography Mass Spectrometry on 23rd and 24th December 2024 at NIPER Guwahati.

JANUARY , 2025

On 11th January, NGI came alive with the vibrant spirit of Pre-Bhogali celebrations The event was a delightful mix of cultural performances, traditional games, and authentic Assamese cuisine, bringing together students, faculty, and staff in a festive atmosphere. The highlight of the celebration was the symbolic preparation of Meji and various pithas, which added to the charm of the occasion.

INSTITUTIONAL GLORIES:

NEMCARE Group of Institutions has been honored with the 4th Prize for the Best College Award at the prestigious Book Fair, Guwahati!

Adding to this achievement, we also earned recognition for:

🏆 Best DotoraBadok

💃 Best Tiwa Dance

National Seminar on Recent Advancements in Ayurveda on 9th-10th November, 2024 organized by Govt. Ayurvedic College, Guwahati, Assam! 🌟

🏆 Tamanna Nasrat Mazumder - 2nd Prize in Scientific Poster Presentation

NETES Institute of Pharmaceutical Science is incredibly proud to share the outstanding achievements of our students at the 27th Annual National Convention of APTICON, held at Utkal University, Odisha! 🌟

🏆**Shibanee Talukdar**- 1st Prize in Scientific Poster Presentation
🏆**Dipjyoti Sharma** - 2nd Prize in Scientific Poster Presentation
🏆**Jebina Yasmin** - 3rd Prize in Scientific Poster Presentation

The Zonal Championship for B Pharm 5th Sem students, organized by the Training and Placement Cell, NGI in collaboration with MakeIntern and E-Cell IIT Hyderabad, showcased the exceptional talent and dedication of our students. After rigorous screenings, five outstanding candidates have been selected to advance to the final round at IIT Hyderabad.

INSTITUTIONAL ACHIEVEMENTS:

Sl.No	Category	Title	Author Name	Journal Name	DOI	Year
1	Journal (Research)	Exploration of the antioxidant and anti-inflammatory potential of *Vachellia farnesiana* bark by in vitro method	Lingkan Deka, Bhaswati Kashyap, Rosy Ahmed, Himsikhar Sarma, Riba Doley, Nilutpal Sharma Bora, Sameeran Gam, Bitu Gogoi, Rituparna Borah, Koushik Nandan Dutta*	Journal of Pharmacognosy and Phytochemistry	https://www.phytojournal.com/archives/2024.v13.i2.	2024
2	Journal (Research)	Antioxidant activities, cytotoxicity activity against A549 cell lines and HPTLC fingerprinting of *Pseudodrynaria coronans* (Wall. Ex Mett.) Ching rhizome	Muslek Uddın Mazumder, Tc Lalhriatpuii, Apurba Talukdar, Bhargab Jyoti Sahariah, Inamul Hoque, Manish Majumder	Hacettepe University Journal of the Faculty of Pharmacy	https://doi.org/10.52794/hujpharm.1414035	2024

3	Journal (Research)	An Analytical Approach by Tri-Combination of Gradient UFLC, Response Surface Methodology and Green Chemistry Principle for Simultaneous Quantification of Azelnidipine and Chlorthalidone in Rabbit Plasma	C Bhagyalakshmi, TN Rekha, Piyongsola Longkumer, Koushik Nandan Dutta, Bhargab Jyoti Sahariah, B Ramesh, Manish Majumder	Journal of Chromatographic Science	https://doi.org/10.1093/chromsci/bmae032	2024
4	Journal (Research)	A Simple Liquid Chromtographic Method for the Simultaneous Estimation of Antidiabetic Drugs in Spiked Human Plasma: Heteroscedasticity Study	B Prakashkumar, C Bhagyalakshmi, Pulak Majumder, Koushik Nandan Dutta, Manoj Kumar Deka, Bhargab Jyoti Sahariah, Manish Majumder	Research Journal of Pharmacy and Technology	DOI:10.52711/0974-360X.2024.00500	2024
5	Journal (Research)	A technique based on infrared spectroscopy for determining sulfanilamide levels sustainably: Progress and comparisons of greenness and whiteness using ComplexGAPI, AGREE, and RGB	Chintu Lahkar, Akramul Ansary, Manoj Kashyap, Tridib Kumar Das, Bitu Gogoi, Deepsikha Bharali, Manoj Kumar Deka, Bhargab Jyoti Sahariah, Manish Majumder	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	https://doi.org/10.1016/j.saa.2024.124467	2024

