Volume 12

PHARMAZONE

Girijananda Chowdhury Institute of Pharmaceutical Science

2021-22

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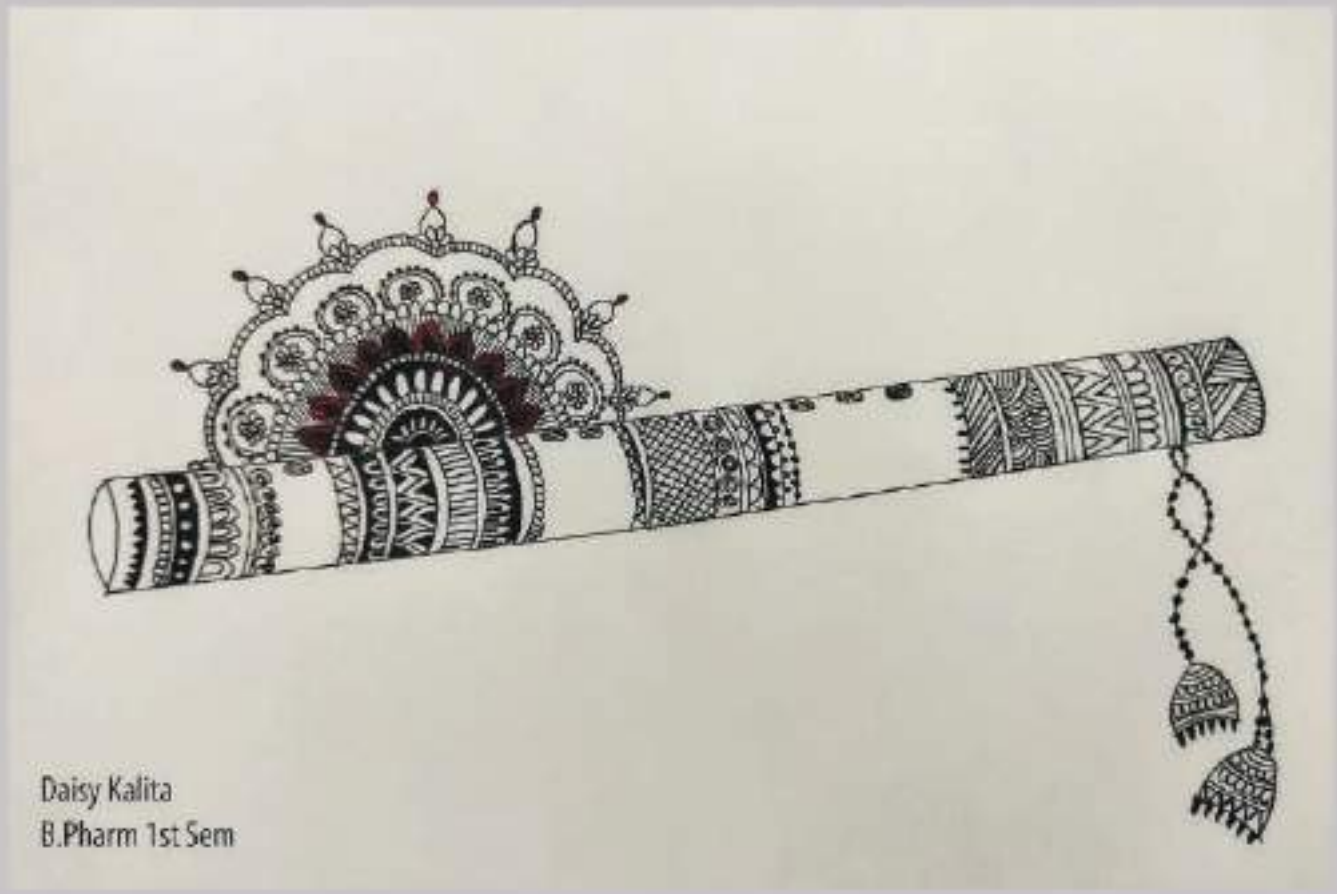

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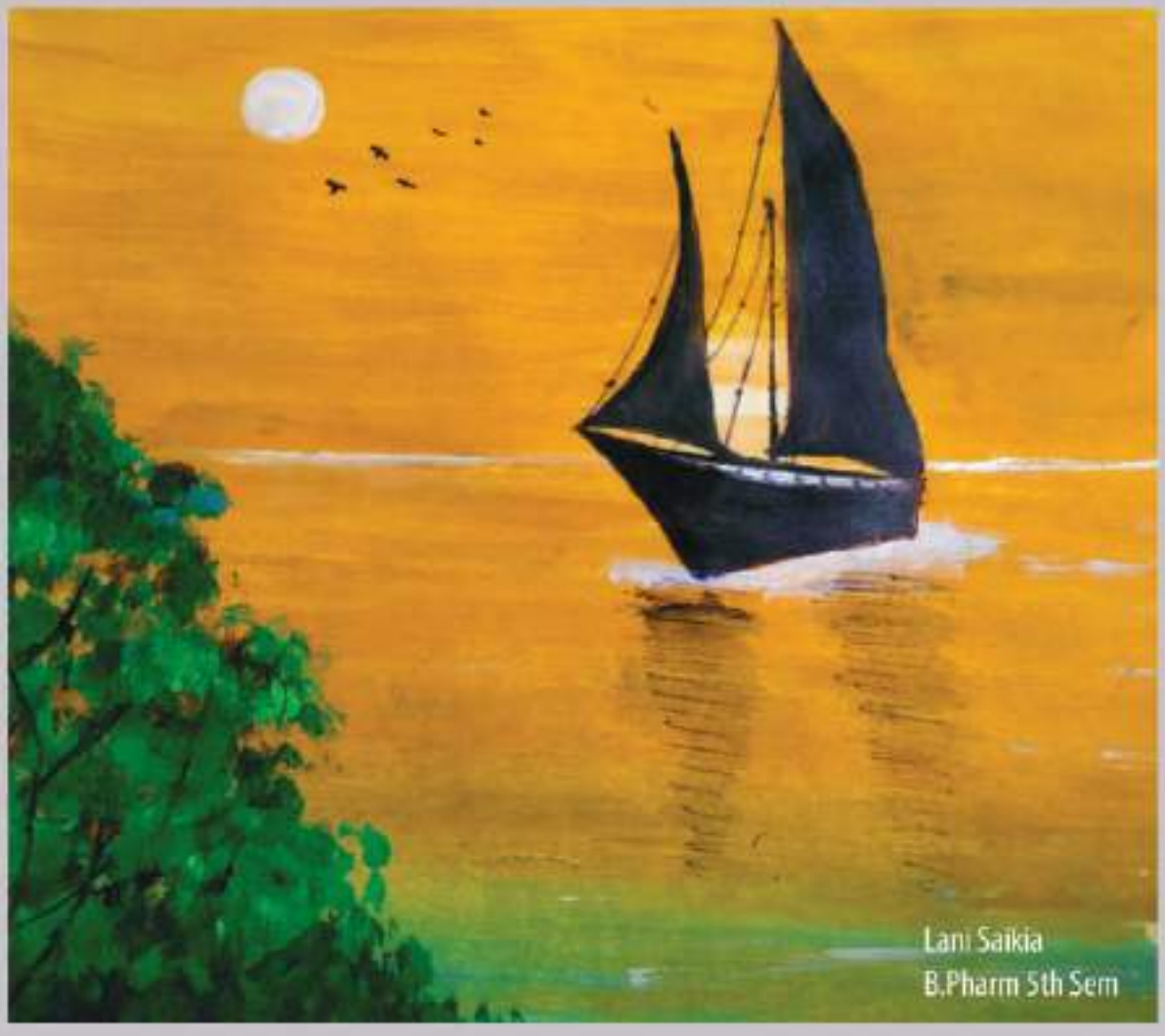

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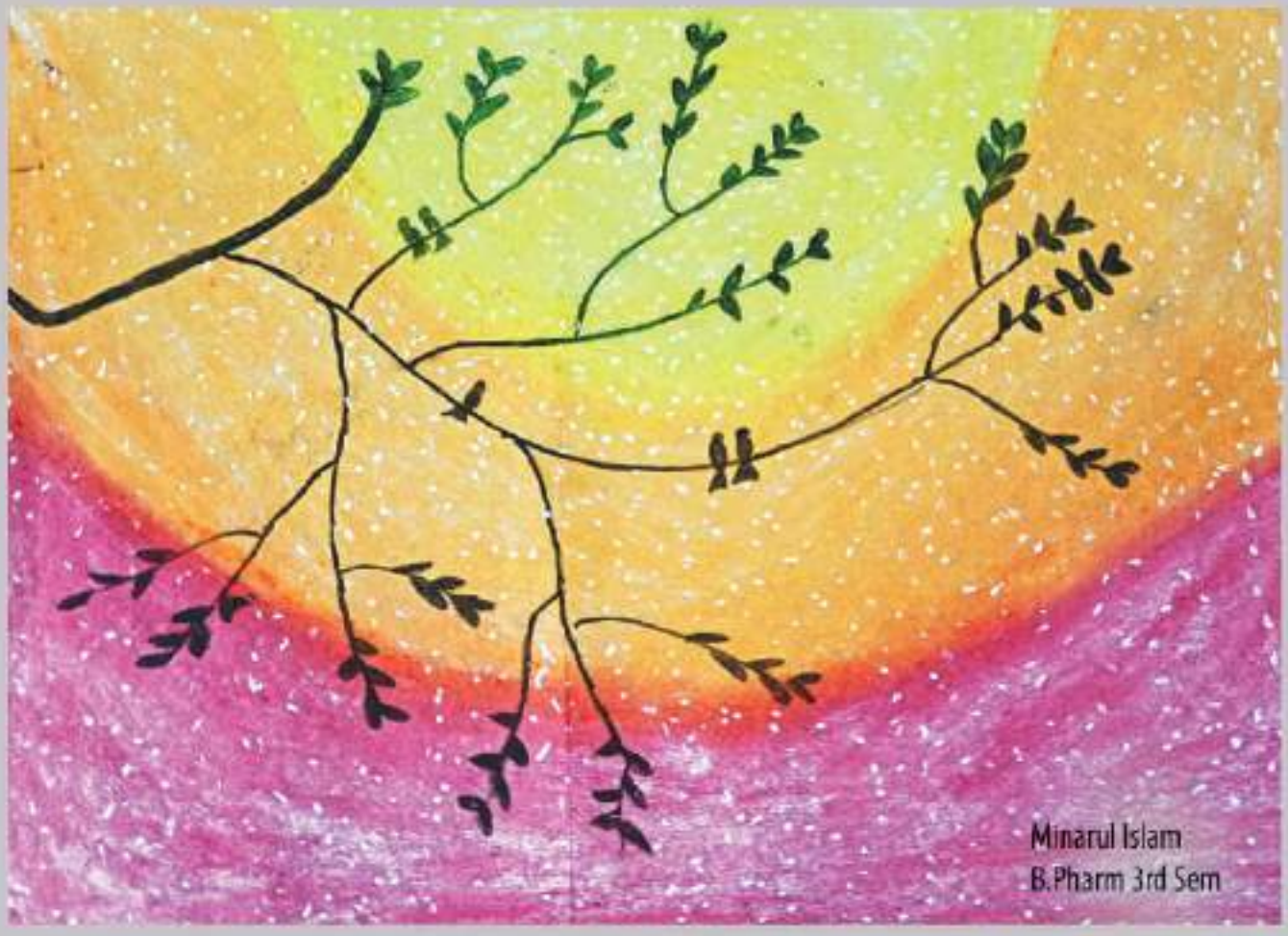

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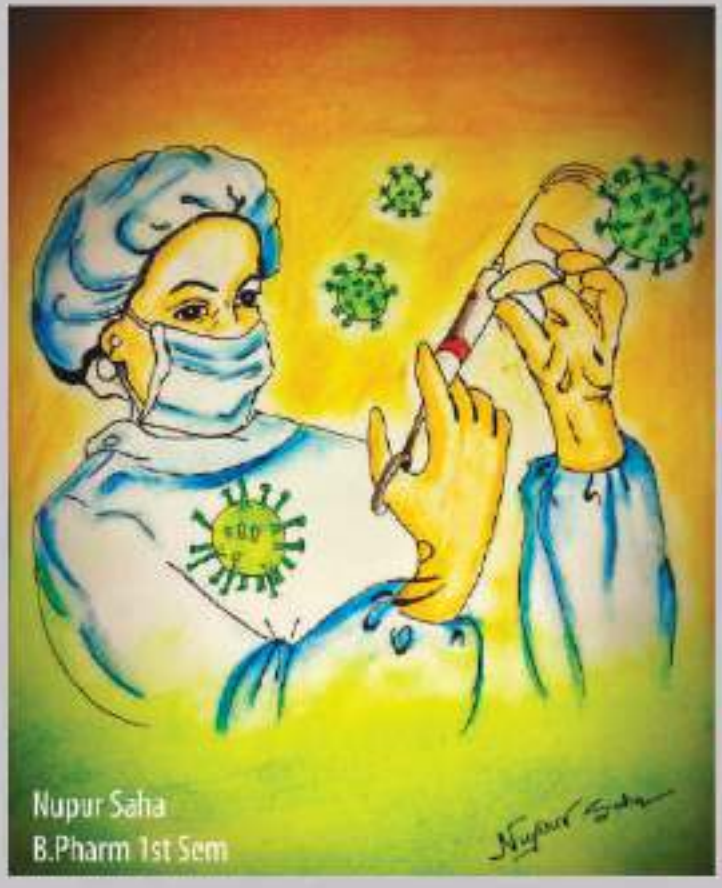

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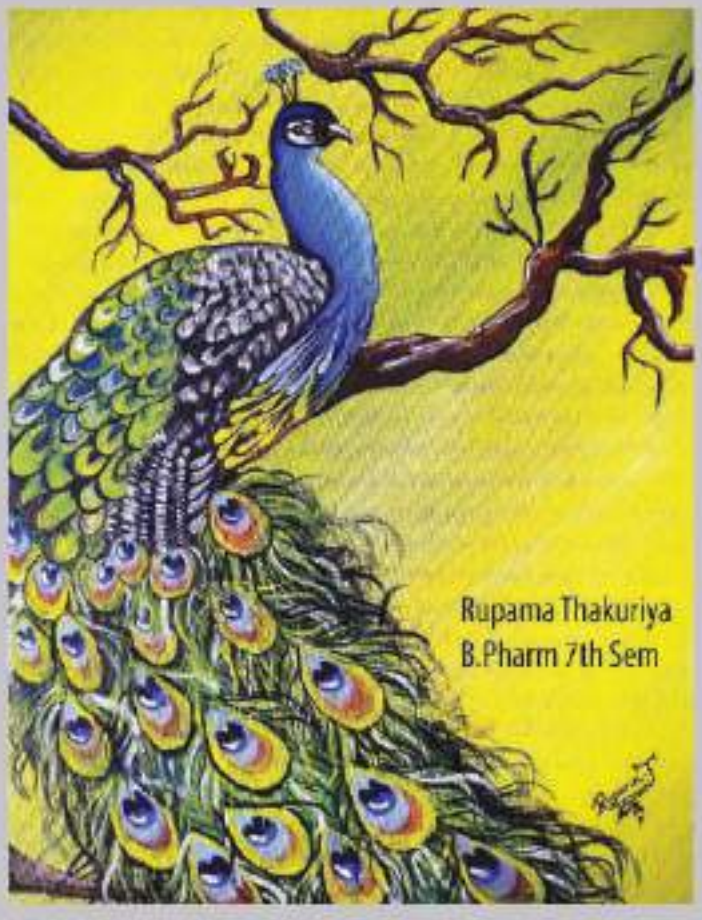
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PHARMAZONE

2021-22

Annual Magazine

Volume 12

With best compliments from :

To,

.....

.....

Prof. (Dr.) Gouranga Das
(Patron)

Mr. Susankar Kushari
(Editor)

Girijananda Chowdhury Institute of Pharmaceutical Science

Editorial Team Member

Prof. (Dr.) Gouranga Das
CHIEF PATRON

Mr. Susankar Kushari
EDITOR

Faculty Member

Mrs. Smriti Rekha Chanda Das

Ankita Kashyap

Asha Das

Suman Kumar

Mrinmoy Deka

Student Member

Manabendra Barman

Anup Jyoti Das

Rashmita Dutta

Pranjal Das

Pharmacist's Oath

- I swear by the code of Ethics of Pharmacy Council of India in relation to the community and shall act as an integral part ofhealth care team.
- I shall uphold the laws and standards governing my profession.
- I shall strive to perfect and enlarge my knowledge to contribute to the advancement of pharmacy and public health.
- I shall follow the system, which I consider best for pharmaceutical care and counselling of patients.
- I shall endeavour to discover and manufacture drugs of quality to alleviate sufferings of humanity.
- I shall hold in confidence the knowledge gained about the patients in connection with my professional practice and never divulge unless compelled to do so by the law.
- I shall associate with organizations having their objectives for betterment of the profession of Pharmacy and make contribution to carry out the work of those organizations.
- While I continue to keep this Oath unviolated, may it be granted to me enjoy life and the practice of pharmacy respected byali, at all times!
- Should I trespass and violate this oath, may the reverse be my lot!

TRIBUTE

Tribute to honorary

Late Girijananda Chowdhury

A figure of wisdom and exemplary personality whose skillful vision and dynamic leadership has resurgent the pillars of GIPS today

IN MEMORIUM

We shall forever remember you

"A limb has fallen from the family tree. I keep hearing a voice
that says" "grieve not for me"
Remember the best times the laughter,
the strong, The good life I lived while I was strong

Late Bina Choudhury

Founder

Shrimanta Shankar Academy Society

11th July, 1930-21st May, 2017

OBITUARY

GIPS

will always remember you

Late Dhiraj Bora

30 September 1951-19 June 2021

Condolences Message

Birth: 15.3.1979 - Death: 17.6.2021
REST IN PEACE

Mr. Jiban Debnath
Drugs Inspector (Sonitpur District, Assam)
Former Faculty of Girijananda Chowdhury Institute of Pharmaceutical Science (Guwahati).

It is unfortunate to hear the untimely and unexpected news about the demises of **Mr. Jiban Debnath** on 17.06.2021 at his home in Nagoan early in the morning. **Mr. Debnath** was such a wonderful person with absolute substance, sincere behavior, and great personality and has always been a great asset for our organization. Currently, he is holding a respected administrative post working as Drugs Inspector at Sonitpur District of Assam. During his academic tenure, he was one of the most intelligent faculty in the Department of Pharmacology, Girijananda Chowdhury Institute of Pharmaceutical Science (Guwahati). He served the Institute for more than a decade from 02.02.2009 to 05.04.2020, and has been an excellent fellow in both academics as well as administration. He was one of the main pillars of the institute who had set many examples in terms academic, research and administration. He was instrumental in setting up the Institutional Pharmacology department, Animal House, Drugs Information Centre, IPR cell etc., and was actively involved in critical decision making thereby playing a major role in many institutional events such as NBA, NIRF, SIRO, PCI, AICTE etc. He was an idol and inspiration for many who has known and met him and was equally respected among the students, faculties and the society. His standards of working is based on high principles of sincerity, honesty, commitment, integrity and transparency and this has made him well fitted in all professional fields.

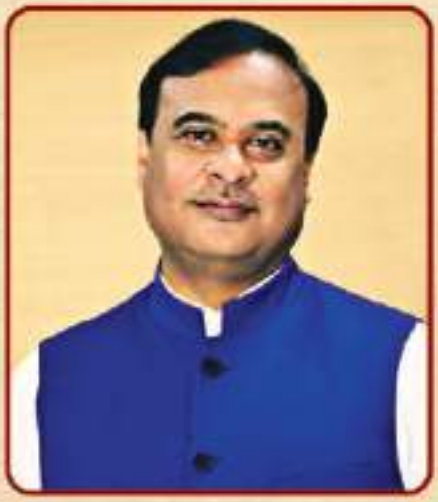
In these hard times, he had left us for the heavenly abode and left behind his family which accounts his wife and a four year old daughter. The GIPS family will remain totally indebted to all his contributions towards shaping the quality and standards of the institute. In this difficult time, we firmly stand with his family members and would like to pay our deepest and heartfelt condolence to his departed soul.

May his beautiful soul rest peacefully in heaven.

ড° হিমন্ত বিশ্ব শর্মা
Dr. Himanta Biswa Sarma

সত্যমেব জয়তে

মুখ্যমন্ত্রী, অসম
Chief Minister, Assam



Dispur
9 Aghon, 1428 Bhaskarabda
26.11.2021

Message

I am happy to know that Girijananda Chowdhury Institute of Pharmaceutical Science (GIPS) is going to publish the 12th volume of its annual magazine 'PHARMAZONE' on the occasion of National Science Day.

The publication of the magazine is an opportune moment to provide a platform to the students, alumni, teaching and non-teaching staff of the institute to discuss and deliberate on various aspects of scientific happenings around the world apart from expressing their talents through literary and artistic works. I am hopefully that the magazine, next genaration of pharmaceutical scientists would find avenue to voice their opinions on different matters while deliberating on various delovelopments in the sphere of science and technology.

I wish Girijananda Chowdhury Institute of Pharma ceurtical Science all the very best on this occasion and hope the annual magazine that would be all able to achieve its desired goals.

(Dr. Himanta Biswa Sarma)

Ranoj Pegu
Minister
Education and WPT & BC Department
Government of Assam
Dispur, Guwahati-781006

सत्यमेव जयते

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Message

I feel happy to know that Girijananda Chowdhury Institute of Pharmaceutical Science, Guwahati is going to publish the 12th volume of their annual magazine named "Pharmazone" on the occasion of National Science Day.

The Institute is one of the leading center of pharmacy science which from its inception has been trying to deliver quality education. In this regard, I extend my greetings and warm wishes to the editorial board and all the esteemed members associated with the publication of the magazine and wish success of the same

(Dr. Ranoj Pegu)

Lovelina Buragohain

Bronze Medalist
Summer Olympics 2020

Message

I have great pleasure in conveying my best wishes to the Department of Pharmaceutical Sciences, Gurujananda Choudhary Institute of Pharmaceutical Sciences (GIPS), Guwahati for releasing the yearly magazine.

Student life is beautiful, yet hectic part of life. As a student the most important thing to remember is that laziness is your worst enemy and Hard work is your best friend Always look for how much progress you made rather than perfection.

Let your talent shine bright and blind everyone out with its aura. Hold positivity in heart and do well.

Best wishes,

Lovlina

(Lovelina Buragohain)

GOVT. OF ASSAM

Department of Health

OFFICE OF THE ASSAM PHARMACY COUNCIL

Constituted as per Pharmacy Act, 1948, Govt. of India

PHARMACY BHAWAN

Director of Health Services Campus, Hengrabari, Guwahati-36

শুভেচ্ছা জ্ঞাপন

আধুনিক শিক্ষাৰ নবদ্বীপ গিৰিজানন্দ চৌধুৰী প্ৰতিষ্ঠানৰ অন্তৰ্গত "ভেষজ শিক্ষা বিভাগে" প্ৰতি বছৰে পালন কৰি অহাৰ দৰে এই বেলিও "ৰাষ্ট্ৰীয় বিজ্ঞান দিৱস" উপলক্ষে তেওঁলোকৰ বহুকেইয়া মুখপত্ৰ 'ফাৰ্মাজোন'ৰ ১২ সংখ্যক মুখপত্ৰখন প্ৰকাশ কৰিব বুলি জানিব পাৰি নথৈ আনন্দিত হৈছো। এই মহান উদ্দেশ্যত মোক ইয়াৰ এভাগ অংশীদাৰ হোৱাৰ সুবিধা দিয়া বাবে সমূহ শিক্ষক শিক্ষয়িত্ৰী তথা ছাত্ৰ-ছাত্ৰী আটাইলৈ আন্তৰিক ধন্যবাদ জনালো।

আশাকৰো এই 'ফাৰ্মাজোন'খনে অসমৰ জাতীয় জীৱনত আৰু শিক্ষাৰ ক্ষেত্ৰখনত যথেষ্ট প্ৰভাৱ পেলোৱাৰ লগতে আজিৰ উঠি অহা যুৱচামৰ মাজত ভেষজ শিক্ষা বিভাগটোৰ বিষয়ে এক উজ্বল আৰু বিস্তাৰিত প্ৰতিচ্ছবি ডাঙি ধৰিব।

সদৌ শেষত গিৰিজানন্দ চৌধুৰী শিক্ষা প্ৰতিষ্ঠানখনৰ লগতে তেওঁলোকৰ মুখপত্ৰখনৰ দীৰ্ঘায়ু কামনা কৰিলো।

(শ্ৰীজগদীশ মিশ্ৰ)

পঞ্জীয়ক

অসম ফাৰ্মচী পৰিষদ

হেঙেৰাবাৰী, গুৱাহাটী-৩৬, অসম

From the Desk of
Vice Chancellor

Message

Message from the Vice Chancellor Girijananda Chowdhury Institute of Pharmaceutical Science (GIPS), Guwahati, Assam is publishing the 12th volume of Annual Magazine, PHARMAZONE. It is important to publish the magazine yearly, as it narrates the achievements and activities held during the year. PHARMAZONE also provides a platform to the students, alumni, teaching and non-teaching and staff along with others to express their views and opinions on various relevant topics. I extend my heartiest congratulations to the faculties and students for their effort to raise the standard to such a level.

This journal publication has been possible only because of collaborative, cooperative and untiring effort of the editorial board.

I congratulate all the members of the Editorial Board for this great job.

P. J. Handique

(Prof. Pratap Jyoti Handique)

From the Desk of
President

Message

It gives me utmost pleasure to know that the Girijananda Chowdhury Institute of Pharmaceutical Science is bringing out its 12th volume of the institute magazine 'Pharmazone" very soon. An annual magazine of an institution reflects its achievements during the year. Besides the academic curriculum, GIPS has been involved in various extracurricular and social activities like blood donation camp, health camp etc in the nearby villages. "National Science Day" is a regular feature in their activity calendar where participants from outside also take part. I like to congratulate Principal and dedicated teachers of GIPS for rendering great services in the field of professional education for making the institute a leading one in the North-Eastern region of India.

Lastly I take the opportunity of conveying my best wishes to the Editor and other members of the editorial board for a grand success in their mission and hope that the magazine will reflect the hidden talents and creative potential of the students.

(Mr. Ratul Das)
President
Shrimanta Shankar Academy Society

From the Desk of
Secretary

Message

We at GIPS wish to be the medium for change by imparting its most important component i.e; "Knowledge". GIPS has always stood for quality education and has excelled in providing all that's needed to mould the young mind succeed. With excellent infrastructural facilities and team of dedicated and experienced faculty, GIPS provides every bit of opportunity for students to excel in their quest for knowledge. We welcome all the aspirants to be a part of this esteemed institute and hope that you will be able to get an opportunity to imbibe the ethos that GIPS stands for.

(Mr. Bijoyananda Choudhury)
Secretary
Shrimanta Shankar Academy Society

From the Desk of
Principal

Message

I am feeling immense pleasure that we are going to publish the 12th volume of the institutional magazine, Pharmazone, 2022. The creative eye of Girijananda Chowdhury Institute of Pharmaceutical Science (GIPS) is always looking for quality education. Pharmazone is the mirror of this prestigious institute reflects the images of its features of standard education system, research facilities and industrial infrastructure for solid dosages forms.

Apart from these, Pharmazone acts as a medium for expressing students and faculty activity in the field of artistic culture, inter college cricket tournament, outdoor and indoor sports, Assam state level Unnat Bharat Abhiyan, Seminar, symposium, training, growth and development of GIPS.

I am confident that our institutional endeavour along with the full support of our society will make it success.

(Prof. (Dr.) Gouranga Das)
Principal, GIPS

From the Desk of
Editor

Message

I am happy to learn that Girijananda Chowdhury Institute of Pharmaceutical. Science, Azara, Guwahati is publishing its 12th Volume of their college magazine titled "Pharmazone" on "National Science Day" which falls on 28th February, 2022.

College magazine serves as a platform for the students, alumni, teaching and non-teaching staff to share their different views on scientific, cultural, literary and artistic ideas.

I would like to place on record my gratitude and heartfelt thanks to the President, Shrimanta Sankar Academy (SSA), Secretary SSA, Principal (GIPS), and all members of the GIPS for their wholehearted support and guidance. I express my sincere thanks to all the members of editorial board for their unrelenting efforts in compiling this magazine. Last but not the least, I am thankful to all the authors who have sent their articles.

Readers feedback is very important to us, which will help us to improve the quality of this magazine. Feedback can be sent to gipspharmazone2021@gmail.com I wish the success of the Annual Magazine and convey my best wishes to the Institute.

(Mr. Susankar Kushari)

Sambar Deer
Kaziranga National Park

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THE NOBEL PRIZE IN CHEMISTRY

HISTORY :

The Nobel Prize in Chemistry is awarded annually by the Royal Swedish Academy of Sciences to scientists in the various fields of chemistry. It is one of the five Nobel Prizes established by the will of Alfred Nobel in 1895, awarded for outstanding contributions in chemistry, physics, literature, peace, and physiology or medicine. This award is administered by the Nobel Foundation, and awarded by the Royal Swedish Academy of Sciences on proposal of the Nobel Committee for Chemistry which consists of five members elected by the Academy. The award is presented in Stockholm at an annual ceremony on 10 December, the anniversary of Nobel's death.

The Nobel Prize in Chemistry has been awarded 113 times to 188 Nobel Prize laureates between 1901 and 2021. Frederick Sanger is the only laureate who has been awarded the Nobel Prize in Chemistry twice, in 1958 and 1980. Only seven women have received the prize, including Marie Curie, her daughter Irène Joliot-Curie, Dorothy Crowfoot Hodgkin (1964), Ada Yonath (2009), Frances H. Arnold (2018), Emmanuelle Charpentier and Jennifer Doudna (2020).

AMINUL ISLAM
M Pharm 3rd Sem

NOBEL PRIZE IN CHEMISTRY 2021:

The Nobel Prize in Chemistry 2021 was awarded jointly to Benjamin List and David W.C. MacMillan "for the development of asymmetric organocatalysis."

Benjamin List, Germany

David W.C. MacMillan, USA

Benjamin List -born 1968 in Frankfurt, Germany. Ph. D. 1997 from Goethe University Frankfurt, Germany. Director of the Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, Germany

David W.C. MacMillan -born 1968 in Bellshill, UK. Ph.D. 1996 from University of California, Irvine, USA. Professor at Princeton University, USA

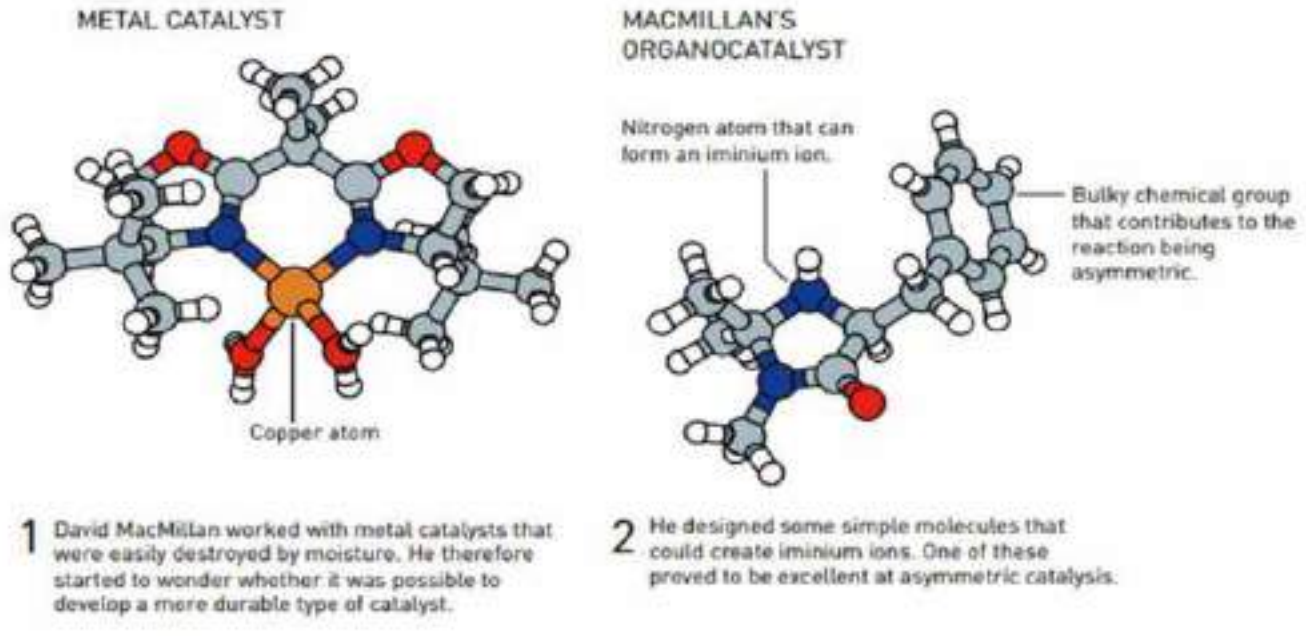
AN INGENIOUS TOOL FOR BUILDING MOLECULES

Building molecules is a difficult art. Benjamin List and David MacMillan are awarded the Nobel Prize in Chemistry 2021 for their development of a precise new tool for molecular construction: organocatalysis. This has had a great impact on pharmaceutical research, and has made chemistry greener.

Many research areas and industries are dependent on chemists' ability to construct molecules that can form elastic and durable materials, store energy in batteries or inhibit the progression of diseases. This work requires catalysts, which are substances that control and accelerate chemical reactions, without becoming part of the final product. Catalysts are thus fundamental tools for chemists, but researchers long believed that there were, in principle, just two types of catalysts available: metals and enzymes. Benjamin List and David MacMillan are awarded the Nobel Prize in Chemistry 2021 because in 2000 they, independent of each other, developed a third type of catalysis. It is called asymmetric organocatalysis and builds upon small organic molecules.

Organic catalysts have a stable framework of carbon atoms, to which more active chemical groups can attach. These often contain common elements such as oxygen, nitrogen, sulphur or phosphorus. This means that these catalysts are both environmentally friendly and cheap to produce.

Organocatalysis has developed at an astounding speed since 2000. Benjamin List and David MacMillan remain leaders in the field, and have shown that organic catalysts can be used to drive multitudes of chemical reactions. Using these reactions, researchers can now more efficiently construct anything from new pharmaceuticals to molecules that can capture light in solar cells. In this way, organocatalysts are bringing the greatest benefit to humankind.



PRIZES :

A Chemistry Nobel Prize laureate earns a gold medal, a diploma bearing a citation, and a sum of money

Nobel Prize Medals - The Nobel Prize medals, minted by Myntverket in Sweden and the Mint of Norway since 1902, are registered trademarks of the Nobel Foundation. Each medal feature an image of Alfred Nobel in left profile on the obverse (front side of the medal) and the years of his birth and death (1833–1896). The image on the reverse of a medal varies according to the institution awarding the prize. The reverse sides of the Nobel Prize medals for Chemistry and Physics share the same design.

Nobel Prize Diplomas - Nobel laureates receive a diploma directly from the hands of the King of Sweden. Each diploma is uniquely designed by the prize-awarding institutions for the laureate that receives it. The diploma contains a picture and text which states the name of the laureate and normally a citation of why they received the prize

Award Money - At the awards ceremony, the laureate is given a document indicating the award sum. The amount of the cash award may differ from year to year, based on the funding available from the Nobel Foundation. In the year 2021, prize money of10 million Swedish kronor, was to be shared equally between the Laureates.

Professionalism - meeting the standard that matter

Bedabrata Talukdar
D. Pharm 2nd year

As the saying goes, "Professionalism is not the job you do, its how you do the job." The concept of profession and professionalization have received considerable and sometimes critical attention in sociology. Professionalism involves consistently achieving high standards, both visibly and "Behind the scenes" -whatever your role or profession. It is also an attitude - one that occurs through socialisation and formal education. Attitudes and behaviors are often modeled after those of a professional role model. Broadly three features characterise a profession and professional values -

- Specialised training.
- Recognition of the need for standards of practice.
- Commitment to provide a service that goes beyond the personal interests of the professional.

Professionalism in health care sectors such as pharmacy entails a lot. For instance, in response to the ever expanding public demand for the pharmaceutical products, care and services, professionalism in this particular field of health care practice involves neatly putting on the professional attire to gain the patient's trust, assuming the accountability for the drug therapy results as well as the proficient, precise and safe supply of any pharmaceutical product. Well nurtured behaviours, ethics and attitudes such as proper timekeeping, flexibility, commitment, sociability, diligence alongside sincerity and responsibility constitute the base of pharmaceutical professionalism.

The experts agree that professionalism is one of the biggest factor in someone's level of career success. It might sound dramatic but its true. This trait affects every aspect of how you do your job. Lack of professionalism can cost you a job or promotion and it can even put you first in line for a layoff. In a recent study on career readiness conducted by NACE(National Association of Colleges and Employers), employers who hire college graduates were asked which professional competencies were essential to workplace success. Professionalism/Work ethic topped the list with 97.5% of respondents identifying it as either 'Absolutely Essential' or 'Essential' for a new college hire's success.

However, in between all of these, another aspect which rise in discussions is balancing between your private and professional lives. It is pretty obvious that maintaining your work-life balance can be pretty hectic sometimes. Being able to strike a balance between your professional and personal lives can help you become more productive and less likely to burnout. This balancing act takes careful planning and preparation, but it is possible. For starters, setting priorities depending upon the situation, shielding your passions, creating schedule and trying to stick to it, eliminating distractions might help. Once you find the sweet spot and with your growing experience everything settles down just fine.

You might be wondering, 'How to improve my professionalism?' or 'How to build my professional character?' ,well even if you don't have much experience with professionalism yet, there are many steps you can take to improve as you prepare to enter the workforce. Professional organisations, events and conferences are great places to practise professionalism . They are also an opportunity to observe how others behave in a professional setting. The Professional organizations helps to generate energy, new ideas and shared practises to support the growrth of professionals.Therearehundredsofhealthandhealthcarerelatedprofessionalorganisationswhereprofessionalsgathertoshare,talk,learnandteach.Healthcareprofessionalsadvocateforthosetheyserve,causesandtheirrespectiveroles.Theseorganisationsadvocatefortheirrespectiveprofessionsandsupportmembersthrougheducation,policyandbestpractice. These helps in nurturing your knowledge as well as your communication skills, which is considered to be very critical to the ethical identity of the professional. A professional must keep improving himself irrespective of his position in a workplace to help and motivate others with his ever growing experience and to create a better professional environment so that new comers find it easy to adapt and learn.

How artificial intelligence is changing drug discovery?

Debabrata Nath
M. Pharm 3rd Sem

Machine learning and other technologies are expected to make the hunt for new pharmaceuticalsquicker, cheaper and more effective.

An enormous figure looms over scientists searching for new drugs: the estimated US$2.6-billion price tag of developing a treatment. A lot of that effectively goes down the drain, because it includes money spent on the nine out of ten candidate therapies that fail somewhere between phase I trials and regulatory approval. Few people in the field doubt the need to do things differently.

Leading biopharmaceutical companies believe a solution is at hand. Pfizer is using IBM Watson, a system that uses machine learning, to power its search for immuno-oncology drugs. Sanofi has signed a deal to use UK start-up Exscientia's artificial-intelligence (AI) platform to hunt for metabolic-disease therapies, and Roche subsidiary Genentech is using an AI system from GNS Healthcare in Cambridge, Massachusetts, to help drive the multinational company's search for cancer treatments. Most sizeable biopharma players have similar collaborations or internal programmes.

If the proponents of these techniques are right, AI and machine learning will usher in an era of quicker, cheaper and more-effective drug discovery. Some are sceptical, but most experts do expect these tools to become increasingly important. This shift presents both challenges and opportunities for scientists, especially when the techniques are combined with automation. Early-career researchers, in particular, need to get to grips with what AI can do and how best to acquire the skills they need to be employable in the job market of tomorrow.

BODY SENSOR : RECENT ADVANCEMENT IN PHARMACEUTICAL SCIENCE

Hrishikesh Bhagawati
M. Pharm 3rd Sem

Recent advances in biosensor design and sensing efficacy need to be amalgamated with research in responsive drug delivery systems for building superior health or illness regimes and ensuring good patient compliance. A variety of illnesses require continuous monitoring in order to have efficient illness intervention. Physicochemical changes in the body can signify the occurrence of an illness before it manifests. Even with the usage of sensors that allow diagnosis and prognosis of the illness, medical intervention still has its downfalls. Late detection of illness can reduce the efficacy of therapeutics. Furthermore, the conventional modes of treatment can cause side-effects such as tissue damage (chemotherapy and rhabdomyolysis) and induce other forms of illness (hepatotoxicity). The use of drug delivery systems enables the lowering of side-effects with subsequent improvement in patient compliance. Chronic illnesses require continuous monitoring and medical intervention for efficient treatment to be achieved. Therefore, designing a responsive system that will reciprocate to the physicochemical changes may offer superior therapeutic activity. In this respect, integration of biosensors and drug delivery is a proficient approach and requires designing an implantable system that has a closed loop system. This offers regulation of the changes by means of releasing a therapeutic agent whenever illness biomarkers prevail. Proper selection of biomarkers is vital as this is key for diagnosis and a stimulation factor for responsive drug delivery. By detecting an illness before it manifests by means of biomarkers levels, therapeutic dosing would relate to the severity of such changes. In this review various biosensors and drug delivery systems are discussed in order to assess the challenges and future perspectives of integrating biosensors and drug delivery systems for detection and management of chronic illness.

Take the global profound disease like cancer generally requires a biopsy to be performed. This is however an invasive procedure where prognosis is limited. Accurate analysis requires technologies such as micro arrays in order to trace susceptibility and level of severity. The analysis of proteomics and genomics require sophisticated instruments and highly trained personnel for data analysis in relation to the high number of people diagnosed with cancer. As an alternative, physiochemical changes that occur during illness can be analyzed making use of noninvasive procedures. Lung cancer is one of the illnesses that can be diagnosed by means of analyzing exhaled volatile organic compounds. Volatile organic compounds such as hexane, methylpentane and benzene derivatives such as o-toluidine and aniline have been used as lung cancer biomarkers. This technology will replace the use of X-rays which does not show illness manifestation until a tumor has formed.

For cardiovascular disease, biomarkers can be useful tools for better identification of susceptible individuals, early disease diagnosis and offer an inter-individual prognosis and illness management. The related susceptibility includes disorders of the blood vasculature and the heart, and even stroke due to late diagnosis. Cardiovascular disease diagnosis can vary amongst individuals based on age, sex and body mass index. Portable biosensors devices able to detect specific biomarkers can be used by patients to monitor their health on daily basis.

At last we can conclude, Integration of diagnosis and therapeutics into a single system can improve illness management. Combination of biosensors and drug delivery system vehicles does not only allow self-regulated therapeutics but is a protective means against biohazard agents as well. Detection of biohazards levels, chemical and biochemical substances require selection of a marker which can be used as direct or indirect indicator. As in environmental applications pollution can be determined by detecting the level of elevated foreign compounds and chemical by-products, the same mode of detection is applied for illness management. Biochemical imbalances, such as those of glucose and cholesterol levels, are indicative of different illness; hypercholesterolemia and hyperglycemia signify elevated levels of cholesterol and glucose, whereas hypercholesterolemia and hypoglycemia indicate their low levels.