6	Journal (Research)	GC-MS and HPTLC Fingerprinting Analysis and Evaluation of Antimicrobial Activity of Naga Chilli: An *In Vitro* and *In Silico* Approach	Moziihrii Chache, Siddhartha Sankar Das, Deijy Choudhury, Bhargab J Sahariah, Gouhar Jahan Ashraf, Ranabir Sahu, Tarun Kumar Dua, Manish Majumder, Koushik Nandan Dutta	Biomedical Chromatography	https://doi.org/10.1002/bmc.6058	2024
7	Journal (Research)	Development of three UV-spectroscopic methods for simultaneous estimation of raloxifene and aspirin in pharmaceutical dosage form: Whiteness and greenness assessment with application of ComplexGAPI, AGREE, and RGB	Manoj Kumar Deka, Akramul Ansary, Tridib Kumar Das, Amit Kumar Das, Bhargab Jyoti Sahariah, Manish Majumder	Green Analytical Chemistry	https://doi.org/10.1016/j.greeac.2023.100088	2024
8	Journal (Research)	Comparative Life Cycle Assessment and Pharmaceutical Validations of Directly Compressed versus Additively Manufactured Tablets	Twinkle Gharate, Tukaram Karanwad, Manoj K. Deka, Sharmistha Banerjee, Subham Banerjee	Industrial & Engineering Chemistry Research (ACS Publication)		2024

9	Journal (Research)	Bioinspired labrum-shaped stereolithography (SLA) assisted 3D printed hollow microneedles (HMNs) for effectual delivery of ceftriaxone sodium	Shubham Kawre, Purushottam Suryavanshi, Dimple S. Lalchandani, Manoj K. Deka, Pawan Kumar Porwal, Santanu Kaity, Subhadeep Roy, Subham Banerjee	European Polymer Journal (Elsevier Publication)	https://doi.org/10.1016/j.eurpolymj.2023.112702	2024
10	Journal (Research)	Pharmacognostic And Phytochemical Study Of *Elsholtzia blanda*	Sathi Debbarma, Arnab Majumder, Phunchok Norbu Sherpa, Biprojit Paul, Replantful Chiangkata, Techi Gello	African Journal of Biological Sciences	10.48047/AFJBS.6.15.2024.6967-6976	2024
11	Journal (Research)	Synthesis and Biological Evaluation of Metal Complexes as Potential Anticancer Agents	Vishal Laxman Waghamare, Atia Jamal, Sampriti Chakraborty, Biprojit Paul, Pankaj Masih, Anil Kumar, Md Mustahidul Islam, Sanmati Kumar Jain, Meenu Rani	African Journal of Biological Sciences	https://doi.org/10.48047/AFJBS.6.15.2024.1906-1916	2024
12	Journal (Research)	Prevalence and Associated Risk Factors of Hypertension Among Adults in Kamrup District, Guwahati, Assam: A Cross Sectional Study	Devi Akoijam Mamata1*, Kakoti Jayashree2, Chanu Khangembam Subita3, Alaska Laishram4, Devi Nongthombam Senthia4, Salam Sulochana5, Devi Paonam Sapna6	Journal of Clinical and Biomedical Sciences	10.58739/jcbs/v14i4.146	2024

13	Journal (Research)	A study to assess the knowledge and attitude regarding expressed breast milk and it's storage among antenatal mothers in selected community health center, Mirza, Assam	Dilruba Akhtar, Mazoni Sikder, Jurisapna Begum, Tasnim Firdous Ahmed, Arunima Roy and Darshana Hazarika	International Journal of Nursing and Health Sciences	10.33545/26649187.2024.v6.i2b.70	2024
14	Journal (Research)	Quality of life among people living with type II diabetes mellitus in the selected rural community of Kamrup district, Assam	Darshana Hazarika, Imran Khan, Mangala Lahkar	African Journal of Biological Sciences	doi: 10.48047/AFJBS.6.13.2024.5128-5144	2024
15	Journal (Research)	Garcinia pedunculata Roxb. ex Buch.-Ham. Leaf Extract Ameliorates Diabetes in Streptozotocin Induced Diabetes in Rats	Kangkan Kalita, Techi Gello, Nilutpal Sharma Bora, and Zothan Puia	Bulletin of the faculty of Pharmacy, Cairo University	https://doi.org/10.54634/2090-9101.1064	2024

16	Journal (Research)	Quality control standardization, nutritional profiling, phytochemical analysis, and investigation into antioxidant and antimicrobial potential of *Begonia palmata* D. Don. leaves	Chayanika Bordoloi Rubi Das · Suman Kumar · Satyendra K. Prasad · Shatabdi Ghose · Damiki Laloo	Vegetos	10.1007/s42535-024-01108-7	2024
17	Journal (Research)	Repurposing of DrugBank molecules as dual non-hydroxamate HDAC8 and HDAC2 inhibitors by pharmacophore modeling, molecular docking, and molecular dynamics studies	D.Choudhury,K.Sarkar, S.Debnath, R.Ghosh,K.Chakrabortya, P.Sahaa, A.Singhaa, A.Nandia, B. Goswami ,A.Ghosh,Samir Kumar Sil	Journal Of Biomolecular Structure And Dynamics	https://doi.org/10.1080/07391102.2024.2428829	2024
18	Journal (Research)	In silico approach for identification of potential tetracyclic triterpenoids from mushroom as HMG-CoA reductase inhibitor	R.Mazumder,B.Debnath, D.Choudhury , R.Ghosh,A. Sarkar b , A. Ghosh, Sudhan Debnath	Aspects of Molecular Medicine	https://doi.org/10.1016/j.amolm.2024.100053	2024