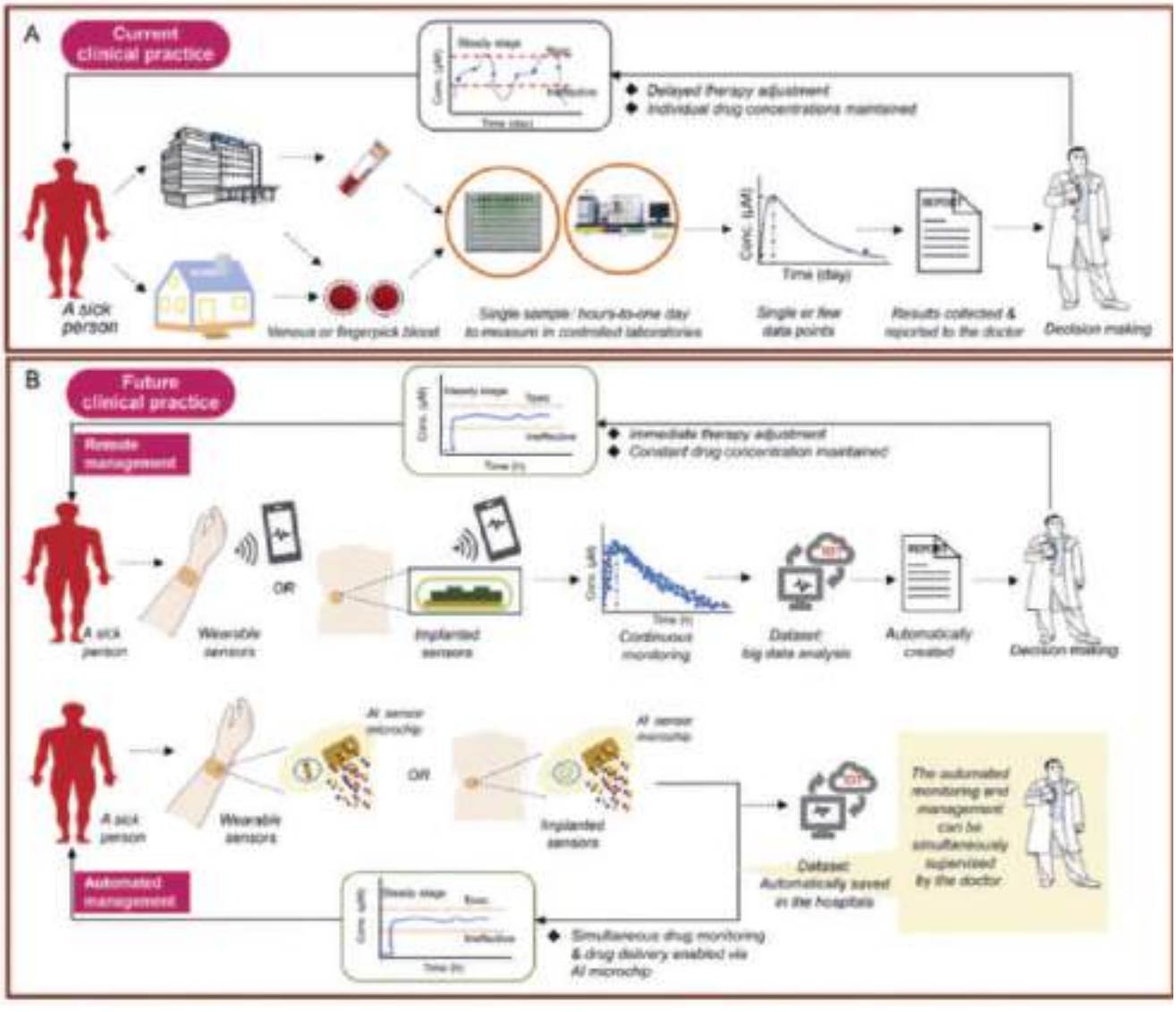


Fig : Depiction of biosensor working.

TRADITIONAL HEALING PRACTICES OF MISHING TRIBE OF NORTH EAST INDIA

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North east India is a place where the food habit changes within every 100 km, language changes among the various districts and healing practices also changes from region to region. The North east India is a hub for various tribal communities which are present in distributed form throughout the region. Total there are 145 tribal communities in North east India out of which 78 are large and have more than 5000 members. With such a diversified distribution and a hub for huge flora and fauna, North east India also made the bench mark for various traditional healing practices that is being practiced by the tribal people of North east India.

The traditional medical practitioner or traditional healer can be defined as "someone who is recognized by the community in which he lives as competent to provide health care by using vegetable, animal and mineral substances and certain other methods based on the social, cultural and religious backgrounds as well as the prevailing knowledge, attitudes and beliefs regarding physical, mental and social well-being and the causation of disease and disability in the community". Traditional healers used different medicinal formulas from various natural substances (animal, mineral and vegetable). They have extensive knowledge on the use of plants and herbs for medicinal and nutritional purposes.

Mishing community is one of the major tribal communities which are distributed from Arunachal Pradesh to plains of Assam and bifurcated from time to time due to their migration from hills of Arunachal Pradesh to plains of Assam. During this migration they developed their knowledge by acquiring from other nearby communities and used herbs available in and around their villages for various treatments of ailments. The Mishings are an ethnic group inhabiting the districts of Dhemaji, North Lakhimpur, Sonitpur, Tinsukia, Dibrugarh, Sibsagar, Jorhat and Golaghat of Assam. A few live in and around Pasighat of East Siang district of Arunachal Pradesh. They are the second largest tribal group in North-East India, followed by the Bodos. Their chief festival is Ali-Aye-Ligang, in the month of February, which marks the

beginning of the sowing season. It was found that long back the responsible persons in the villages was village head called Gaon Burha in Arunachal Mishing but during these interactions more than 3 persons belonging to same or different family are involved in healing practices by developing some cultivation of herbs used in their practices and not naturally occurring in the nearby areas just like Aloe barbadensis, Barleria cristata, Glycyrrhiza glabra etc. Under healing practices of Mishing community general herbalist, bone setters, Ojhas related with Bhoot Badha, Dondai using Mantra Tantra etc. Some common type of treatment like cuts and wound, sprain and skin diseases where external application is involved is practiced by all those who get affected immediately. Use of certain herbs like Centella asiatia, Houttuyinia cordata, Phyllanthus emblica and Terminalia citrina is in common practice as protective medicine and is commonly sold in vegetable shops.

Ethno medicinal plants used by Mishing Community

In a study done by Rama Shankar et al 2012, 55 medicinal plants encountered from different parts of the Mishing inhabitant area used by this community in their daily ailment from various diseases. Fifteen were trees; 8 shrubs and 30 were herbs and climbers. Different parts of the medicinal plant species were used for curing different diseases and mostly leaves (36.84%) were used followed by stem (14.03%), root (10.52%) and bark (7.02%). Asteraceae (5 species), Apocynaceae (4 species) and 3 each in Euphorbiaceae, Malvaceae and Acanthaceae were found. Some of the plants can be categorized as highly prioritized medicinal plants as they are of immense value in curing various diseases but are in the low niche. These plants are widely used under traditional healing practices but due to multiple use they are depleting from their habitat viz. *Acorus calamus, Costus speciosus, Eclipta prostrata, Oroxylum indicum* and *Plumbago zeylanica.* Eventually, these species are now on the freeway towards extinction due to over exploitation, road construction, encroachment of habitat by the immigrants of the neighbouring community. Local inhabitants adapted cultivating some of the locally available herbs like *Acorus calamus, Alstonia scholaris, Centella asiatica, Leucas indica, Nymphea stellata, Tabernemontana divaricata* and some others from habitats of different climatic condition like *Aloe barbadensis, Glycyrrhiza glabra* which meet out the requirement of drugs for daily requirement. Some of the prominent herbs of the area are *Ageratum conyzoides, Clerodendrum infortunatum, Leucas indica, Sida acuta, Solanum viarum*, etc. which are commonly available in the habitat and are used for meeting out requirement of drug for treating ailments Few commonly observed trees and shrubs are *Alstonia scholaris, Costus speciosus Ficus racemosa, Oroxylum indicum, Plumaria alba, Ricinus communis,* etc.

Most of the plant products after formulation are used orally, whereas for skin disease and bone fracture medicines are not prescribed for oral consumption. It was found that in most of the cases the plant products are prepared with combination of some other plants or some other products. The plants uses in mixture all may not contain the properties to relief from particular disease but some might be reduced side effect on treatment. The description of all above mentioned plants are on the basis of ethno medicinal knowledge. Plants are used by Mishing community in different places on the basis of availability of those plants and the proper knowledge about efficacy of those plants against the particular disease. For safe uses of different medicinal plants, we need randomized clinical trials for some of the manual therapies and further research is need to ascertain the efficacy and safety of several other practices and medicinal plants.

Services of these traditional healers are of great importance to public as they are rendering their services to public in very remote places where people are really in need of health services. These traditional healers need to be involved in all sorts of trainings to youngsters as well as refreshing their knowledge with healers of other communities. Though they are acquiring and correlating their knowledge with established records and information available with other communities.

LACK OF CIVIC SENSE

Aparna Thakuria
B. Pharm 3rd Sem

CIVIC sense or mather the lack of it is a topic that has been widely disscussed and argued in our society. Somehow, most of the people do not care much for civic sense.

This attitude towards their personal goals that civic sense as an ethic has become a low priority, almost a misance Civic sense is nothing but social ethics. It is consideration by the people for the unspoken norms of society. A lot of people assume that civic sense is just about keeping the roads, streets and public property clean. But civic sense is more than that. It has to do with law-abiding, respect for fellow men and maintaining decorum in public places. Separatism, vandalism, intolerance, racism, road rage etc. are all examples of lack of civic sense. Peope are becoming less and less tolerant of each other, of other's cultures, backgrounds and other similar traits civic sense is the need of the ... There are spit marks, urine, vulgar graffiti, random garbage and over flowing sewers at every nook and corner of the city. No area in this city has managed to fight the .... It is easy to pin everything on the government, but people must first question themselves and their own civic sense. If we want a change, we must change ourselves. Civic sense is a school of thought in itself. It is a belief in hygiene, respect for other members of society and human behaviour.

With such small steps you can teach your child about civic sense and the importance of it in his life. And by teaching your child about civic sense, you are met only making him a better human being but also doing your bit for the further of the country.

SISTERS AND THEIR SINFUL DELICACIES

Bhumika Kalita
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Apong with Bamboo Shoots -Aruncahl Pradesh

Apong is just another name for rice beer and is one of the most important traditional drink of Arunachal Pradesh food. This beer is home made free of any chemicals and is also light on the buds. The perfect beverage to enjoy along the food is Apong and the perfect snack to enjoy an Apong is with Bamboo shoots. Bamboo shoot is widely eaten through all the North Eastern States because of its delicate falvour and forms a chief component in the food of Arunachal Pradesh.

Smoked Pork Stew -Nagaland

No matter how weird it may sound but rice, pork, chikken, dog, insects and worms, vegetable and famous chilli sauces are essential in the Naga dict. Talking of which Smoked Pork Stew is one of the most famous and delicious dish of Nagaland. Just the right amount of crisp on the outside and juices on the inside makes this intensely delicious plate of smokiness. The dried smoky pork is chopped into bite-sized peices before being boiling in a thin soup that includes potatoes, tomatoes and chillies and an ample quantity of salt and smoke.

Pukhlein - Meghalaya

The North-East State of Meghalaya is also known for dishes made of Bamboo Shoots and Pork like it's counterparts. But what makes it's difference is the wide range of sweet dishes it oofers, unlike other sister states. And one of such drool-worthy sweet dishes is Pukhlein. It is a dish of powdered rice sweetened with jaggery. Simple and delicious this dish is another example of how the North-East people just can't get enough of their delicious rice.

Masor Tenga - Assam

Assam is truely a state offering the best palette of flavours ranging from vegetables to meet, duck and fish and the ever famous bamboo shoots and pork. Masor Tenga is a tangry fish curry, a tasty treat for all food lovers. This tangry fish curry is made with everything sour and

delicious. The fish is slow cooked in a rich, tangry broth made with tomato, outenga (elephant ear) and lemon.

Panch Phoran Tarka -Mizoram

The food of Mizoram can be seen as a mixture of North Indian and Chinese elements. A beautiful blend of unique flavours. This dish called Panch Phoran Tarka is one of the most famous dishes in this state. It can be prepared either with vegetarian options or a meat lover's non-vegetarian feast, thus magnifying its reach to all kinds of people. In the vegetarian version, it is made with brinjal, pumpkins and potatoes. In the non-vegetarian version, it is most likely prepared with chicken.

Alu Kangmet - Manipur

Manipur is one of the richest states when it comes to food models amongst all the northeastern states in India. So, like other states, not only does it have an array of non-vegetarian delicacies but also possess a wide range of healthy and delicious vegetarian options too, such as the Alu Kangmet. Alu Kangmet is a very simple, wholesome and delicious dish. It is basically a mashed potato dish. Boiled potatoes are mashed wonderfully nad mixed with fried red chilli, salt and drizzle of mustard oil. This is surely simple but very delicious and quite a change from what the rest of the state officers.

Mui Borok and Chuwarak

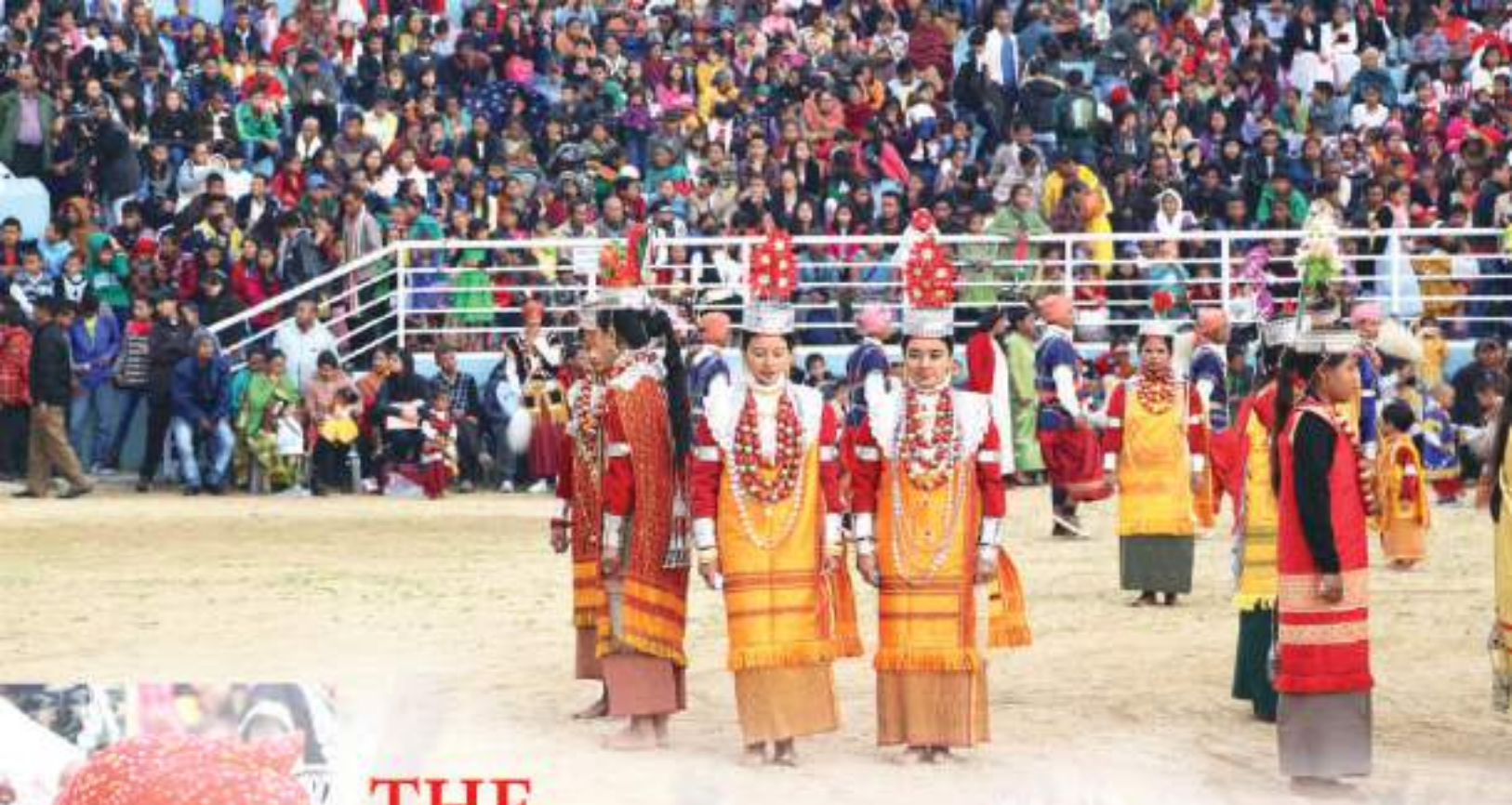
Once of the smallest states in India, Tripura is not smaller in any aspects as compares to other states especially when it comes to food and delicious. The culture and rich food of Tripura speaks for itself and one such delicacy is Mui Borok. It is a traditionally cooked fish that will always form a part of plate when in Tripura. Chuwarak on the other hand is the in famous scotch and champagne of the state. Prepared with unique ingredients such as Mami rice, pineapple, jackfruit. It is one of the safest alchohol to drink in the world.

SHAD SUK MYNSIEM FESTIVAL

Biloris Rymbai
B. Pharm 7th Sem

Shad Suk Mynsiem 'The dance of peaceful hearts' is held during the month of April. It signifies the beginning of new cycles during which new seedings are planted. Shad Suk Mynsiem is an agrarian festival and celebrates the optimism for the coming year.

The biggest visual highlight of Shad Suk Mynsiem is the dance and accompanying music. The dance of the maidens reflects their roles in the community. They are in the middle the keepers of the hearth, home and lineage of the clans. The turbaned men in ceremonial apparel are the protections, they surround the female dancers armed with the Waitlam (sword) and Symphiah (whisk). The role of the man in Hynniewtrep society is to be the advisor, leader and protector. The female dancers are clad in the best silks and adorned with gold, coral and silver accessories. The crown represcents dignity and modesty. An organisation that keeping alive the old traditions and helping the indigenous beliefs and westerns flourish into modern times.



THE NONGKREM DANCE FESTIVAL OF MEGHALAYA

Idaris Marbaniang
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Ka Ing Sad is the king place located of Smit, the cultural centre of the Khasis. One of the festival is celebrated nor that is "The Nongkrem Dance", celebrated in order to honor and thanks giving the powerful Goddess "Ka Blei Synshar" for blessing the poeple of the community with good harvest and prosperity. Here the virgin men and women get dressed in their ethmic waers with heavy gold ornaments and perform their traditional dance to show honor to their God and Ancestors.

The dance performed by the men known as "Ka Shad Master" where they holding swords in the right and winsks in the left hand along the drum beats of music and Tang.... or pipes. The dance performed by the women known as "Ka Shad Kynthei" performed in the inner circle while the men perform their dance in the outer circle.

SACRED FOREST IN MEGHALAYA

Shillong also has a string of legendary stories that date back 700-800 years. The every roads, dotted with hairpin turns, will take you to places where such stories are still being lived one such place is scared forest or Sacret Grove forest, which is spread accross 78 hectores of land is protected by the local deity-labasa. The scared forest was prospected by the lyngdoh elan, who believes that the deity protect their villages. The huge forest was first ruled by the Blah clan. Blah clan found a woman, a lyndoh, who had a son. The sacpling grew beautifully.

Here, in the sacred forest, you need to know one thing that you cannot take anything out of this scared forest. Yes, nothing. Not even a leaf. The Army in 1970 once tried to take out dead logs out of this forest but they couldn't leaves as the truck refused to start.

"The green Jewels inside" The entry to the sacred forest is no less like a green tunnel, formed by green branches. There are trees, which are said to have the cure for diseases, even breast cancer. One of the peculiar plants that you can spot inside is a lily cobra, which has a leaf and a ..... that look like head of the cobra. The branches and roots of oldest pine tree ..... to the ground in the marshy grassland. Also, take a guide as you will get lost in the forest. The village is ruled by a king, who is chosen through a democratic election. If the deity will happy with the chosen one, the sun nill shine on the day of his anointment else it will rain. All have one rule. Respect the sacred forest.

Dionesia Bamon
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MISUSE OF PRESCRIPTION AND OVER THE COUNTER DRUGS TO OBTAIN ILLICIT HIGHS

Shravana Das
B. Pharm 3rd Sem

This article provides an overview of the tipic, focusing on a range of medicines that have emerged as miused or diverted.

This rapidly changing drug scenario represents a challange for pharmacy, psychiatry, public health and drug control policies. Moreover, possibly resulting from the COVID-19 pandemic, drug use habits and availability have changed. Healthcare professionals should be aware of potential prescription drugs diversion, recognise misuse cases, consider the possibility of polymer drugs misuse and prevent it. Pharmacist can prevent and reduce drug abuse should be involved in evidence-based actions to detect, understand and prevent drug diversion activities and the adverse effects of drug misuse.

Generic Medicines The Scenario

Prastuti Borah
D. Pharm 1st Year

"It is easy to get a thousand prescriptions,
but hard to get one single remedy."

- Chinese Proverb

A generic drug is a medication created to be the same as an existing approved brand name drug in dosage from safety, strength, route of administration, quality and performance characteristics.

On September 24, 1984, in the 98th United States Congress, the act named the Drug Price Competition and Patent Term Restoration Act was passed, informally known as the Hatch-Waxman Act, encouraging the manufacture of generic drugs by the pharmaceutical industry and established the modern system of government generic drug regulation in the United States.

The requirement was an abbreviated new drug application (ANDA) to be submitted by the pharmaceutical companies to the regulatory authorities for getting the approval to market a generic drug. ANDA process does not require the manufacturer to carry out repeat testing of generics animals which is often time consuming,

as their branded versions have already been tested and approved fot the safety and effectiveness. They are formulated when patent and other exclusivity rights of the innovator have expired.

Generic drug manufacturers do not have to spend extra money for drug discovery and preclinical and clinical trials. Generics are available at a lower cost; they provide an opportunity for savings in drug expenditure in a country.

As India is one of the higher per capita out of pocket expenditures' country, such generics will save a lot of money which can be used for others health issues. In all the countries, use of generic drugs has increased significantly in recent years.

The regular governing the approval of generic drugs are some what the same world over with very few differences in developing countries, as in this part of the world it is not mandatory to undergo bioequi valence (BE) studies for getting approval for generics and the gold standard considered for regulation in this field is United States.

In 2008, the Government of India, through the Department of Pharmaceuticals, started a new initiative "Jar Aushadhi" (a hindi word literally translated as "Medicine for people"). This program envisaged making unbranded quality medicines available to poor poeple in the country at a reasonable and affordable price through retail outlets' setup with the help of the government. It has taken ownership of setting up Jar Aushadhi stores, which are pharmacies selling only generic name medicines to the extent possible giving preference to pharmaceutical public sector undertakings too. Until March 15, 2018, 3200 Jan Aushadhi stores were operating in more than 33 states/union territories across India. There are not enough. Jar Aushadhi stores, possibly 3200 against more than 8 lakh retail pharmacies in existence, with many rural ares still underserved.

The Medical Council of India, in an amendment to the code of conduct for doctors in october 2016, has recommended that every physicians should prescribe drug with generic names legible and he or she shall ensure that there is a rational prescription which promotes the use of generic drugs. In further, the Government of India may bring a legal frame work under which doctors will have to prescribe generic medicines to patients.

Generic medicines are typically 30%-80% cheaper than originator equivalents. The question raised quite often is "Whether the quality and performance of generic drugs is comparable to the brand drug"? Subsequent to this claim, the Drugs Technical Advisory Board of India in May 2016 considered amending Rule 65 (11A) of the Drug and cosmetics Act, 1940, so that pharmacists can dispense generic name medicines and/or equivalant brands against prescriptions in brand names. However, skeptics have stated that the use of generic drugs may lead to prolongation of illness or even therapeutic failure as the bioavailability (BA) of a generic drug may not be as good as that of the prescribed brand.

Hence, the critical issues that affect the quality of generic drugs are purity, potency, stability, and drug release and these should be controlled within an appropriate limit, range or distribution to ensure the desired drug quality.

If sponsors, healthcare providers and regulators work together effectively, then effective use of generic drugs will make medical costs cheaper and also ensure sound treatment options for the patients.

"Alcohol, tobacco and pharmaceutical drugs are legal,
but they can hurt a lot of people."
-Ziggy Marley

NORTH EAST

The Paradise Culture

Neptune Ahmed
B. Pharm 1st Sem

North East India is the eastern most region of India representing both a geographic and political administrative division of the country. It is one of the most beautiful places of Indian and of world, consisting of 7 states, called 'Seven Sisters'. However Sikkim formed a part of North East region as the eight state in 2002.

North East India is one of the most culturally diverse areas of the world. This region offers a mixed culture of Hindu, Muslim, Christianity and Buddhism keeping in view its diverse culture, the National Museum, New Delhi has celebrated the rich heritage of North East India as a part of celebration of Azadi Ka Amrut Mahotsav to commemorate 75 years of progressive India and the glory of its peoples culture. Under the ministry of Doner and North Eastern Council, the initiative was titled as 'Deslination North East' and it was commenced from 1st Nov. 2021 to 7th Nov. 2021.

The culture of North Eastern states are charaterised by the diverse ethenic groups settled in the region. Each tribe in the region has their own distinct cus....., cuisine, attire and dialect. They have their own handicraft tradition. Eg- Assam, Meghalaya is recognised for silk textile, Manipur for gold plated jewellery, Tripura for bamboo craft and so on. The North East areas may be explored by way of traditional festivals, dances and folk art. To experience their culture one must stay in villages and take part in traditional festivals. This region has been hosting several faiss and festivals for decades like Bihu festival, Wangala festival, Chapchar festival, Kang China etc. Moreover it is the home of different genres of music. Each state has its own folk dance and music. Popular dance form Sattriya from Assam amd Manipuri dance is classified under the list of classical dances of India.

North East India is known to be the world's most culturally diverse region as it is inhabited by more than 200 tribes who boast of their indigenous and authentic culture. It is very important to preserve and promote the tribal culture of this hand. Government should take steps to set up a number of museums, library and media centre to provide the visitors the view of North East and its indigenous people.

Kunal Rajbongshi
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GUTKA : A POISON

Gutka is a preparation of crushed area nut, tobacco, catechu, paraffin wax, slached lime and sweet or savory flavorings. Is is manufactured in India and exported to a few other countries. It is a mild stimultant. It is sold across India in small, individual sized pockets that cost between 5 to 20 rupees per packets. Gutka is consumed by placing a pinch of it between the gum and check and gently seeking and chewing. It is considered responsible for oral cancer and other serve negative health effects. As with paan an other smokeless tobacco products, there are preventive efforts to encourage users to quit and young people not to start.

Characteristics : Gutka is a powdery, granular, light brownish to white substance within moments of chewing mixing with salvia the gutka begins to dissolve and turn deep red in colour. It may impart upon it user a 'buff' somewhat more intense than that of tobacco chewing, snuffing on smoking.

Effects : Exessive use of gutka can eventually bad to loss of appetite, promote unusual sleep patterns and loss of concentration along with other tobacco related problems. A gutka user can easily be identified by prominently stained teeth ranging from dirty yellowish orange to reddish black. The stains are difficult to remove by normal brushing and usually need the attention of a dentist. After gutka is consumed, it is generally splat onto a wall or at the ground, causing an insightly red stain that is quite resistant to the elements. Some building owners have taken to combating this unpleasentness by painting morals of Gods on their walls. With the idea that gutkha chewers would not split on a God.

People get addicted to it as gutka is reported to have stimultant and relaxation effects. While most consumers believe that the blend is not harmful, doctors, especially on cologists, say consumption of gutka is more harmful than any other form of tobacco.

Overall, people can develop cancers of mouth, throat, lung and oesophages; heart disease and related aliments. While most youngstars get easily addicted to it. Women are in the habit of chewing tobacco or even inhaling snuff, which is even more harmful.

Ban : Many states of India have banned the sale, manufacture distribution and storage of gutka and all its variants. As of May 2013, gutka is banned in 24 states and 3 union territories. The federal food safety and regulation Act, 2011 allows harmful products such gutka to be banned for a year. This can be renewed annually, resulting in a permanent ban. The ban is enforced by the state public health ministry, the state food and drug administration.

Tobacco in India

- Portuguese brought in tobacco through Goa in 1600 for the purpose of trade.
- Initially introduced to Royal Courts.
- Spread to common in 17th country.
- Portuguese traded it for Indian textiles and spices.
- British colonial rule magnified the tobacco production and consumtion (Impact of American tobacco to India)

PLASTIC
Impact on wildlife

Prabal Basumatary
B. Pharm 1st Sem

Plastic are not necessarily synthetic. Plastic originally refers to any substance that is pliable and easily shaped. In 1862, Alexander Parkes introduced the world's first ever man made plastic at the London International Exhibition. He named it "Parkesine." It was used as an alternative to ivory and horn. While Parkesine was created from organic compounds, specifically cellulose, Dr. Leo Bakeland in 1907 created the world's first entirely synthetic plastic called Bakelite. This marked the start of the modern plastic industry.

Medienal craftsmen made lanterm window out of translucent slices of animal horn. About eight thousand years ago, the oldest known comb-asmall four teeth number was carved from animal bone. Animals were slaughterd for their hair, wool, skin, bones, teeth and tusk. Poeple slaughtered elephants so that they could harvest their tusk to make high quality billiard balls. A single tusk could produce only 3-5 balls meaning at least 2 animals had to be killed for every set of balls. The finest quality water colour brush Leries 7 Kolinsky lable water colour brush is also made of animal hair, killing thousand of animals. But in the late 19th century with the arrival of the man made plastic, there was reduction of

animal killing. Plastic was used instead of naimal horns, bones etc. Combs were among the first and most popular objects made of plastic. Ever since, combs generally have been made of one kind of plastic or another. it was said that plastic was invented to save animals.

The Tragedy : We see plastic accumulating in our oceans, beaches and coastal areas in our social media. It has become a global crisis. Millions of tons of plastic can be found in the ocean. According to IUCN ever 300 million tons of plastic are produced every year for use in a wide variety of applications. At least 8 million tons of plastic and up in oceans every year and make up 80% of all marine debris from surface water to deep sea sediments. Marine species ingest or are entangled by plastic debris, which causes serve injuries and deaths. Plastic pollution threatens food safety and quality. Thousands of sea birds and turtles, seals, fishes, whales and other marine animals are killed each year after ingesting plastic of getting entangled in it.

Plastic is expected to out weigh all the fish in the sea by 2050. All fine of the Earth's majot ocean gyre (a circular pattern of ocean current) are flooded with plastic pollution. The largest one has been dubbed the Great Pacific Garbage Patch. The Great Pacific Garbage Patch also known as the Pecific trash vortex is located in the central North Pacific Ocean. It is the largest accumulation of plastic in the world.

Animals may mistake plastic for food or they may consume plastic in the process of eating the leftover food it contains. It causes intestinal blockages in animals. Death is the inevitable result for animals that ingest plastic and this is a miserable disaster. We see viral videos of animals like dog or cat loitering with a plastic container stuck on its head, tyres around the neck of crocodile, plastic in the stomach of deers and whales, in socail media like facebook, instagram and twitter. We see animals walking around with plastic wrapped in legs or container stuck in legs. It can also be dangerous. An animal that can not walk also can not run away from predators. It can not get away from an incoming car and hence we see dead body of animals on roads. Further, such animals will also have difficulty in finding food, water and shelter, which is important for their survival. Human have not escaped from such nfortunate fate either. According to WION, micro plastic are found in a fetus. It claims that there is plastic in Point Nemo, the farthest place from land, in human stool, in bottled water and in human placenta. Researches found micro plastic particles in placentas both on fetal and maternal side. Expert say microplastic could carry harmful chemicals, reduce fetus growth and immune system. The size of microplastic were around 10 microns. Scientist say they may have been inhaled or consumed by the mother. They could have come from packaging, cosmetics and personal care products.

Therefore recycling and reuse of plastic products and support for research and innovation to develop new products to replace single - use plastics are necessary.

DELIRIUM AND COVID

Rija Begum
D. Pharm 1st Year

Delirium is a serious disturbance in mental state where in patient is confused agitated and unable to think clearly.

Delirium can often make some more factors, such as serve or chronic illness, changes the metabolic balance (low sodium or dehydration) medication, infection, surgery, alcohol in take or drug in toxication.

As we found cause of delirium is one that serve illness also, like injection and inflamation of lung which called pheumnia can interfere with brain function.

Now we come relation with Covid patient how they suffer from delirium.

When any person suffers in covid the person have trouble in breathings due to blockage of air lobe or contration of trachen in this case brain does not set the oxygen in sufficient amount and the factor significantly changes brain function, less competancy of brain cell may lead to confusion or delirium.

In covid-19 cases the bodies reaction to the virus inflamation caused and the body immune system over reacts to the virus could block the blood to a patient brain.

Yet another change of suspect the virus attack the brain direct too the virus may be herm neuron within the brain tissues. The brain has neurons that contains ACE2 (Angiotensin converting Enzyme) receptors. Those are very similar to receptor found in the lungs that have served as transmitor for the corona virus to attack cells there says Dr. George.

Karmchakra

All this birth and death
Beyond the sun and above the land
Everything is a matter of time
Everything is a result of something
Somewhere we lost a dear one
And we were left behind with grief
Surrounded with mourning
Becoming a tiny light of cheer and happiness
Eight month old life blinked with a smile...
All the grief went away
Somehow all the sorrow was converted
Just by her enter into this world
She created happiness around her
Somewhere in my heart
I cried.....cried aloud
Such unexpected missing
Such unexpected loosing
But I had tears of happiness trolling down my cheeks
Feelings of loosing a dear one
And becoming an elder sister clashes..

All this birth and death
Beyond the sun and above the land
Everything is a matter of time
Everything is a result of something.

Ananya Sarma
B. Pharm 3rd Sem

Rekibuddin Ahmed
B. Pharm 5th Sem

My daddy was a farmer

When he was younger,
people called him a fool
And he never made it to high school
His daddy was a hard workin' man
He taught his son how to work the land
From sunrise to sunset
Crops rise from blood & sweat
The only thing he could really know
Was how to make things grow
Until he met a woman that stole his heart
She was the bright light in the dark
She sang pretty songs
that he didn't understand
She'd cook and clean while he worked the land
He wanted to learn, she planted the seed
She brought home books, taught him to read
They were happy, but not yet complete
The house was missing the sound of little feet
And storybooks they longed to hear a baby's cries
Soon he grew heavy, baby inside
One that would be his father's pride
He grew up in a house full of love
Told he could be whatever he dreamed of
And he has to say
"my Daddy was a farmer,
he loved the way things grew.
(That little baby is me)

PHARMACEUTICAL LIFE .. ITS PROS & CONS

Kaustav Kaushik
B. Pharm 1st Sem

Why pharmacy?

I chose pharmacy because pharmacists are an essential and respected part of the healthcare team.

If there are medications involved, then a pharmacist can help. And, while medications are not always necessary, the treatment of most diseases would not be possible without medicine. What a privilege it is to be considered the "drug expert," someone both patients and other health professionals can rely on for help.

What makes this career path unique?

My career path is unique because I never thought I'd be doing what I'm doing today. As a high school student, I knew I liked chemistry and biology but that was about it. I figured pharmacy might be a good option since it involved those things, but I never imagined I would be working with patients as a pharmacist, and I certainly did not imagine myself as an educator for future pharmacists.

What does a typical workday look like for you?
Every day is a little bit different, that's the exciting thing about being a pharmacy professor! Some days I'm in the clinic conducting one-on-one visits with patients (or simply being available to providers for questions). And on other days, I'm on the university campus giving lectures to PharmD students. Finally, there are days when I'm doing neither—instead, I'm attending committee meetings, doing research, and preparing for lectures.

What has been the most rewarding day of the career thus far?

It's hard to pinpoint "the most rewarding day" when I genuinely do find every day rewarding. But, if I had to choose, I would say commencement for our pharmacy school. It never gets old watching PharmD students transform from new students who know very little about medications to ready-to-practice pharmacists. A lot can happen in four years. Seeing their growth and knowing that I made an impact in their careers is incredibly rewarding.

What has been the most challenging day of the career thus far?

I don't have a specific day that I can recall, but the most challenging days of my career are when multiple responsibilities are colliding. I'm sure this is not exclusive to pharmacy, but there are days when patient care, teaching, committee meetings, research, and personal life all collide. These types of days force me to multitask and work at a pace that is sometimes very uncomfortable. Those can be hard days, but I've learned to realize that they happen in every job. And, thankfully, they never last too long. I've learned to push through and find hope in the fact that I ultimately enjoy what I do.

What most attracted you to pharmacy over other healthcare professions?

If I'm honest, pharmacy first attracted me over other healthcare professions because I knew it would be a relatively clean job. I've always been that way. I vividly remember dissecting a pig in my high school biology class. At one point, we had to break open the rib cage. It was then that I knew being a surgeon was probably out of the picture. In fact, I ruled out many other healthcare professions that require direct contact with skin, bones, body fluids, etc.

While I've grown from that and now do not mind encountering patients, it remains a profession that is relatively removed from that environment. Despite the slight distance, pharmacists are still essential to every team of health professional, as our profession is predicated on our expertise and knowledge, precision, sterility, and communication. I take pride in all these things.

What advice would you give a student entering pharmacy school?

My advice for students entering pharmacy school would be to take advantage of every learning opportunity that presents itself. School only happens once.

While learning and growing never truly stop, school is the one place where everyone around you is willing to teach. If you're lucky like me, you'll meet co-workers and mentors who will be a tremendous help in your learning journey.
In school, you're the primary reason why educators exist. Approach them, pick their brains, and don't forget to thank them for their dedication to you!

What do you believe is the biggest misconception about the field of pharmacy?

I think the biggest misconception about the field of pharmacy is that pharmacists are limited to those who count medications or stand behind the counter. It's much more than that. Each patient and prescription require a great deal of care and knowledge (otherwise school wouldn't take so long!).

Additionally, the field of pharmacy is widely expansive and can take so many different forms, including veterinary pharmacy, nuclear

pharmacy, oncology pharmacy, critical care pharmacy, etc. The pharmacy profession is far from limited.

A Day in the Life of a Pharmacist

Most of your interactions with a pharmacist probably come from your local pharmacy or drug store—in fact, around 60 percent of pharmacists choose to work in either an independent or chain community pharmacy. If you are considering pharmacy school, and wondering what it's like to be behind the counter, here's what you can expect in a typical day in the life of a pharmacist.
Filling Prescriptions

The most well-known task of the pharmacist is to fill prescriptions, and oversee pharmacy technicians and interns that work in the pharmacy filling patient prescriptions. In addition, since a pharmacist is an important part of a healthcare team, you may also have appointments to keep, such as meeting with a doctor (usually over the phone) to discuss any problems with a patient's prescription. As you fill prescriptions, you will need to be mindful of many factors: have you checked for drug interactions with any other medications the patient is taking? Does the patient have financial constraints and, if so, has the administration of a generic substitute been authorized by the prescribing physician? Many people are not aware that there is a lot more to filing prescriptions than just counting pills and applying labels.

Interacting With Patients

A big part of a pharmacist's day is spent advising patients on the use of prescription drugs. They may have questions about dosage or side-effects, and you must be familiar with the medications so you can answer these questions. The public will also want to know which over-the-counter medication will best treat their symptoms, so you need to be knowledgeable about these as well, and ready to make recommendations. Since it takes a lot of time and money to schedule an appointment with a physician or a specialist, many people look to their pharmacist to provide basic information about over-the-counter drugs and prescriptions.

Completing Office Tasks

Most pharmacies now keep computerized records of their patients and prescriptions, so part of each day is dedicated to updating and maintaining patient records. These records can help you check for potentially dangerous drug interactions, and can even help you spot prescription drug abuse. You may also need to order medications when the pharmacy runs out, and keeps in touch with patients and/or physicians when problems with prescriptions arise. If you choose to start your own community pharmacy, you will take on all the tasks of running a business in addition to your pharmacist duties.
The job of a pharmacist is active, and much time is spent on your feet, moving around, and interacting with people who rely on you for information and assistance with prescriptions and medication. In the life of a pharmacist, there is never a dull moment.

Paying Your Dues

The majority of students enter pharmacy school with at least three years of college under their belts. Undergraduate study should consist of mathematics and sciences such as biology, chemistry, and physics, as well as humanities and social sciences. Students on this track need to pay close attention to the curriculum recommended by the college of pharmacy they intend to apply to in order to fulfill admissions requirements. Students must then complete at least two years of special pre-pharmacy coursework followed by four academic years of pharmacy study. In addition to being knowledgeable, a pharmacist needs to have good people skills. Successful completion of the academic and clinical requirements of a professional degree from an accredited program and passage of a state board examination are required to obtain a license to practice pharmacy.

Present and Future

The days of a pharmacist's work resembling that of an ancient alchemist are gone. The actual mixing of ingredients to form powders, tablets, capsules, ointments, and so on is the smallest part of a pharmacist's job. Most medicines are now produced by pharmaceutical companies and come pre-packaged. Though technology has taken over one aspect of a pharmacist's job, it has also created a need for more pharmacists. Scientific advances in medicine have made drugs for the treatment and prevention of disease widely available, and with more and more new drugs and drug treatment options available, there is a demand for pharmacists who can consult physicians, health care practitioners, and patients on the proper use of these new drugs. Also important to the projected growth in the profession is the increase in the elderly population —the primary consumers of medicines—as the average life expectancy of Americans rises every year. This puts the career of pharmacist among an elite group of professions that are luring new graduates into the field with perks, incentives, and generous salaries.

PRESENT AND FUTURE

Many pharmacists will start out as employees of community pharmacies and retail chains, while others will work in hospitals with limited responsibilities under the watchful eyes of their supervisors. Starting salaries range widely for entry-level pharmacists, depending on region and practice setting.

FIVE YEARS OUT

By this point, pharmacists who can afford to start up their own businesses have the experience to do so. Those individuals working in community pharmacies have the professional experience to move into managerial and supervisory positions, and pharmacists working in hospitals will assume senior supervisory positions and direct the actions of interns and newly licensed pharmacists. Pharmaceutical companies are also searching for pharmacists with this level of experience to act as sales representatives. Others pharmacists choose to pursue a master's or doctorate degree to move into teaching and research positions.

TEN YEARS OUT

Well established by this point in their careers, those individuals who have stayed within the community pharmacy field are managers, and some of them have achieved executive positions within the company. People who have remained in hospitals assume administrative positions or have achieved the position of director of pharmacy service and are in charge of all of the hospital's pharmaceutical services. But nearly any pharmacist with this much experience can find gainful employment in the manufacturing side of the industry in management positions, sales, research, quality control, advertising, production, and other areas. After 10 years,many pharmacists have enough capital to finally start their own practices, while those individuals who have had their own businesses should enjoy continued success.

THE WAY FORWARD: THE ROLE OF PHARMACISTS IN COVID-19 VACCINATION

The COVID-19 pandemic has ravaged the U.S. over the past few months. Since early March 2020, our country has seen over 16 million cases of the virus and over 300 thousand deaths.

During this difficult time, pharmacists have been on the front lines managing and preventing the spread of COVID-19. Some brave and passionate pharmacy students even graduated early to step up and offer their services.

Now, with the introduction of a new vaccine to prevent the virus, things seem to be taking a turn in the right direction.

The First COVID-19 Vaccine

On December 11, 2020, the FDA issued an emergency use authorization (EUA) for the first COVID-19 vaccine after thorough evaluation of the vaccine's available safety, effectiveness, and

manufacturing quality information.

In an official press release, FDA Commissioner Stephen M. Hahn, M.D. said, "The first COVID-19 vaccine is a significant milestone in battling this devastating pandemic that has affected so many families in the [U.S] and around the world."

With this announcement, pharmacies and pharmacists across the country are gearing up to begin administering vaccines to U.S. citizens. Here's a look at the role they'll play in COVID-19 vaccination.

Administering the COVID-19 Vaccine

The first doses of Pfizer's COVID-19 vaccine were administered beginning on December 14, 2020. This marked the beginning of what will likely be a long process to administer the vaccine to the general public, in which pharmacy professionals will play an important role.

As a first step, the Department of Health and Human Services officially authorized state-licensed pharmacists to administer the COVID-19 vaccine in an effort to increase access and availability across the country. The following is a more detailed breakdown of the pharmacy professionals able to administer the vaccine according to a resource sheet released by American Pharmacists Association (APhA):

- State Licensed Pharmacists – can order and administer COVID-19 vaccines
- State-Authorized Pharmacy Interns – can administer COVID-19 vaccinations under supervision of a readily available, qualified pharmacist
- Qualified Pharmacy Technicians – can administer COVID-19 vaccinations under supervision of a readily available, qualified pharmacist

Vaccination will likely occur in a phased approach. Front line health workers and residents of long-term care facilities will likely be among the first to receive the COVID-19 vaccine. In many cases, pharmacists will be the ones to deliver these vaccines. More information about the nationwide plan for vaccination can be found of the CDC website.

Pharmacists across the country have expressed their excitement about playing such an active and important role in the path towards helping the country overcome this global pandemic.

An inpatient pharmacist in New Orleans was the first person in Louisiana to administer the vaccine. On a recent episode of The Daily Podcast, they said the opportunity to play a role in vaccinating against the virus has been a career highlight.

A Greater Demand for Pharmacists

Given the important part they'll play in administering the COVID-19 vaccine over the next few months, pharmacists and other pharmacy professionals are in high demand nationwide.

According to a recent Bloomberg article, large chain pharmacies like CVS and Walgreens are hiring thousands of professionals to assist with COVID-19 testing, vaccination, and more. In some cases, sign-on bonuses of up to $30 thousand dollars are being offered.