19	Journal (Research)	Formulation, Optimization and Evaluation of Sustained Release Tablet of Tramadol Hydrochloride	Juti Rani Devi, Arundhuti Kashyap and B. Das	Indian Journal of Pharmaceutical Sciences		2024
20	Journal (Research)	Formulation and Evaluation of Phytosome© Drug Delivery System of *Camellia sinensis* (Polyphenols)	Juti Rani Devi, Bhupen Kalita, Trishna Das	African journal of Biological Sciences		2024
21	Journal (Research)	Development of a gradient method for sulfamethoxazole, trimethoprim, isoniazid, and pyridoxine hydrochloride in rabbit plasma through QbD-driven investigation	Premsagar K M, Bhagyalakshmi C, Piyong Sola, Akramul Ansary, Tridib Kumar Das, T. Yunus Pasha1, Koushik Nandan Dutta, Ramesh B & Manish Majumder	Scientific Reports	10.1038/s41598-024-77062-w	2024
22	Journal (Research)	Roflumilast-loaded nanostructured lipid carriers attenuate oxidative stress and neuroinflammation in Parkinson's disease model	Dhritiman Roy, Shivaramakrishnan Balasubramanian, Prajwal P. Kunte,Jawahar Natarajan, Piyong Sola, Emdormi Rymbai & Praharsh Kumar M. R	Journal of Drug Targeting	10.1080/1061186X.2024.2408724	2024

23	Journal (Research)	*In-Silico* Screening of Natural Compound Library against COVID-19 Main Protease	Nag M, Paul RK, Dasgupta D,Yakin J, Biswas S, Chattopadhyay S, Bora R, Alam F	Anti-Infective Agents	10.2174/0122113525310221240713022605	2024
24	Journal (Research)	Local Anaesthetic Activity Studies Of The Exotic Plant Species, *Croton Bonplandianum* baill	Subhas Chandra Maity *1, Padmanath Pegu 2, Subhasis Maity 1, Debaprotim Dasgupta3 and Mrinmoy Nag3	International Journal Of Pharmaceutical Sciences And Research	2024-09-11	2024
25	Journal (Research)	Assessing the Antiurolithiatic Potentials of *Calamus floribundus* Griff. An in vitro and in vivo Approaches	Kangkan Deka, Bibhuti Bhusan Kakoti, Ngurzampuii Sailo, Dev Jyoti Kalita, Rajashri Bezbaruah	Pharmacognosy Research	10.5530/pres.16.3.72	2024
26	Journal (Research)	Therapeutic potential of lipopeptide biosurfactant-fabricated copper oxide nanoparticles: Mechanistic insight into their biocompatibility using zebra fish	Tamanna Bhuyan, Yugal Kishore Mohanta, Kaustuvmani Patowary, Surjendu Maity, Debasis Nayak, Kangkan Deka, K Meenakshi Sundaram, Saravanan Muthupandian, Hemen Sarma	Current Research in Biotechnology	https://doi.org/10.1016/j.crbiot.2024.100227	2024

UPCOMING EVENTS:

NGPL Season 07:

The largest intercollegiate tennis ball cricket competition in Assam, the Nemcare Group Premier League (NGPL), was first played in 2018 at the NGI playground in Mirza. This competition includes a large number of teams from various institutions across India. It strengthens bonds between people and encourages sports education, particularly in cricket. The goal of NGPL is to be the best and set the standard for sports training, research, and teaching worldwide. It also helps to achieve sports excellence via cricket education, research, and training. In addition to serving as the national training center for a few sports, the tournament's goal is to further sports education in the fields of sports sciences, sports technology, sports management, and sports coaching besides functioning as the national training centre for select sports disciplines by adopting best national and international practices.

NIBS-2024:

The National Seminar on Novel Innovations in Biomedical Sciences (NIBS) conducted at NETES Institute of Pharmaceutical Sciences provided a dynamic platform for experts, researchers, and students to explore cutting-edge advancements in the field of biomedical sciences. The seminar featured a series of insightful presentations, discussions, and workshops focusing on the latest innovations in medical research, drug development, and healthcare technologies. The seminar witnessed the participation of many delegates from Assam, Arunachal Pradesh, Meghalaya, Mizoram and West Bengal. The participants shared their expertise and knowledge in different paradigms of recent advances in the fields of pharmacy, nursing, life science and Biomedical science.

ANNOUNCEMENTS

Animal house facility at NIPS-Mirza

Applications are invited from the students & research scholars of various Institutes to carry out the animal study part of their project work at the state-of-the-art Animal house facility of NIPS, Mirza. For any query please contact:

Member Secretary

IAEC, NIPS, Mirza

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The Institute boasts of a young and dynamic IAEC and CPCSEA experts along with Veterinarian care for consultations of animal care during the experiment. Charges for conducting experiments and CPCSEA approval meetings will be applicable.