This increased demand speaks to the importance of pharmacists and pharmacy professionals in the current healthcare landscape.

GOOD OR EVIL?

Rashmita Dutta
B. Pharm 7th Sem

As kids we watched Hero-villain based movies, heard mythological tales about Devas-Asuras and developed a mentality that villains are 'pure evil' and heroes are perfect symbolism of 'pure good'. This Hero worshipping mentality does more harm than good, as we expect someone to be perfect and perfection is a myth. Every human is flawed, every person has a dark side. Yes! You read it right. We get so busy in dividing the world into 'GOOD' and 'EVIL' that we don't realise that there is a bit of both in everyone and the path we choose to embrace decides who we become at the end.

No, I am not empathizing with ill- minded people who think its fun to hurt another; all I am saying is that instead of expecting Heroes to be perfect, let's expect them to be admirable people with positivity, compassion and good-naturedness and let's accept them with their flaws.

There is nothing called 'Pure good' or 'Pure evil' in this world. Extremities of anything and everything is bad. Evil is born from the extremities of human emotions. Ego, greed, fear, pride and jealousy are some of the many pillars on which the foundation of evil lies. But sometimes its also born out of poverty, pain and injustice as well. Sometimes 'evil' and 'good' also becomes a matter of perception. Freedom Fighters fighting to free our country from Britishers were 'evil' terrorist in the eyes of British Government but 'good' revolutionaries in the eyes of subjugated Indians.

Lets take another instance from mythological tales. DEVAS or ADITYAS were the sons of 'Aditi' who drank the divine drink (sura) and were called SURAS while DAITYAS were the sons of 'Diti' (Aditis sister) who didn't drink the divine drink and thus were called ASURAS. The Devas and Asuras were just two different communities who lived in different places and clashed sometimes because of differences in opinions or for the greed of expanding kingdoms (much like Human Kingdoms). There was no concept of 'Pure evil' or 'Pure good' in our mythological stories. Our ancestors clearly wanted us to understand and respect differences in this world and become more accepting instead of expecting everyone to fit into our norms of good and bad.

Once, we develop this mentality and accept the fact that everyone is different; that everyone is a little flawed; we will start finding Beauty in imperfections and peace in mind. We will start having realistic expectations in our relationships and we will start living a life more wholesome and satisfactory than ever before.

SNAKE VENOM

Biswajit Baruah
Laboratory Assistant

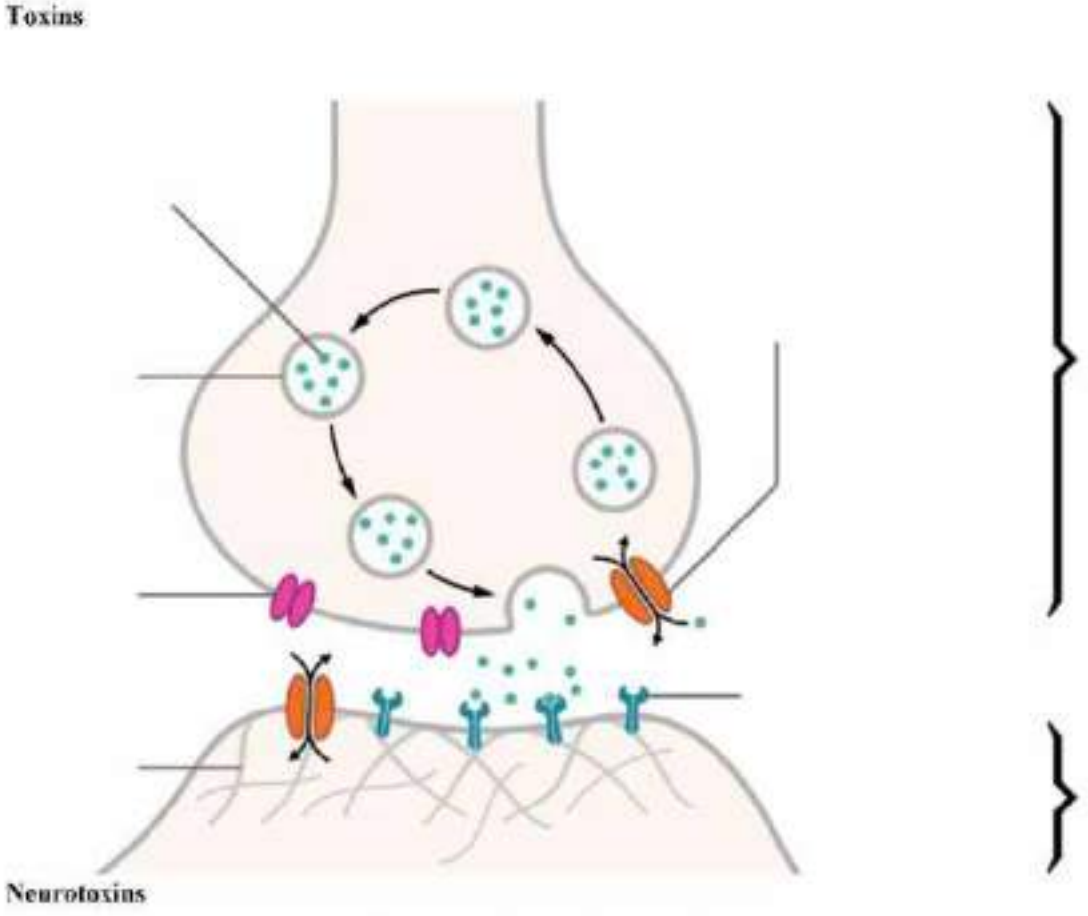
Snake venom is a highly toxic saliva containing zootoxins that facilitates in the immobilization and digestion of prey. This also provide defence against threats. Snake venom is injected by unique fangs during a bite, whereas some species are also able to spit venom. The glands that secrete zootoxins are a modification of the parotid salivary glands found in other vertebrates and are usually located on each side of the head, below and behind the eye, and enclosed in a muscular sheath. The venom is stored in large glands called alveoli in which it's stored before being conveyed by a duct to the base of channelled or tubular fangs through which it's ejected. Venom contains more than 20 different compounds, which are mostly proteins and polypeptides.The complex mixture of proteins, enzymes, and various other substances with toxic and lethal properties.Venom serves to immobilize prey. Enzymes in venom play an important role in the digestion of prey,and various other substances are responsible for important but non-lethal biological effects.Some of the proteins in snake venom have very specific effects on various biological functions,including blood coagulation, blood pressure regulation, and transmission of nerve or muscle impulses. These venoms have been studied and developed for use as pharmacological or diagnostic tools, and even drugs.

Chemistry

Proteins constitute 90-95% of venom's weight and are responsible for almost all of its biological effects. The hundreds, even thousandsof proteins found in venom include toxins, neurotoxins in particular, as well as nontoxic proteins (which also have pharmacological properties), and many enzymes, especially hydrolytic ones.Enzymes make up 80-90% of viperid and 25-70% of elapid venoms, including digestive hydrolases, L-amino-acid oxidase, phospholipases, thrombin-like pro-coagulant, and kallikrein-like serine proteases and metalloproteinases (hemorrhagins), which damage vascular endothelium. Polypeptide toxins include cytotoxins, cardiotoxins, and postsynaptic neurotoxins (such as α-bungarotoxin and α-Cobratoxin), which bind to acetylcholine receptors at neuromuscular junctions. Compounds with low molecular weight include metals, peptides, lipids, nucleosides, carbohydrates, amines, and oligopeptides, which inhibit angiotensin-converting enzyme (ACE) and potentiate bradykinin (BPP). Inter- and intra-species variation in venom chemical composition is

geographical and ontogenic.Phosphodiesterases interfere with the prey's cardiac system, mainly to lower the blood pressure. Phospholipase A2 causes hemolysis by lysing the phospholipid cell membranes of red blood cells.Amino acid oxidases and proteases are used for digestion. Amino acid oxidase also triggers some other enzymes and is responsible for the yellow colour of the venom of some species. Hyaluronidase increases tissue permeability to accelerate the absorption of other enzymes into tissues. Some snake venoms carry fasciculins, like the mambas (Dendroaspis), which inhibit cholinesterase to make the prey lose muscle control.

Snake toxins vary greatly in their functions. The two broad classes of toxins found in snake venoms are neurotoxins (mostly found in elapids) and hemotoxins (mostly found in viperids). However, exceptions occur – the venom of the black-necked spitting cobra (Naja nigricollis), an elapid, consists mainly of cytotoxins, while that of the Mojave rattlesnake (Crotalus scutulatus), a viperid, is primarily neurotoxic. Both elapids and viperids may carry numerous other types of toxins.



Structure of a typical chemical synapse

The beginning of a new neural impulse goes as follows: An exchange of ions (charged atoms) across the nerve cell membrane sends a depolarizing current towards the end of the nerve cell (cell terminus).

When the depolarizing current arrives at the nerve cell terminus, the neurotransmitter acetylcholine (Ach), which is held in vesicles, is released into the space between the two nerves (synapse). It moves across the synapse to the postsynaptic receptors.

Ach binds to the receptors and transfers the signal to the target cell, and after a short time, it's destroyed by acetylcholinesterase.

Fasciculins

These toxins attack cholinergic neurons (those that use Ach as a transmitter) by destroying acetylcholinesterase (AChE). Ach, therefore, cannot be broken down and stays in the receptor. This causes tetany (involuntary muscle contraction), which can lead to death. The toxins have been called fasciculins since after injection into mice, they cause severe, generalized and long-lasting (5-7 h) fasciculations (rapid muscle contractions).Snake example: found mostly in the venom of mambas *(Dendroaspis spp.)* and some rattlesnakes *(Crotalus spp.)*

Dendrotoxins

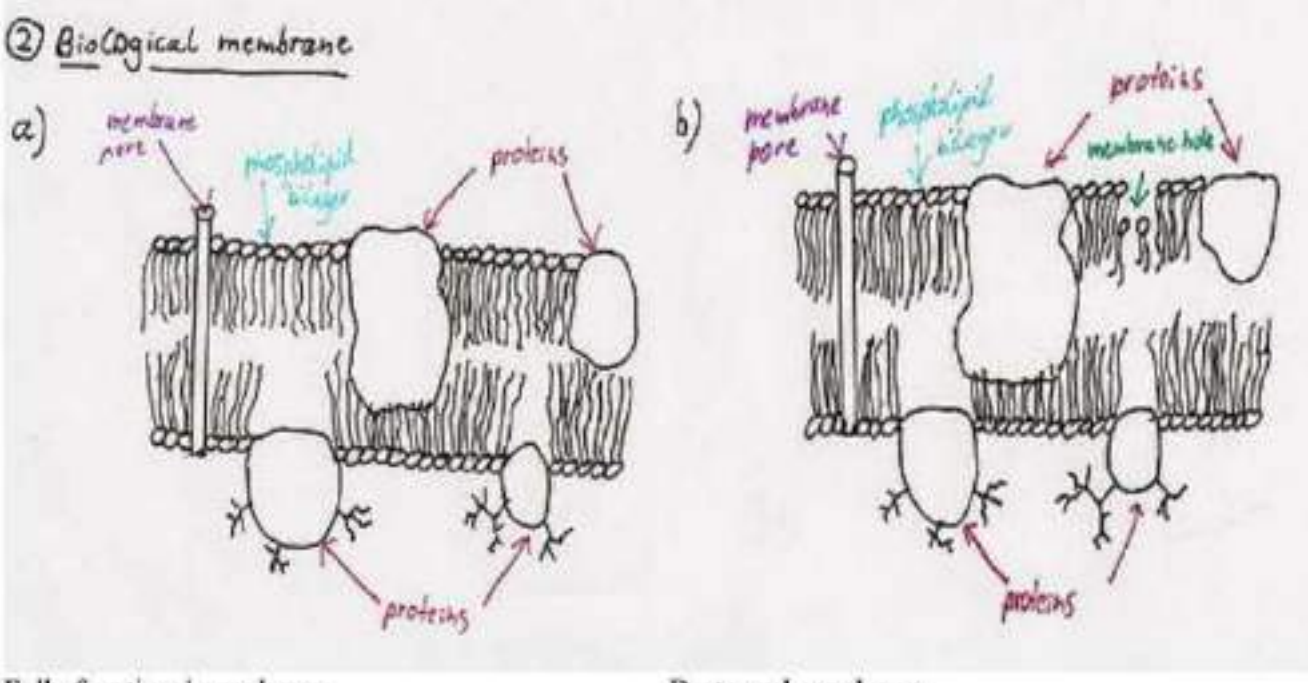
Dendrotoxins inhibit neurotransmissions by blocking the exchange of positive and negative ions across the neuronal membrane lead to no nerve impulse, thereby paralyzing the nerves. Snake example:mambas

a -neurotoxins

Alpha-neurotoxins are a large group; over 100 postsynaptic neurotoxins having been identified and sequenced.[9] a-neurotoxins attack the Nicotinic acetylcholine receptors of cholinergic neurons. They mimic the shape of the acetylcholine molecule, and so fit into the receptors, where they block the Ach flow, leading to a feeling of numbness and paralysis.

Snake examples: king cobra *(Ophiophagus hannah)* (known as hannahtoxin containing a-neurotoxins), sea snakes (Hydrophiinae) (known as erabutoxin), many-banded krait *(Bungarus multicinctus)* (known as a-bungarotoxin), and cobras *(Naja spp.)* (known as cobratoxin).

Cytotoxins



Fully functional membrane Destroyed membrane

Phospholipases Phospholipase is an enzyme that transforms the phospholipid molecule into a lysophospholipid (soap) —> the new molecule attracts and binds fat and ruptures cell membranes.

Phospholipase A2 is one specific type of phospholipases found in snake venom.Snake example: Okinawan habu *(Trimeresurus flavoviridis)*

Cardiotoxins / Cytotoxins

Cardiotoxins are components that are specifically toxic to the heart. They bind to particular sites on the surface of muscle cells and cause depolarisation —> the toxin prevents muscle contraction. These toxins may cause the heart to beat irregularly or stop beating, causing death. An example is the three-fmgered cardiotoxin III from Chinese cobra, an example of the short three-fingered family.Snake example: mambas, and some Naja species.

Hemotoxins

Hemotoxins cause hemolysis, the destruction of red blood cells (erythrocytes), or induce blood coagulation (clotting, e.g. mucrocetin). A common family of hemotoxins includes snake venom metalloproteinases such as mucrolysin. Snake examples: most vipers and many cobra species: The tropical rattlesnake Crotalus durissus produces convulxin, a coagulant.

Myotoxins

Myotoxins are small, basic peptides found in rattlesnakeand lizard (e.g. Mexican beaded lizard) venoms. This involves a non-enzymatic mechanism that leads to severe skeletal muscle necrosis. These peptides act very quickly, causing instantaneous paralysis to prevent prey from escaping and eventually death due to diaphragmatic paralysis.The first myotoxin to be identified and isolated was crotamine, discovered in the 1950s by Brazilian scientist Jose Moura Gonsalves from the venom of tropical South American rattlesnake Crotalus durissus terrificus. Its biological actions, molecular structure and gene responsible for its synthesis were all elucidated in the last two decades.

Injections

Vipers

In vipers, which have the most highly developed venom-delivery apparatus, the venom gland is very large and is surrounded by the masseter or temporal muscle, which consists of two bands, the superior arising from behind the eye, the inferior extending from the gland to the mandible. A duct carries venom from the gland to the fang. In vipers and elapids, this groove is completely closed, forming a hypodermic needle-like tube. In other species, the grooves are not covered, or only partially covered. From the anterior extremity of the gland, the duct passes below the eye and above the maxillary bone, to the basal orifice of the venom fang, which is ensheathed in a thick fold of mucous membrane. By means of the movable maxillary bone hinged to the prefrontal bone and connected with the transverse bone, which is pushed forward by muscles set in action by the opening of the mouth, the fang is erected and the venom discharged through the distal orifice. When the snake bites, the jaws close and the muscles surrounding the gland contract, causing venom to be ejected via the fangs

Elapids

In the proteroglyphous elapids, the fangs are tubular, but are short and do not possess the mobility seen in vipers.

Colubrids

Opisthoglyphous colubrids have enlarged, grooved teeth situated at the posterior extremity of the maxilla, where a small posterior portion of the upper labial or salivary gland produces venom.

Mechanic sofbiting

Several genera, including Asian coral snakes (Calliophis), burrowing asps (Atractaspis), and night adders (Causus), are remarkable for having exceptionally long venom glands, extending along each side of the body, in some cases extending posteriorly as far as the heart. Instead of the muscles of the temporal region serving to press out the venom into the duct, this action is performed by those of the side of the body. Considerable variability in biting behaviour is seen among snakes. When biting, viperid snakes often strike quickly, discharging venom as the fangs penetrate the skin, and then immediately release. Alternatively, as in the case of a feeding response, some viperids (e.g. Lachesis) bite and hold. A proteroglyph or opisthoglyph may close its jaws and bite or chew firmly for a considerable time. Differences in fang length between the various venomous snakes are likely due to the evolution of different striking strategies.

Mechanics of spitting

Spitting cobras of the genera Naja and Hemachatus, when irritated or threatened, may eject streams or a spray of venom a distance of 4 to 8 ft. These snakes' fangs have been modified for the purposes of spitting; inside the fangs, the channel makes a 90° bend to the lower front of the fang. Spitters may spit repeatedly and still be able to deliver a fatal bite. Spitting is a defensive reaction only. The snakes tend to aim for the eyes of a perceived threat. A direct hit can cause temporary shock and blindness through severe inflammation of the cornea and conjunctiva. Although usually no serious symptoms result if the venom is washed away immediately with plenty of water, blindness can become permanent if left untreated. Brief contact with the skin is not immediately dangerous, but open wounds may be vectors for envenomation.

Physiologicaleffects

The four distinct types of venom act on the body differently:

Proteolytic venom dismantles the molecular surroundings, including at the site of the bite.

Hemotoxic venom acts on the cardiovascular system, including the heart and blood.

Neurotoxic venom acts on the nervous system, including the brain.

Cytotoxic venom has a localized action at the site of the bite.

Proteroglyphous snakes

The effect of the venom of proteroglyphous snakes (sea snakes, kraits, mambas, black snakes, tiger snakes, and death adders) is mainly on the nervous system, respiratory paralysis being quickly produced by bringing the venom into contact with the central nervous mechanism that controls respiration; the pain and local swelling that follow a bite are not usually severe. The bite of all the proteroglyphous elapids, even of the smallest and gentlest, such as the coral snakes, is, so far as known, deadly to humans. However, some mildly venomous elapids remain, such as the hooded snakes (Parasuta), bandy-bandies (Vermicella), etc.

Vipers

Viper venom (Russell's viper, saw-scaled vipers, bushmasters, and rattlesnakes) acts more on the vascular system, bringing about coagulation of the blood and clotting of the pulmonary arteries; its action on the nervous system is not great, no individual group of nerve-cells appears to be picked out, and the effect upon respiration is not so direct; the influence upon the circulation explains the great depression, which is a symptom of viperine envenomation. The pain of the wound is severe and is

rapidly followed by swelling and discoloration.

The Viperidae differ much among themselves in the toxicity of their venoms. Some, such as the Indian Russell's viper *(Daboia russelli)* and saw-scaled viper *(E. carinatus)*; the American rattlesnakes (Crotalus spp.), bushmasters (Lachesis spp.), and lanceheads (Bothrops spp.); and the African adders *(Bitis spp.)*, night adders *(Causus spp.)*, and horned vipers *(Cerastes spp.)*, cause fatal results unless a remedy is speedily applied. The bite of the larger European vipers may be very dangerous, and followed by fatal results, especially in children, at least in the hotter parts of the Continent; whilst the small meadow viper (Vipera ursinii), which hardly ever bites unless roughly handled, does not seem to be possessed of a very virulent venom, and although very common in some parts of Austria and Hungary, is not known to have ever caused a serious accident.

Opisthoglyphous colubrids

Biologists had long known that some snakes had rear fangs, 'inferior' venom injection mechanisms that might immobilize prey; although a few fatalities were on record, until 1957, the possibility that such snakes were deadly to humans seemed at most remote. The deaths of two prominent herpetologists, Robert Mertens and Karl Schmidt, from African colubrid bites, changed that assessment, and recent events reveal that several other species of rear-fanged snakes have venoms that are potentially lethal to large vertebrates.Boomslang *(Dispholidus typus)* and twig snake (*Thelotornis spp.)* venoms are toxic to blood cells and thin the blood (hemotoxic, haemorrhagic). Early symptoms include headaches, nausea, diarrhea, lethargy, mental disorientation, bruising, and bleeding at the site and all body openings. Exsanguination is the main cause of death from such a bite.The boomslang's venom is the most potent of all rear-fanged snakes in the world based on LD50. Although its venom may be more potent than some vipers and elapids, it causes fewer fatalities owing to various factors (for example, the fangs' effectiveness is not high compared with many other snakes, the venom dose delivered is low, and boomslangs are generally less aggressive in comparison to other venomous snakes such as cobras and mambas). Symptoms of a bite from these snakes include nausea and internal bleeding, and one could die from a brain hemorrhage and respiratory collapse.

Aglyphous snakes

Experiments made with the secretion of the parotid gland of Rhabdophis and Zamenis have shown that even aglyphous snakes are not entirely devoid of venom, and point to the conclusion that the physiological difference between so-called harmless and venomous snakes is only one of degree, just as various steps exist in the transformation of an ordinary parotid gland into a venom gland or of a solid tooth into a tubular or grooved fang.

Use of snake venoms to treat disease

Given that snake venom contains many biologically active ingredients, some may be useful to treat disease.For instance, phospholipases type A2 (PLA2s) from the Tunisian vipers *Cerastes cerastes* and *Macrovipera lebetinus* have been found to have antitumor activity.Anticancer activity has been also reported for other compounds in snake venom.PLA2s hydrolyze phospholipids, thus could act on bacterial cell surfaces, providing novel antimicrobial (antibiotic) activities.

The analgesic (pain-killing) activity of many snake venom proteins has been long known. The main challenge, however, is how to deliver protein to the nerve cells: proteins usually are not applicable as pills.

Traditional treatments

The World Health Organization estimates that 80% of the world's population depends on traditional medicine for their primary health-care needs. Methods of traditional treatments of snakebites, although of questionable efficacy and perhaps even harmful, are nonetheless relevant.

Plants used to treat snakebites in Trinidad and Tobago are made into tinctures with alcohol or olive oil and kept in rum flasks called snake bottles, which contain several different plants and/or insects. The plants used include the vine called monkey ladder (Bauhinia cumanensis or Bauhinia excisa, Fabaceae), which is pounded and put on the bite. Alternatively, a tincture is made with a piece of the vine and kept in a snake bottle. Other plants used include mat root (Aristolochia rugosa), cat's claw *(Pithecellobim unguis-cati)*, tobacco *(Nicotiana tabacum)*, snake bush *(Barleria lupulina)*, obie seed (Cola nitida), and wild gri gri root *(Acrocomia aculeata)*. Some snake bottles also contain the caterpillars (Battuspolydamas, Papilionidae) that eat tree leaves *(Aristolochia trilobata)*. Emergency snake medicines are obtained by chewing a three-inch piece of the root of bois can& *(Cecropia peltata)* and administering this chewed-root solution to the bitten subject (usually a hunting dog). This is a common native plant of Latin America and the Caribbean, which makes it appropriate as an emergency remedy. Another native plant used is mardi grass *(Renealmia alpinia)* (berries), which are crushed together with the juice of wild cane (Costus scaber) and given to the bitten. Quick fixes have included applying chewed tobacco from cigarettes, cigars, or pipes. Making cuts around the puncture or sucking out the venom had been thought helpful in the past, but this course of treatment is now strongly discouraged, due to the risk of self-envenomation through knife cuts or cuts in the mouth (suction cups from snake bite kits can be used, but suctioning seldom provides any measurable benefit)

Serotherapy

Serotherapy using antivenom is a common current treatment and has been described back in 1913. Both adaptive immunity and serotherapy are specific to the type of snake; venom with identical physiological action do not cross-neutralize. Boulenger 1913 describes the following cases :

A European in Australia who had become immune to the venom of the deadly Australian tiger snake *(Notechis scutatus)*, manipulating these snakes with impunity, and was under the impression that his immunity extended also to other species, when bitten by a lowland copperhead *(Austrelaps superbus)*, an allied elapine, died the following day.

In India, the serum prepared with the venom of monocled cobra Naja kaouthia has been found to be without effect on the venom of two species of kraits (Bungarus), Russell's viper (Daboia russelli), saw-scaled viper *(Echis carinatus)*, and Pope's pit viper *(Trimeresurus popeiorum)*. Russell's viper serum is without effect on colubrine venoms, or those of Echis and Trimeresurus. In Brazil, serum prepared with the venom of lanceheads (Bothrops spp.) is without action on rattlesnake *(Crotalus spp.)* venom.

Antivenom snakebite treatment must be matched as the type of envenomation that has occurred. In the Americas, polyvalent antivenoms are available that are effective against the bites of most pit vipers. Crofab is the antivenom developed to treat the bite of North American pit vipers. These are not effective against coral snake envenomation, which requires a specific antivenom to their neurotoxic venom. The situation is even more complex in countries such as India, with its rich mix of vipers (Viperidae) and highly neurotoxic cobras and kraits of the Elapidae.

অসমীয়া বিভাগ

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মৃদুল কুমাৰ দাস
বিজ্ঞানাগাৰ সহকাৰী

প্ৰথম ঘণ্টাৰ বেজিষ্টাৰৰ পিছত মাত্ৰ ক্লাছ আৰম্ভ হৈছে, কিন্তু বঞ্জু এতিয়াও আহি পোৱা নাই। তাৰমানে আজিও তাৰ আকৌ দেৰি হ'ব। যতিনে কিবা এটা ভাবি অজয়ক ক'লে, "এই বঞ্জুটোৱে কোনো দিনেই সময়মতে নাহে"। এনেকৈয়েনো সদায় দেৰি কৰিব লাগে নে? অজয় ধেমালীৰ সুৰেৰে কৈ উঠিল, দেৰি হ'বয়ে, কিয় নহ'ব। তাৰ কি যে চাহাবি ষ্টাইল স্কুললৈ আহোঁতে এবাৰ, লেজাৰত এবাৰ, ছুটীত এবাৰ, তিনিআলিৰ চ'কৰ সেই বগাৰ দোকানত নিজিবালে হ'বনে? তাতে আকৌ পেকেটে পেকেটে শিখৰ, তিৰঙ্গা খোৱাৰ তাৰ কি যে চখ। মৰিব, সোনকালে মৰিব সি। যতিনে কথাৰ মাজতে ক'লে, ধেৎ লাহে লাহে ক, ছাৰে শুনিলে দিব মজা, খাওঁক দে আমাৰ কি হ'ব, ধনীঘৰৰ ল'ৰা টকা আছে, খাওঁক মৰক সি তাক কৈ কৈ ভাগবিলো আমাৰ কিনো লাভ।

"মে আই কাম ইন ছাৰ"?, আতাই কেইজনে একে খৰে অবাক চাৰনিৰে দুৱাৰৰ পিনে চাই ৰ'ল। ছাৰে বঞ্জুৰ পিনে চাই ক'লে, আহা বাপু, আজিও হ'বলা তোমাৰ চাইকেলখন পামচাৰ হৈছিল, নে শিখৰ খোৱাৰ বাবে দেৰি হৈছিল? শ্ৰেণীত হাঁহিৰ ঢৌ উঠিল। "নাই নাই ছাৰ, এনেয়ে", মুখটো খুজুৰাই ভিতৰ সোমাই আহিল বঞ্জু। বঞ্জুৰ বাবে আগৰে পৰা বেঞ্চখন ঠাই অৱশ্য বাৰি থোৱা আছিল। বঞ্জু, যতিন, অজয়, বাহুল আৰু অমিয় এই পাঁচজনীয়া এটা বন্ধুৰ দল। ইহঁতক সচৰাচৰ আন ল'ৰাবোৰে মাতিবলৈ সাহস নকৰে। ক্লাছৰ শেষৰ বেঞ্চখন সিহঁতৰ বাবে সংৰক্ষিত। সেইখনত কোনেও বহিব নোৱাৰে। স্কুলত নাহিলে পাঁচজনে কোৱা-কুই কৰি একেলগে নাহে। তেতিয়াও সিহঁতৰ বাবে শেষৰ বেঞ্চখন খালি হৈ থাকে।

এনেদৰে দিনবোৰ বাগৰি গৈ থাকিল। কেইবছৰমান যোৱাৰ পিছত আহিল হাইস্কুল শিক্ষান্ত পৰীক্ষাৰ বর্ষ। আতাইকেইজনে একে সমানেই আগুৱাই গৈ আছিল। সিহঁতৰ বন্ধুত্বৰ বান্ধ কোনেও চিঙিব নোৱাৰিলে। পিছে কোনেও নজনাকৈ ৰঞ্জুৰ হ'লে এটা বেয়া অভ্যাসে গঢ় লৈছে। ড্ৰাগছ্ সেৱন, ৰঞ্জু ড্ৰাগছ্ৰ প্ৰতি আসক্ত হোৱাটো কোনেও নাজানিছিল। ধনী ঘৰৰ ল'ৰা। বাপেকে নামি-দামী ঠিকাদাৰ টকাৰ কোনো অভাৱ নাই, আনফালে ৰঞ্জু হ'ল ঘৰখনৰ একমাত্ৰ ল'ৰা। দিনবোৰ গৈ থাকিল টেষ্ট পৰীক্ষাৰ দিন যো-জা চলাই আছিল। কিন্তু দুদিনমান ধৰি ৰঞ্জুক সিহঁতে লগ পোৱা নাই। এনেতে কোনোবা এজনৰ মুখত শুনিব পালে যে ৰঞ্জুৰ গা ভাল নহয়। এদিন দুদিনকৈ কেইবাদিনো সিহঁতে ৰঞ্জুক লগ নোপোৱাত, এদিন আবেলি চাৰিও ঠিক কৰিলে ৰঞ্জুহঁতৰ ঘৰলৈ গৈ ৰঞ্জুৰ খবৰ এটাকেই লোৱা যাওঁক। ৰঞ্জুৰ মাকে চাৰিও বনন্ধুকে আথে-বেথে বহিবলৈ দি চাহ-জলপানৰ ব্যৱস্থা কৰিবলৈ পাকঘৰৰ ফালে আগুৱাই গ'ল। ৰঞ্জুৱে শুই থকা বিচনাখনৰ পৰা উঠি বহি ল'লে, "আৰে তহঁত দেখোন, কচোন তহঁতৰ কেনে খবৰ। মই এই কেইদিন তহঁতক লগ ধৰিবই পৰা নাই, মনটো বৰ বেয়া লাগি আছে। তহঁত আহিছ ভালেই কৰিলি"। হ'ব হ'ব সেইবোৰ এতিয়া বাদ দে, বাৰু কচোন তই এতিয়া কেনে আছ। ডাক্তৰক দেখুৱাইছনে নাই ঔখধ পাতি খাইছনে নাই, অজয়ে ৰঞ্জুৰ কথাখিনি সম্পূৰ্ণ নুশুনাকৈ সুধি পেলালে।

কিছু সময় ভাবি ৰঞ্জুৱে এটা মিছিকিয়া হাঁহি মাৰি ক'লে, "আৰে মোৰ কি হৈছে, মই দেখোন ঠিকেই আছো"। এনেকেয়ে কথা বতৰাৰ মাজতে মাকে হাতত চাহৰ ট্ৰেখন লৈ আহি ক'লে, হ'ব বাৰু আগতে তোমালোকে চাহ খাই লোৱা, তাৰ পিছত বাকি থকা কথাখিনি ক'বা। ই এনেকুৱাই কাৰো কথাকেই নুশুনে। আমি কিবা এটা কথা ক'লে কথবোৰ উৰুৱাই দিয়ে।

কিছু সময় এনেকৈ থকাৰ পিছত আতাইকেইজনে ৰঞ্জুৰ পৰা বিদায় লৈ উভতি আহিল। এনেকৈ দিনবোৰ গৈ থাকিল। আনহাতে, ৰঞ্জুৰ শৰীৰৰ অৱস্থাও বেয়াৰ ফালে গতি কৰিলে। ৰঞ্জুক ওচৰতে থকা নার্ছিংহোম এখনত ভর্তি কৰালে। চিকিৎসকে কৰা চিকিৎসাই ৰঞ্জুৰ কোনোফালে নাপালে। কেইদিনমান পিছত আকৌ ৰঞ্জুক গুৱাহাটীলৈ লৈ যোৱা হ'ল। তাতো সেই একে অৱস্থা। দিনক দিনে ৰঞ্জুৰ অৱস্থা বেয়াৰ ফালেহে ঢাল খালে। আনহাতে, ৰঞ্জুক নাপায় বন্ধুবর্গৰ মনৰ অৱস্থাও সিমান ভাল নহয়। কেইদিনমানৰ পিছত চিকিৎসকে মাক-দেউতাকক ক'লে যে ৰঞ্জু আৰু ভাল হোৱাৰ আশা নাই, তাৰ এইড্ছ হৈছে। সি মাথো কেইদিনমানৰহে আলহী। গতিকে তাক ঘৰলৈ নিয়াৰ ব্যৱস্থা কৰক। চিকিৎসকৰ কথাবোৰ শুনাৰ লগে লগে মাক-দেউতাক শোকত ভাগি পৰিল। আমাৰ একমাত্ৰ সন্তানটোক আমি জীয়াই ৰাখিব নোৱাৰিম। হে ভগৱান আমাৰ পিনে অকনমান চকু মেলি চোৱা, আমাক দয়া কৰা প্ৰভু বুলি মাকে কান্দি-কান্দি অস্থিৰ হৈ পৰিল।

কেইদিনমান যোৱাৰ পিছত ৰঞ্জুক ঘৰলৈ ওভোতাই অনা হ'ল। ঘৰখনত ৰঞ্জুৰ বন্ধুবর্গ আৰু ওচৰ-চুবুৰীয়াৰে ভৰি পৰিল ৰঞ্জুক চোৱাৰ বাবে। অমিয়, যতিনহঁতে ৰঞ্জুৰ অৱস্থাৰ বাবে মনত বাৰুকৈয়ে আঘাট পালে। এনেকৈয়ে দুদিন যোৱাৰ পিছত হঠাৎ স্কুললৈ খবৰ আহিল ৰঞ্জু আৰু এই পৃথিৱীত নাই। লগে লগে ৰঞ্জুৰ প্ৰিয় বন্ধু অমিয়, যতিনহঁতৰ মনত যেন এক বুজাব নোৱাৰা শোকৰ ডাৱৰে আৱৰি ধৰিলে। আটাইকেইজনে ল'ৰালৰিকৈ স্কুলৰ পৰা ৰঞ্জুহঁতৰ ঘৰলৈ বুলি খোজ ল'লে। আটাইকেইজনৰ মনত মাথো এটায়ে প্ৰশ্ন, ৰঞ্জুই আমাক কিয় এনেকৈ এৰি গ'ল। সি গ'ল কিন্তু আমাৰ মাজত এৰি গ'ল এটা বুজাব নোৱাৰা বেদনা।

সেই বেদনাই হ'ল আমাৰ বাবে যেন এক "চিৰস্মৰণীয় স্মৃতি"।।

আধুনিক অসমীয়া নাটৰ ইতিহাস

এক চমু অৱলোকন

শংকৰ জ্যোতি বৈশ্য
বিজ্ঞানাগাৰ সহকাৰী

প্রাচীন ভাৰতীয় সংস্কৃত সাহিত্যত ৬৪ বিধ কলাৰ বিৱৰণ পোৱা যায়। ইয়াৰে ভিতৰত ৬ বিধ এনে কলা আছে যাক বিশিষ্ট কলা হিচাপে অভিহিত কৰিব পাৰি। চিত্ৰ, ভাস্কর্য, নৃত্য, কাব্য শ্রেষ্ঠ কলা হিচাপে অভিহিত কৰা দেখা যায়।

নাটক বুলি ক'লে আমি সাধাৰণতে জীৱনক জুকিয়াই চাব পৰা এক শিল্পৰ কথাই বুজো। নাটক হ'ল সাহিত্যৰ এটি বিশেষ ধৰণ। পাশ্চাত্য সাহিত্যৰ আৰ্হিত গঢ় লৈ উঠা আধুনিক অসমীয়া নাটকৰ ইতিহাস বৰ বেছি পুৰণি নহয় যদিও এই লেখাটোৰ জৰিয়তে আধুনিক অসমীয়া নাটকৰ ইতিহাস সম্পর্কে সংক্ষিপ্তভাৱে আলোচনা কৰিবলৈ চেষ্টা কৰা হৈছে। দৰাচলতে ঊনবিংশ শতিকাৰ মাজভাগৰ পৰাহে আধুনিক অসমীয়া নাট্য সাহিত্যৰ আবির্ভাব হৈছে বুলি ক'ব পাৰি। অসমত প্রাচীন কালৰে পৰা পুতলা নাচ, ওজা-পালি আদি লোকনাট্যৰ যি পৰম্পৰা আছিল সেই পৰম্পৰাকে আধাৰ হিচাপে লৈ সংস্কৃত নাটকৰ উপাদান গ্রহণেৰে মহাপুৰুষ শ্রীমন্ত শংকৰদেৱে অসমীয়া নাটক ৰচনা কৰাৰ নতুন ধাৰাৰ সূচনা কৰিছিল আৰু তেতিয়াৰ পৰাই অসমত পূর্ণ পর্যায়ৰ নাট আৰু অভিনয়ৰ প্রচলন হয়।

প্রাচীন ভাৰতীয় নাট্য শাস্ত্রৰ আলমত সৃষ্টি কৰা হ'লেও অংকীয়া নাট-ভাওনাত থলুৱা লোকনাট্যাস্থানৰ উপকৰণেই সৰহ পৰিমাণে সংযোগ কৰা হৈছিল। নাট্য-সংস্কৃতিৰ মাজেদি স্থানীয় বৈশিষ্ট্য পৰিস্ফুত কৰাৰ অভিপ্রায়েৰে শংকৰদেৱে এই অনুষ্ঠানসমূহৰ সহায় লৈ অসমৰ নিজস্ব নাট্য সম্পদ গঢ়ি তুলিছিল। পঞ্চদশ শতিকাৰ শেষৰফালে আৰম্ভ হোৱা অংকীয়া নাটৰ সেই ধাৰাতেই বিশেষ একো পৰিবর্তন নোহোৱাকৈ শংকৰোত্তৰ যুগতো নাটবোৰ ৰচিত আৰু মঞ্চস্থ হৈ আহিছিল যদিও অষ্টাদশ শতিকাৰ শেষৰফালে বিভিন্ন কাৰণত এইবোৰ নাটকে আগৰ গতিবেগ হেৰুৱাই পেলায় ফলত গৌৰৱময় অংকীয়া নাটৰ ঐতিহ্য আধুনিক অসমীয়া নাটলৈ বিস্তাৰিত নহ'ল। বৰং পাশ্চাত্য নাটকৰ ভাবধাৰা আৰু আদর্শহে আধুনিক

নাটকৰ বুনিয়াদ ৰূপে পৰিগণিত হ'ল। ইয়াণ্ডাবু সন্ধিমতে ১৮২৬ খ্ৰীঃত অসম ব্ৰিটিছৰ অধীনত অহাৰ লগে লগে অসমীয়া সমাজ জীৱনত আমূল পৰিবৰ্তন ঘটে। পশ্চিমীয়া শিক্ষা তথা ধ্যান-ধাৰণাৰে সমৃদ্ধ হৈ অসমীয়া সাহিত্যিকসকলেও তেওঁলোকক অনুসৰণ কৰি নাটক লিখিবলৈ আৰম্ভ কৰে। ফলস্বৰূপে ১৮৫৭ চনত গুণাভীৰাম বৰুৱাই 'ৰাম-নৱমী' নামেৰে প্ৰথমখন আধুনিক অসমীয়া নাটক লিখি উলিয়ায়। পৌৰাণিক কাহিনীৰ পৰিবৰ্তে সমাজ-সংস্কাৰৰ উদ্দেশ্যেহে এই নাট ৰচনা কৰা হৈছিল।

প্ৰথম আধুনিক নাট হিচাপে পৰিচিত হ'লেও নাটখন পিছে সেই সময়তে মঞ্চস্থ হোৱা নাছিল। কিন্তু এইটো ঠিক যে এইখন নাটকৰ যোগেদি সংস্কাৰধৰ্মী বক্তব্যৰ আধুনিক অসমীয়া সামাজিক নাটক ৰচনাৰে প্ৰথম খুটি পোতা হয়। ইয়াৰ পিছত ১৮৬১ চনত হেমচন্দ্ৰ বৰুৱাই ৰচনা কৰা 'কানীয়াৰ কীৰ্ত্তন' নাটখনিতেই হ'ল অসমত (শিৱসাগৰত) অভিনীত হোৱা আধুনিক মঞ্চৰ প্ৰথম অসমীয়া নাটক। ইয়াৰ পিছৰ পৰ্যায়ত ৰুদ্ৰৰাম বৰদলৈ 'বঙাল-বঙালনী', ৰমাকান্ত চৌধুৰীৰ 'সীতাহৰণ', 'ৰাবণ বধ' আদিৰ দৰে প্ৰাৰম্ভিক স্তৰৰ আধুনিক অসমীয়া নাটক ৰচনা কৰা হয় আৰু এইসমূহ নাটকৰ যোগেদি অসমীয়া সমাজৰ পৰম্পৰাগত কিছুমান ধ্যান-ধাৰণাক সংস্কাৰমুক্ত দৃষ্টিৰে আঙুলিয়াই দিবলৈ চেষ্টা কৰা হৈছিল।

অৱশ্যে সমাস্তৰালভাৱে ধৰ্মীয় বিষয়বস্তুক বিশেষকৈ পৌৰাণিক কাহিনীক বিষয়বস্তু হিচাপে লৈ নাটক ৰচনাৰ এটা ধাৰাও প্ৰবাহিত হৈ আছিল। বেণুধৰ ৰাজখোৱাৰ 'দুৰ্যোধনৰ উৰুভংগ'; ভাৰত চন্দ্ৰ দাসৰ 'অভিমন্যু বধ'; মিত্ৰদেৱ মহন্তৰ 'অম্বা' আদি পৌৰাণিক কাহিনীৰ অবলম্বনত ৰচিত নাটকসমূহে পৰম্পৰাগত অসমীয়া পৌৰাণিক নাটকৰ ধাৰাটো সমৃদ্ধ কৰিছিল।

স্বাধীনতা লাভৰ আগৰ আৰু ঠিক স্বাধীনতাৰ পিছৰ সময়ছোৱাত অসমীয়া নাটকৰ বাবে এক উল্লেখযোগ্য বিষয়বস্তু হৈ পৰিছিল ইতিহাস। ইতিহাস আশ্ৰয়ী বুৰঞ্জীমূলক নাটক ৰচনাৰে অসমীয়া মানুহৰ জাতীয় চেতনা পুনৰ জাগ্ৰত কৰাৰ প্ৰথম প্ৰয়াস কৰে পদ্মনাথ গোহাঞিবৰুৱাই 'জয়মতী' নাটকৰ জৰিয়তে। মূলতঃ স্বদেশপ্ৰেম আৰু জাতীয়বোধ জাগ্ৰত কৰাৰ উদ্দেশ্যে এই নাটক ৰচনা কৰা হৈছিল। জাতীয় চেতনাৰ অভ্যুত্থানান আৰু দেশৰ প্ৰাচীন ঐতিহ্যৰ প্ৰতি আস্থা, অতীতৰ বীৰ-বীৰাংগনাসকলৰ বীৰত্ব, শৌৰ্য-বীৰ্য, গুণ-গৰিমাৰ পৰা পোৱা প্ৰেৰণাতেই ঐতিহাসিক নাটসমূহৰ উত্থান হয়। প্ৰবীন ফুকনৰ 'লাচিত বৰফুকন', জ্যোতিপ্ৰসাদ আগৰৱালাৰ 'লভিতা', চৈয়দ আব্দুল মালিকৰ 'ৰাজদ্ৰোহী', ফণী শৰ্মাৰ 'ভোগজৰা', আদি নাটকৰ জৰিয়তে বুৰঞ্জীৰ নতুন ব্যাখ্যাৰ নৱনিৰ্মাণ হ'ল বুলি ক'ব পৰা যায়। মন কৰিবলগীয়া যে এই সময়খিনিৰ নাট্যকাৰসমূহৰ ভিতৰত শক্তিশালী নাট্যকাৰজনেই হ'ল ৰূপকোঁৱৰ জ্যোতিপ্ৰসাদ আগৰৱালা। আধুনিক অসমীয়া নাটকৰ ধাৰাটোৱেই জ্যোতিপ্ৰসাদ আগৰৱালাৰ হাতত নতুন সুঁতি গ্ৰহণ কৰিলে। অসমৰ থলুৱা গীত আৰু সুৰৰ সংযোজন কৰি অসমীয়া নাটকক নতুন ৰহন দিলে। জ্যোতিপ্ৰসাদে বাস্তৱবাদী চিন্তা-চৰ্চা, অপূৰ্ব গীতিময়তা, ৰূপধৰ্মিতা, ভাষাৰ সৌন্দৰ্য তথা বৈচিত্ৰময়তাৰে অসমীয়া নাট্যক্ষেত্ৰখনলৈ নতুনত্ব আদৰি আনিলে। তেওঁ 'ৰূপালীম', 'কাৰেঙৰ লিগিৰি', 'নিমাতী কইনা', 'লভিতা' আদি নাটকৰ অসমীয়া নাট্যসাহিত্যত বাস্তৱবাদী চিন্তা-চৰ্চা আৰম্ভ কৰে। ইয়াৰে ভিতৰত সামাজিক সমস্যাক পটভূমি হিচাপে লৈ পাশ্চাত্য চিন্তাকলাৰ আৰ্হিত ৰচিত 'কাৰেঙৰ লিগিৰী' নাটখনক জ্যোতিপ্ৰসাদৰ শ্ৰেষ্ঠ কৃতি বুলি অভিহিত কৰিব পাৰি।

স্বৰাজোত্তৰ কালত আকৌ সামাজিক নাটকৰ বিষয়বস্তু আৰু কলা কৌশলৰ পৰিবৰ্তন ঘটিল। নাট্যকাৰসকলৰ দৃষ্টি সামাজিক, ৰাজনৈতিক, মনঃস্তাত্বিক আদি সকলো দিশলৈ প্ৰসাৰিত হ'বলৈ ধৰে। ব্যক্তিৰ নাগৰিক অধিকাৰ বৃদ্ধি পালে। পৰিৱৰ্তিত সামাজিক পৰিবেশ তথা শ্ৰেণীসংগ্ৰাম, পুঁজিবাদ আৰু সাম্ৰাজ্যবাদৰ বিৰোধ, সাম্যবাদৰ প্ৰসাৰ, প্ৰজন্মৰ ব্যৱধান, নিবনুৱা সমস্যা আদিৰ দৰে বিষয়সমূহৰ ওপৰত নাট্যকাৰসকলৰ দৃষ্টি নিবদ্ধ হ'বলৈ ধৰিলে। পাশ্চাত্য ধ্যান ধাৰণা, বাস্তৱবাদী এৱছার্ড ৰীতি আৰু প্ৰতীকৰ প্ৰয়োগেও নাটকৰ ক্ষেত্ৰখনত আমূল পৰিবৰ্তন আনিলে। কিন্তু এইখিনিতে উল্লেখ কৰিব লাগিব য়ে অকল পাশ্চাত্যৰ প্ৰভাৱতেই নহয়, ভাৰতীয় আন ভাষাৰ নাট্যৰীতিৰ যেনে- মহাৰাষ্ট্ৰীয়, কৰ্ণাটকী, হিন্দী আৰু বঙালী নাট্যসাহিত্যৰ প্ৰভাৱত অসমীয়া নাটকৰো আংগিক আৰু বিষয় বস্তুৰ আমূল পৰিবৰ্তন হ'বলৈ ধৰে। ফলস্বৰূপে সত্যপ্ৰসাদ বৰুৱা, ফণী শৰ্মা আদিৰ দৰে নাট্যকাৰসকলে সমাজৰ বিভিন্ন স্তৰৰ সমস্যাসমূহক উপস্থাপন কৰি কেইবাখনো চিন্তাকৰ্ষক নাটক ৰচনাৰে অসমীয়া সামাজিক নাটকক এক বিশেষ মৰ্যদা প্ৰদান কৰিলে। আধুনিক অসমীয়া নাটকৰ এই প্ৰেক্ষাপটত নাটকক প্ৰকৃত অৰ্থত আধুনিক কৰি তুলিলে অৰুণ শৰ্মাই। সম্পূৰ্ণ পাশ্চাত্য নাট্যশৈলীৰ আৰ্হিত অগতানুগতিক নতুন নাট্য কৌশললৈ ধাৰমান হৈ অৰুণ শৰ্মাই 'পুৰুষ', 'আহাৰ', 'চিএঞৰ' আদি নাটকৰ মাজেৰে অসমীয়া নাটকক প্ৰকৃত অৰ্থত আধুনিক কৰি তুলিলে।

ইয়াৰ উপৰিও আধুনিক অসমীয়া নাট্যধাৰত এটা উল্লেখযোগ্য সংযোজন হৈছে অনুবাদ আৰু ৰূপান্তৰিত নাটক

‘জোনাকী’ যুগতে শ্বেইক্সপীয়েৰৰ ‘Comedy of Errors’ ৰ অসমীয়া ভাঙনি ‘ভ্ৰমৰঙ্গ’ৰ জৰিয়তে অসমীয়া অনুবাদগ নাটকৰ পৰিক্ৰমা আৰম্ভ হৈছিল। লাহে লাহে বিষয়বস্তু আৰু উপস্থাপন শৈলীৰ পাশ্চাত্য আংগিক ব্যৱহাৰ কৰাৰ লগতে পোনপোটীয়াকৈ আৰু পৰোক্ষভাৱেও বিভিন্ন নাটকৰ অসমীয়ালৈ অনুবাদ হ’বলৈ ধৰে। শ্বেইক্সপীয়েৰৰ ‘মেকবেথ’, ‘কিংলেয়ৰ’, ‘হেমলেট’, ‘জুলিয়াছ ছিজাৰ’, ‘ৰোমিঅ এণ্ড জুলিয়েট’ আদিকে ধৰি প্ৰায় কেইবাখানো নাটক অসমীয়ালৈ অনুবাদ হৈছে আৰু এনেধৰণৰ অনুবাদে অসমীয়া নাটকৰ প্ৰেক্ষাপট আৰু অধিক সুদৃঢ় আৰু উজ্বল কৰিছে। ইয়াৰ সমান্তৰালভাৱে আন ভাৰতীয় ভাষাৰ যথেষ্ট নাটকো অসমীয়ালৈ অনুবাদ হৈছে।

সাম্প্ৰতিক সময়ৰ অসমীয়া আধুনিক নটকৰ প্ৰেক্ষাপটত শৈলীৰ দিশত এক গুৰুত্বপূৰ্ণ পদক্ষেপ হৈছে লোকনাট্য শিল্পীৰ প্ৰয়োগ। এই শৈলীৰ প্ৰয়োগে আধুনিক অসমীয়া নাটকৰ উপস্থাপনৰ দিশত এক সুন্দৰ প্ৰেক্ষাপট গঢ়ি তুলিছে। প্ৰথমবাৰৰ বাবে এনে প্ৰচেষ্টা কৰিছিল মিত্ৰদেৱ মহন্তই ‘প্ৰচ্ছন্ন পাণ্ডৱ’ত। ফণী তালুকদাৰে ‘মৰা হাতী’, ‘কুৰুৱাইপৰে ৰাওঁ’, আদিত ৰৰপেটাৰ নাওঁখেল, লোকগীত আৰু কামৰূপৰ কথিত ভাষা ব্যৱহাৰ কৰিছিল। যুগল দাসৰ ‘বায়নৰ খোল’, সতীশ ভট্টাচাৰ্যৰ ‘নিলাজ মানুহৰ দেশ’, গুণাকৰ দেৱগোস্বামীৰ ‘জেৰেঙা’ আদিত অংকীয় ভাওনাৰ আংগিক ব্যৱহাৰ কৰা পৰিলক্ষিত হয়। মুঠতে এক কথাত ক’বলৈ গ’লে লোকনাট্যই আধুনিক অসমীয়া নাটকৰ শ্ৰীবৃদ্ধিত সাৰপানীৰ যোগান ধৰি আহিছে।

এতিয়ালৈ উল্লেখিত পূৰ্ণাংগ দৈর্ঘ্যৰ নাটসমূহৰ লগতে একাংকিকা আৰু ভ্ৰাম্যমান থিয়েটাৰৰ বাবে ৰচিত নাটসমূহেও অসমীয়া নাট্যসাহিত্যৰ ধাৰাটোত অৰিহণা যোগাইছে। সম্পূৰ্ণ ব্যৱসায়িক দৃষ্টিভংগীত ৰচিত হোৱা হেতুকে ভ্ৰাম্যমানৰ নাটসমূহৰ সাহিত্যিক বিষয়বস্তু লোপ পাইছে যদিও থিয়েটাৰত মঞ্চস্থ কৰাৰ উদ্দেশ্যৰে বহুকেইখন অসমীয়া তথা আন ভাৰতীয় ভাষাৰ লগতে বিদেশী ভাষাৰ উপন্যাস, গল্পৰো নাট্যৰূপ দিয়া গৈছে আৰু ই অসমীয়া নাট্যসাহিত্যৰ বাবে শুভ বাৰ্তাবাহক। ইফালে একাংকীকা নাট্যসমূহেও লোকশিল্পৰ লগতে প্ৰাচ্য-পাশ্চাত্যৰ সংমিশ্ৰণত আধুনিক অসমীয়া নাট্যসাহিত্যত এক নতুন মাত্ৰা প্ৰদান কৰিলে। অৰুণ শৰ্মা, ভৱেন্দ্ৰ নাথ শইকীয়া, হেমেন বৰঠাকুৰৰ পৰা আৰম্ভ কৰি সাম্প্ৰতিক সময়ত বাহাৰুল ইছলাম, শুক্ৰচার্য ৰাভা, পবিত্ৰ ৰাভা, জাহানাৰা বেগম, হিমাংশু প্ৰসাদ দাস আদি উদ্যমী নাট্যকাৰসকলে চিন্তাশীল তথা প্ৰগতিশীল ভাৰধাৰাৰে অসমীয়া নাট্য চর্চাক এক আন্তর্জাতিক পর্যায়লৈ লৈ যোৱাৰ ক্ষেত্ৰত অগ্ৰণী ভূমিকা গ্ৰহণ কৰিছে।

সদৌশেষত এজন সৰু নাট্যকর্মী তথা একান্ত নাট্যানুৰাগী হিচাপে আধুনিক অসমীয়া নাটকৰ এই ধাৰাটো এনেদৰেই চিৰপ্ৰবাহমান হৈ থাকক তাকেই সহৃদয়েৰে কামনা কৰিলো।

সহায়ক গ্ৰন্থপুঞ্জী ঃ

১। ড° সত্যেন্দ্ৰ নাথ শর্মা ঃ অসমীয়া নাট্য সাহিত্য

২। অসমীয়া নাট্য সাহিত্যৰ জিলিঙনি ঃ ড° হৰিচন্দ্ৰ ভট্টাচার্য্য

৩। নাট্যকলা ঃ দেশী আৰু বিদেশী ঃ ড° শৈলেন ভৰালী

বাস্তৱ

ৰূপশিখা কলিতা
এম. ফাৰ্ম তৃতীয় ষাণ্মাসিক

দুঃস্বপ্ন
উকামনৰ অস্থিৰকৰচ
উদং পথাৰত ছিৰাল ফটি
কৃষকৰ মুৰত হতাশাৰ হাত
শস্য-মৎস্যৰ নাটনিয়ে
জনতাক কৰিছে কঙাল।
মধ্যভোগীৰ দালালৰাজ
আকাশচুম্বী মূল্য বৃদ্ধিয়ে
ৰাইজক কৰিছে খণ্ডাল
বিপথগামী নৱপ্ৰজ
ড্ৰাগছ, জুৱাৰ চক্ৰবেহুত
উতনুৱা সিহঁতৰ মন...
সমাজৰ আজিৰ এই জটিল সন্ধিক্ষণত
আপদক হাত ৰাউলি মাতে
নুবুজে সিহঁতে আই-বোপাইৰ জীৱন।।

আশা...
জোনাকে পোহৰাব ধৰাৰ বুকু
বিজ্ঞান প্ৰযুক্তিয়েই সপোন
অন্ধবিশ্বাস কুসংস্কাৰৰ পৰা আঁতৰিব মানৱ জাতি
দেশত আহিব নতুন প্ৰগতি।

প্ৰহেলিকা

ত্ৰিদীপ শইকীয়া
সহকাৰী অধ্যাপক

মনৰোৰ কিয় জানো ইমান অশান্ত
সময়ৰোৰ নিষ্ঠুৰ মায়াময় গতিশীল।
পাইও হেৰুৱাৰ বেদনাৰোৰ কাতৰ
অপেক্ষাৰোৰ সীমাহীন নিশব্দতাপূৰ্ণ।।
প্ৰেম জটিল যন্ত্ৰণাকাতৰ বিক্ষোভিত
শান্তমনৰোৰ উদ্দেগিক হোৱাৰ সৰঞ্জাম।

বুকুৰ গধুৰতাৰোৰ আতৰাবলৈ নিকপায়
জ্বলি জ্বলি ছাই হ'বলৈ মোৰো মন নাই
ভালপোৱাই জানো সকলো??
যদি নিঃস্বাৰ্থৰোৰ লাহে লাহে হেৰাই যায়
ধুন্ধা দলিচাৰ পৰা ভালপোৱাখিনি আজি
সময়ৰ প্ৰহেলিকাময় দুৰাহত।।।

অনন্যা শর্মা
বি. ফার্ম তৃতীয় ষান্মাসিক

নিৰৱতা

নিৰৱতা এক সাধনা,
কেৱল নিজৰ বাবে,
উত্তৰণৰ বাবে দৃঢ়তাৰ বাবে
নিৰৱতা এক প্ৰত্যুত্তৰ
সামাজিক পঙ্কিলতাক
ভেদিবলৈ, ভাকুটি কৰিবলৈ,
অৰজ্ঞতাৰ বিৰুদ্ধে
অৰজ্ঞা কৰিবলৈ,
নিষ্ঠুৰতাৰ উত্তৰ
মৌনতাৰে দিবলৈ,
প্ৰতাৰণাৰ উত্তৰ
প্ৰেমেৰে দিবলৈ।
নিৰৱতা এক অমোঘ অস্ত্ৰ
বহুবাধী প্ৰতিপক্ষৰ
মৰ্ম ভেদিবলৈ,
নিজৰ সততাক
প্ৰতিষ্ঠিত কৰিবলৈ
নিৰৱতাক দুৰ্বলতা ভবাজনক
সময়ৰ সোঁতত
ধৰাশায়ী কৰিবলৈ
ক্ষণভঙ্গুৰ নহওক
নিৰৱতা এক সাধনা
কেৱল নিজৰ বাবে
উত্তৰণৰ বাবে,
দৃঢ়তাৰ বাবে।

দ্বীপজ্যোতি গোস্বামী
এম. ফার্ম তৃতীয় ষান্মাসিক

ৰাজনীতি

ৰাজনীতি...
গণতন্ত্ৰৰ সমবিকাশৰ আধাৰ নীতি,
সবল ভাষাত হ'ব লাগে জনমুখী।
পিছে...
ইয়াৰ গূঢ়াৰ্থত প্ৰায়ে লাগে চেঁকা,
কাৰণ সমগ্ৰ নীতিয়ে যেন একাবেৰা।।
যতি পৰিল আমাৰ ঐতিহ্য কলা কৃষ্টিত,
বৰ্তমান ৰাজনীতি নিমজ্জিত হিতাধিকাৰী সৃষ্টিত,
মূল্যহীন আজি কৃষকৰ কপালৰ ঘাম,
নিত্য ব্যৱহাৰ্য সামগ্ৰীৰো দুই চাই দাম।
শাসক পক্ষৰ অদ্ভুত যুক্তি,
পৰটেলত বিশ্লেষকৰ তৰ্কা তৰ্কী,
উপায়হীন বিৰোধীৰ .....
লগতে...
বিজয়ী প্ৰাৰ্থীৰ অট্টহাস্য কিৰিলি।
বৰ্তমান ৰাজনীতিৰ হয়তো এয়াই বাস্তৱ প্ৰতিচ্ছবি।
এতিয়াৰ ৰাজনীতি আঁচনিৰ চমকনি
কেৱল নেতা মন্ত্ৰীৰ কথাৰ ফুলজাৰি
ইয়াকে লৈ চলে একাংশ সাংগুপাংগুৰ দপদপনি,
সকলো দেখি একো নোপোৱা ..... কঁপে
বুকুৰ ধমনী।

নিকিতা বেগম
বি. ফার্ম তৃতীয় বর্ষ

সঁহাৰি

আজি বহুবছো সেমেকা
সমগ্ৰ পৃথিবী নীৰৱ
নীৰৱতাৰ ভাষাৰ জানা কোন?
সেই সুৰীয়া বাঁহী
অসমীত ৰৈ কৈছে
শুনা মোৰ এই ধ্বনি
এন্ধাৰৰ ওৰণি ফালি
এখন হৃদয়ৰ বিনিনি
"হেৰৌ মোৰ সংগিনী
নহ'বাচোন অভিমানী
নীৰৱতাৰ সঁহাৰিত মই
পঠাইছো এখনি চিঠি
মোৰ এই বাঁহীয়ে
পঢ়ি শুনাব মোৰ কাহিনী"
"অ মোৰ সংগী
নোৱাৰো যে দিব মই
নীৰৱতাক কোনো সহঁৰি
হৃদয়ে শুনিব নিৰিচাৰে
মোৰ কোনো ধ্বনি
কিয়নো সেমেকা বতৰে
দিয়ে মাথো গভীৰ টোপনি
নহ'লে কেৱল চকুপানী"
আজি বহুবছো সচাই সেমেকা
সমগ্ৰ পৃথিবী এতিয়া নীৰৱ
শুনা নাই ক'তো অতীত ধ্বনি
নাবাজিল পুনৰ সেই সুৰীয়া বাঁহী
কিন্তু জানা নে কি?
এন্ধাৰৰ আৱৰণ ঢালি
দুনয়নৰ চকুলো চিৰ লগৰী
বিষাদৰ অন্যতম সঁহাৰি।

শশাংক জ্যোতি কাশ্যপ
বি. ফার্ম তৃতীয় ষাণ্মাসিক

হাঁহি

চোৱাচোন এবাৰ ঘুৰি কি দেখিছা?
সৌ দুৰণিলৈ চোৱা এবাৰ।
মাথোঁ এবাৰ...
দেখিবা হেজাৰ-হেজাৰ লোক,
কোনোৱে আজি হাঁহিছে আৰু কোনোৱে...
আৰু দেখিবা হেজাৰ হেজাৰ লোকে ধনেৰে নিজৰ
সপোন পূৰ্ণ কৰিছে।
লাহ-বিলাসেৰে জীৱন ৰচিছে
হাঁহি হাঁহি কটাইছে নিজৰ জীৱন।
আৰু আনফালে...
আনফালে কি দেখিবা?
দেখিবা কোনো অচিন পথৰ কাষত
খালী পাত্ৰ লৈ বহি আছে সেইসকল
দেহ যাৰ অসুস্থ...
ভোকাতুৰ পেট...
আৰু চকুত নাই টোপনি...
উজাগৰে কটাইছে জীৱন...
অপেক্ষা মাথোঁ কিছু টকাৰ বাবে,
আৰু ইয়াৰ আশাতেই যেন বহি আছে।
যাৰ বাবে হাঁহি যেন কল্পলোকৰ এটি মিঠা স্বপ্ন।

Like at first sight

সীমা শহিকীয়া
বি. ফার্ম তৃতীয় ষাণ্মাসিক

"শবতৰ কোনোবা এটা কোমল সন্ধিয়া,
নতুবা শীতৰ এটা গধূলি, হয়তো বা
ফাগুনৰ দিন- ৰাতিৰ সন্ধিক্ষণৰ এটি সময়।
পার্থক্যহীন পৰিস্থিতিত দিনৰ অন্তৰাল।
বেলি ডুবো অৱস্থাত কিনকিনিয়া
ববষুণৰ টোপালত ৰঙা হালধীয়া ৰঙে
তোমাক হয়তো পোনপোটীয়াকৈ আক্ৰমণ কৰে।
বিনিময়ত তোমাৰ এই আধা ঘং আধা হাঁহি মুখখন।
জপৰা চুলিৰ সৈতে সেই ৰহস্যময় চকু!
সহ্য নহয়! মুখখন ঘুৰাই দিয়াটো মোৰ অভ্যাসেই হে যায়।
তুমি মই মুহূর্ততে চেন সৰু গলিটোও ভাহৰ পৃথিবীখন হৈ পৰে।
অজান কোনোবা উৎসৱৰ মনপৰশা সুৰেচোন আবেগৰ পৰশ সিঁচি যায়।
আৰু... উভতি যোৱা পক্ষীজাকৰ কোলাহলো মই ভাল পোৱা গীতবোৰ হৈ পৰে।
ৰোমাণ্টিক কিৰণ নায়কজন নহ'লেও তুমি কিন্তু "অৰ্ণৰ-আস্থা"ৰ অৰ্ণৰৰ দৰেই।
অভিমান সুযোগ নিদিয়া; অথচ বাউলী মোৰ মনটোক অভিমানী কৰি পেলোৱা।
হাতত হাত ধৰি খোজকঢ়া প্ৰিয়জন হ'বই নোৱাৰা তুমি,
কিন্তু সন্ধিয়াৰ বতাহজাকত জেকেটটোও নীৰৱে আগবঢ়াই দিয়া বিশেষজন তুমিয়েই।
নীৰৱতাত থাকি ভালপোৱা হ'বলা?
অনৰ্গল বকি যোৱা ৰেবেৰিং কথাৰ উত্তৰো তুমি নীৰৱেই দিয়া।
এতিয়া নীৰৱ, নিস্তব্ধ সময়খিনি মোৰ অতিকৈ প্ৰিয়।
ববষুণে উপচি পৰা প্ৰতিটো সন্ধিয়াতে তোমাক বিচাৰি পাওঁ।
সৰু গলিটোৰে তোমাক বিচাৰি ঢাওঁ অকলশৰে।
বিচাৰি যাওঁ হাচনাহানাৰ মিঠা গোন্ধটোৰ দৰে তোমাৰ সুবাস।
আৰু আধাতিতা মোৰ চুলিত তোমাৰ হাতৰ পৰশ লৈ উভতি আহো।
সেইখিনি সময়ত মোৰ মুখত আপোনা আপুনি এটা হাঁহিয়ে বাহ লয়।
তুমি তুমি লগা বতাহজাকো বৰ মৰম আকলোৱা হৈ পৰে।
এতিয়া আধা আঁকা ছবিকেইখনত তোমাৰ মোৰ আধৰুৱা কাহিনীৰ মূৰ্ত প্ৰকাশ।
গহীন নিশাৰ আধৰুৱা জোনটোৰ দৰে মনৰ কবিতাও আধৰুৱা।
স্মৃতিৰ টোপোলাত ভাললগাবোৰ সামৰি লৈছোঁ।
সামৰি লৈছোঁ দুখন ভিন্ন ঠাইৰ দুজনৰ প্ৰিয় সময়বোৰ।
মধুৰ স্মৃতিৰ সাক্ষী সৰু গলিটোক একোলা মৰম দি একেবাৰেই যাব ওলাইছোঁ।
হেঁপাহবোৰ অধাৰঙী বোল হয়েই থাকক।
পূৰ্ণাংগ ৰূপ দিবলৈ আশা হেৰুওৱাৰ মনোবল মোৰ নাই।
প্ৰকাশৰ উৎসুকতাও নাই। ধুনীয়া ক্ষণৰ "love at first sight" হ'বলৈ নিদিও তোমাক।
"like at first sight" হিচাপে মোৰ সেই বিশেষজন হয়েই ৰোৱা।

ভালপোৱাৰ প্ৰথমখন চিঠি তোমালৈ বুলি

প্ৰণৱ জ্যোতি ডেকা
বি. ফাৰ্ম তৃতীয় ষাণ্মাসিক

হৃদয়ত গোপনে সাঁচি ৰাখিছো
তোমালৈ বুলি একুকু ভালপোৱা।
কিমান দিন, কিমান সময় লাগিছিল
সেই ভালপোৱাবোৰ গোটাবলৈ সময়ত হয়তো বুজিবা
হৃদয়ৰ কোনো এচুকত আবদ্ধ হৈ আছে সেই সময়বোৰ।
তুমি শুনিলে হয়তো আচৰিত হ'বা যে
ভাললগাবোৰেই নো কেনেকৈ সলনি হ'ল ভালপোৱালৈ।
তুমি বিচাৰি ফুৰিবা নিজৰ মাজতে তাৰ উত্তৰ।
মই জানো বিচাৰি পালেও তুমি মোৰ মুখৰ পৰা শুনিবহে বিচাৰিবা।
এদিন তুমি প্ৰশ্ন কৰিবা আৰু মই তাৰ উত্তৰ দিম।
মোৰ কথাবোৰ শুনি অকণো ভাবিব নোৱাৰা হে তুমি মৰমতে
যেন সোমাই পৰিবা মোৰ দুবাহুৰ মাজত আৰু তোমাৰ চকুলোৰে
বৈ অহা চকুপানীবিনিয়েই হয়তো দিবা তুমি মোক ভালপোৱাৰ
বতৰা!
বাহঃ কি এক স্বপ্ন!
হ'ব জানো কেতিয়াবা সেই দিবাস্বপ্নবোৰ পূৰণ?
মোৰ ওচৰত থাকিলে আজিয়েই দি দিলোহেঁতেন তাৰ উত্তৰ
মাথো আছে তাইৰ ওচৰতো
তাইৰ ওপৰতে নিৰ্ভৰ সপোনবোৰৰ পূৰ্ণতা!
অপেক্ষা কৰিম তাইৰ উত্তৰলৈ
জানোছা উত্তৰ সঠিক পাওঁৱেই!
যেনিবা তাইৰ উত্তৰৰ পাছতেই আৰম্ভ হয় মোৰ এক নতুন জীৱনৰ।

ঋতুৰাজ ডেকা
বি. ফাৰ্ম পঞ্চম বৰ্ষ

কবিতাৰ সৃষ্টি

বহুদিন হ'ল
কবিতা লিখা নাই
নোৱাৰো লিখিব কবিতা
ছন্দবোৰ নিমিলে
অনুভূতি প্ৰায় মৃতপ্ৰায়ঃ
হুলস্থূলীয়া পৰিৱেশ
ব্যৱসায়ী মন
মন প্ৰাণ চঞ্চল
এনেকুৱা পৰিৱেশত জানো
কবিতাৰ সৃষ্টি সম্ভৱ?
স্বপ্নভঙ্গস্তৰুদ্ৰশক্তৰুদ্ধ, স্বৰ্গৰ্ধ ৰ
স্বৰ্গময় সুখ আৰু নীতিশিক্ষাৰ কবিতাই
মানুহৰ মনৰ পৰিবৰ্তন সাধি
আকৌ এক নতুন যুগৰ সৃষ্টি কৰিব আৰু মই?
বৈ থাকো সেই দিনটোলৈ
এটি কবিতা লিখিবলৈ...।

পূৰ্বালী গোস্বামী
বি. ফার্ম সপ্তম ষাণ্মাসিক

ব্যস্ততা পাহৰি এদিন...

মিনতি আৰু অনামিকা আজি প্ৰায় চাৰিবছৰৰ মূৰত লগ পাইছে। যোৱা চাৰিবছৰৰ ভিতৰত ব্যস্ততাৰ বাবে ইজনীয়ে আনজনীক লগ কৰিব পৰা নাছিলে। এফালে চাকৰিৰ কৰ্মভাৰ আনফালে দুয়োৰে সন্তান দুটি আছিলে নিচেই সৰু। মিনতিৰ ছোৱালী বৰ্তমান পঞ্চম শ্ৰেণীত পঢ়ি আছে আৰু অনামিকাৰ ছোৱালীজনীক এইবাৰ নিকেতনত নাম লগাই দিছে। আজি ইমানদিনৰ মূৰত সৰুকালৰ বান্ধৱীক লগ পাই দুয়োজনীৰ আনন্দৰ শেষেই নাই।

মিনতি আৰু অনামিকাক আজি প্ৰায় চাৰিবছৰৰ মূৰত লগ পাইছে। যোৱা চাৰিবছৰৰ ভিতৰত ব্যস্ততাৰ বাবে ইজনীয়ে আনজনীক লগ কৰিব পৰা নাছিলে। এফালে চাকৰিৰ কৰ্মভাৰ আনফালে দুয়োৰে সন্তান দুটি আছিলে নিচেই সৰু। মিনতিৰ ছোৱালী বৰ্তমান পঞ্চম শ্ৰেণীত পঢ়ি আছে আৰু অনামিকাৰ ছোৱালীজনীক এইবাৰ নিকেতনত নাম লগাই দিছে। আজি ইমানদিনৰ মূৰত সৰুকালৰ বান্ধৱীক লগ পাই দুয়োজনীৰ আনন্দৰ শেষেই নাই।

"অ'ই ইমানদিনে তোৰ মোক লগ কৰিবৰ মনে যোৱা নাছিলনে", মিনতিৰ প্ৰশ্নৰ উত্তৰত অনামিকাই ক'লে, "লগ কৰিবৰ মন কেলেই নাযাব নো কিন্তু কি কৰিবি ইমান ব্যস্ত হৈ পৰিছিলোঁ, ইফালে চাকৰি আনফালে কণমানিজনী"।

-"একো নাই দে, মই আৰু নুবুজিম নে, মিনতিয়ে আকৌ ক'বলৈ ধৰিলে, "ভাল হৈছে বৰ্তমান এই ৱাটছএপ, ফেচবুক এইবোৰৰ জৰিয়তে ভিডিঅ'ক'ল এইবোৰ কৰি মিনিটতে সাত সাগৰ দূৰত থকাজনকো ওচৰতে পাব পাৰি"। আমাৰ দিনত কেৱল সাধাৰণ ফোনটো আছিলে, ইজনে আনজনক দেখা নাপাইছিলোঁ"।

-"অ' মিনতি এইটো বাৰু হয় যে আজিৰ এই ব্যৱস্থাখিনিৰ বাবে বহুত সুবিধা হৈছে। কিন্তু চাব গ'লে আমাৰ আগৰ দৰে নহয় এতিয়াৰ কথাবোৰ। আগতে আমি স্কুলৰ গৰমৰ বন্ধত বা ঠাণ্ডাৰ বন্ধত ক'ত যাম কি কৰিম এইবোৰ ভাবিছিলোঁ। আজিকালি স্কুলীয়া ছাত্ৰ-ছাত্ৰীৰ পৰা বৃদ্ধলৈকে প্ৰায়খিনি সময় ছচিয়েল মিডিয়াতে অতিবাহিত হয়। মই কোৱা নাই যে ই বেয়া বুলি কিন্তু ইয়াৰ বাবে কণ কণ শিশুবোৰৰ সোণালী শৈশৱটো হেৰাই গৈছে ক'ৰবাত। খেলপথাৰত ক্ৰিকেট খেলাতকৈ তেওঁলোকে অনলাইন গেমবোৰ প্ৰিফাৰ কৰে"।

-তোৰ মনত আছেনে আগতে আমি গৰমৰ বন্ধত বা ঠাণ্ডাৰ বন্ধত কোনে ক'ত যাম সেইবোৰ আলোচনা কৰিছিলো। এইযে পৰীক্ষা শেষ হ'বলৈ কিমান দিন বাকী ৰুটিনখনত বাৰে বাৰে চাই থাকোঁ আৰু গণি থাকোঁ কিমানদিন পিছত মামাৰ ঘৰলৈ যাব পাৰিম। কিন্তু আজিকালি এই ব্যস্ত পৃথিৱীখনত সৰু কণ কণ ল'ৰা-ছোৱালীবোৰেও শান্তিৰে গৰমৰ বন্ধ বা ঠাণ্ডাৰ বন্ধ নাপায়। হোমৱৰ্কৰ লগতে ডান্স ক্লাছ, মিউজিক ক্লাছ ক'তো কি থাকে। উপায়ো নাই বাৰু সময়ৰ লগত সকলো সলনি হয় আৰু আমি এই সলনিৰ লগত আগবাঢ়িবই লাগিব।

অনামিকাৰ কথাখিনি শুনি মিনতিয়ে ক'লে, "কথাটো হয়। আমাৰ সময়ত ঘৰৰ আটায়ে মিলি এটা নিৰ্দিষ্ট সময়ত টিভিত কিছুমান অনুষ্ঠান চাইছিলো"।

বৰ্তমান স্মাৰ্ট ফোনবোৰত কি চিনেমা কি ছিৰিয়েল সকলোবোৰ যেতিয়াই মন তেতিয়াই চাব পাৰি। ঘৰৰ প্ৰত্যেকেই নিজৰ নিজৰ পছন্দ অনুযায়ী অনুষ্ঠান চাব পাৰে। আচলতে ইণ্টাৰনেটে যিমান পৃথিৱীখনক সৰু এখন গাওঁলৈ ৰূপান্তৰ কৰিছে সিমানে মানুহবোৰক দূৰতো কৰিছে। সি আমেজ একেলগে বহি কথা পাতি অতিবাহিত কৰিলে পোৱা যায় সেইবোৰ বৰ্তমান মানুহে প্ৰায় পাহৰিবই ধৰিছে। মন গ'লে ফোন কৰিলোঁ কথা পাতিলো কিন্তু কেতিয়াবা লগ কৰি কথা পাতিলে যি আমেজ সেয়া চাগে আমি পাহৰিব ধৰিছো। অৱশ্যে বৰ্তমান মানুহৰ জীৱনত ব্যস্ততাও সৰহ।

"হ'ব দে আহ আৰু এতিয়া এইবোৰ কৈ থাকিলে নহ'ব কিমানদিনৰ মূৰত লগ পাইছোঁ, মই তোৰ মনপছন্দৰ আটাইবোৰ ব্যঞ্জন বনাইছোঁ, খাবলৈ আহ"- মিনতিয়ে ক'লে।

-"কণমানিজনীক এৰি আহি তাইলৈ মনতো পৰি আছে কিন্তু তোক লগ পাই তোৰ লগত সময় অতিবাহিত কৰি আজি বহুত ভাল লাগিলে। আমাৰ ল'ৰালিৰ দিনবোৰ আকৌ জীপাল হৈ উঠিল।"

-অনামিকাৰ কথাত হয়ভৰ দি মিনতিয়ে ভিতৰৰ পৰা ফটো এলবাম এখন লৈ আহিলে।

-দুয়োজনীৰে সৰুকালৰ ফটোবোৰ চাই চাই দুয়ো নষ্টালজিক হৈ পৰিল।

দুয়োজনীয়ে স্কুলত কৰা ধেমালিবোৰৰ কথা মনত পেলাই ক'ব ধৰিলে, "তেতিয়াৰ দিনবোৰ সচাঁই বৰ ভাল আছিল জাননে। একো চিন্তা নাই, একো দায়িত্ব নাই"।

-"অ'ই তই যে দুটা ৰাস্তাৰ মাজত থকা নলাটো পাৰ হ'বলৈ গৈ তাত পৰিছিলি মনত আছেনে" - মিনতিয়ে অনামিকাক সোধোতে অনামিকাই লাজতে মনত আছে বুলি ক'লে।

আজি মুঠতে গোটেই ঘৰখন দুয়োজনীৰ হাঁহি ধেমালিত ৰজনজনাই উঠিছে।

আবেলি অনামিকা যাবলৈ ওলাই ক'লে- "আজি ইমান দিনৰ মূৰত তোক লগ পাই পূৰণি কথাবোৰ মনত পেলাই বৰ ভাল লাগিল। আমি সকলোৱে নিজৰ ব্যস্ত জীৱনৰ পৰা এটা দিন এনেদৰে অতিবাহিত কৰিব পাৰিলে সচাঁই বৰ আনন্দ পোৱা যায়। ৱাটছ্এপত প্ৰায়ে কথা পাতোঁ আমি। ভিডিঅ' ক'লটো কথা পাতি থাকো মাজে মাজে? কিন্তু আজি এনেদৰে লগ পাই যিটো আনন্দ পাইছোঁ সেইটো যান্ত্ৰিক ভাৱে পোৱা নাযায়। আৰু ইমান সুস্বাদু ব্যঞ্জনৰ বাবে ধন্যবাদ বান্ধৱী"।

"হ'ব দে বৰ কথা তোৰ। ধন্যবাদ কিহৰ। আকৌ আহিবি আৰু এইবাৰ মইনাজনীকো লগত আনিবি"।

হৃদয়ন দেৱ চৌধুৰী
বি. ফার্ম প্রথম ষাণ্মাসিক

ঔষধ আৰু ভাৰতৰ ঔদ্যোগিক ক্ষেত্রত ইয়াৰ অৱিহণা

পুৰণি কালৰে পৰা ৰোগ নিৰাময়ৰ বাবে মানুহে ঔষধ ব্যৱহাৰ কৰি আহিছে। ভাৰতৰ নিচিনা প্রাচীন দেশত ঔষধৰ ধাৰণাটো বহু আগৰ পৰা প্রচলিত। প্রাকৃতিক ঔষধৰ ক্ষেত্রত ভাৰত ঋষি-মুনিৰ দিনৰে পৰা চহকী। পাশ্চাত্য দেশবিলাকৰ বিজ্ঞানীসকলে ঔষধৰ বৈজ্ঞানিক পৰীক্ষা-নিৰীক্ষা কৰি ঔষধবোৰক আগতকৈ অধিক উপযোগী কৰি তুলিছে।

বর্তমান যুগত ঔষধ ব্যৱসায়িক ক্ষেত্রখনত অধিক সক্রিয় হৈছে। বহু ভিতৰুৱা ঠাই য'ত যোগাযোগ বিশেষ সুবিধা নাই সেইবিলাক ঠাইতো ফার্মাচী গঢ়ি উঠিছে। ভাৰতৰ অর্থনীতিৰ বিকাশত ঔষধে বিশেষ ভূমিকা পালন কৰি আহিছে। ঔষধৰ পৰিমানৰ ফালৰ পৰা ভাৰত বিশ্ব ভিৰতে তৃতীয় স্থান দখল কৰিবলৈ সক্ষম হৈছে। আনহাতে মূল্যৰ ফালৰ পৰা ভাৰত চতুর্দশ স্থান লাভ কৰিছে। বিভিন্ন দেশত ভাৰতৰ পৰা ঔষধ ৰপ্তানি কৰা হয়। এক সমীক্ষা মতে ২০২১ চনত ভাৰতে ঔষধৰ বাণিজ্যিক ক্ষেত্রখনত ৪২ বিলিয়ন আমেৰিকান ডলাৰৰ ব্যৱসায় কৰিবলৈ সক্ষম হৈছে। আহি থকা সময়ৰ বাবে ই এক সুখবৰ। ভৱিষ্যতে ইয়াৰ মাত্রা আৰু অধিক বৃদ্ধি পাব বুলি আশা কৰা হৈছে।

কৰোণা ভাই�ৰাছে গোটেই বিশ্বত ত্রাস কৰাৰ সময়ত ঔষধে বিভিন্ন ধৰণে অৱদান আগবঢ়াইছে। এই ভাইৰাছৰ প্রতিষেধক তৈয়াৰ কৰাত বিভিন্ন আগশাৰীৰ দেশে ভাগ লৈছে যদিও ভাৰতৰ অৱদান লক্ষণীয়। ভাৰতে ২০২১ চনৰ মে' মাহলৈকে বিভিন্ন দেশলৈ ৫৮৬.৪ লাখ ক'ভিড-১৯ প্রতিষেধক পঠিয়াবলৈ সক্ষম হৈছে।

বিগত কিছু সময়ত ভাৰতৰ ফার্মাচী ক্ষেত্রখনত হোৱা কিছুমান গুৰুত্বপূর্ণ সিদ্ধান্ত তলত উল্লেখ কৰা হ'ল-

- ২০২১ চনৰ ফেব্রুৱাৰী মাহত তেলেংগানা চৰকাৰে ..... সৈতে যোগ হৈ 'ফ্রাষ্ট-ট্রেক' নামৰ ৰাসানাগাৰ এটি গঢ়ি তোলে যাতে ই ৰাজ্যখনৰ ফার্মাচী ক্ষেত্রখন আৰু অধিক সক্রিয় কৰি তোলে।
- ২০২১ চনৰ ফেব্রুৱাৰী মাহতে আন এক সফলতাপূর্বক খবৰ আহে গ্লেনমার্ক ফার্মাচিউটিকেল লিমিটেড (SUTTB)ৰ পৰা। এই কোম্পানীয়ে চুনিটনিৰ অ'ৰেল কেপচুল নামেৰে এক ঔষধ উদ্ভাৱন কৰে, যিয়ে বৃক্কৰ কর্কট ৰোগৰ নিৰাময়ৰ পথ সুচল কৰি তুলিছে।
- ২০২১ চনৰ ফেব্রুৱা মাহতে নাতকো ফার্মা নামৰ কোম্পানীয়ে ব্রাইভাৰচিতম নামেৰে এক ঔষধ তৈয়াৰ কৰে যিয়ে মৃগীৰোগ নিৰাময় কৰে।
- ২০২১ চনৰ মে' মাহত চিপলা নামৰ কোম্পানীয়ে ক'ভিড-১৯ ভাইৰাছ ধৰা পেলাব পৰা ফিট 'ভাইৰাজেন' প্রস্তুত কৰি উলিয়াইছে, যি PCR পদ্ধতিৰে তৈয়াৰ কৰা হৈছে।

ফার্মাচী ক্ষেত্রখনত ভাৰতৰ অৱদান উল্লেখযোগ্য। ইয়াৰে বিকাশৰ বাবে চৰকাৰেও গুৰুত্ব আৰোপ কৰিছে। ফার্মাচীক্ষেত্রখনক ভৱিষ্যতে অধিক শক্তিশালী কৰাৰ লক্ষেৰে সকলোৱে কাম কৰি যোৱাটোৱেই ইয়াৰ সৈতে জড়িত লোকসকৰ প্রধান উদ্দেশ্য।

TEACHING STAFF

Sitting from Left to Right : Dr. Tapash Chakraborty , Mr. Purbajit Chetia , Dr. Damiki Laloo, Dr.Bhanu Pratap Sahu, Dr.Gouranga Das, Dr. Dipankar Saha, Dr.Smriti Rekha Chanda Das, Dr. Trishna Das, Mrs. Rupa Sengupta.

First Row Standing from Left to Right : Mr. Ranadeep Buragohain, Dr. Seikh Sofiur Rahman, Ms. Priyanka Choudhury, Ms. Shatabdi Ghosh, Mrs. Ankita Kashyap, Ms. Bhaswati Das, Mrs. Asha Das, Mrs. Madhuchandra Lahon, Ms. Zartaj Wasmin Banu , Ms. Lima Patowary, Mrs.Arundhati Medhi, Ms. Pallabi Kashyap.

Second Row Standing from Left to Right : Mr. Chinmoy Bhuyan, Mr. Trideep Saikia, Mr. Bhrigu Kumar Das, Mr. Mrinmoy Deka, Dr.Anupam Sharma, Mr.Suman Kumar, Mr. Susankar Kushari, Mr.Alakesh Bharali, Mr. Iswar Hazarika, Dr. Junmoni Kalita, Mr. R. James.

NON-TEACHING STAFF

Sitting from Left to Right : Mr. Biswajit Baruah, Mr. Biren Kalita, Mr. Munindra Bhattacharya, Md. Isha Ali Hoque, Dr.Gouranga Das, Mr. Bipul Sarma, Mr. Diganta Kumar Das, Mr. Prakash Talukdar, Mr. Utpal Das

First Row Standing from Left to Right : Mr.Pranjit Kalita, Mr. Gokul Das, Md.Eyajul Ali , Mr. Chanakya Talukdar ,Mr. Deepmoni Das, Mr.Kulendra Rabha, Mrs. Babita Baishya, Mr. Hirak Jyoti Das, Mr. Sourav Kumar Sharma, Mr. Mridul Das, Mr.Sankar Jyoti Baishya, Md. Jamser Ali, Mr. Karnadeep Chowdhury.

Students of D. Pharm 2nd Year

Students of B. Pharm 1st Sem (Section A)

Students of B. Pharm 1st Sem (Section B)

Students of B. Pharm 3rd Sem (Section A)

Students of B. Pharm 3rd Sem (Section B)

Students of B. Pharm 5th Sem (Section A)

Students of B. Pharm 5th Sem (Section B)

Students of B. Pharm 7th Sem (Section A)

Students of B. Pharm 7th Sem (Section B)

Students of M. Pharm 1st Sem

Students of M. Pharm 3rd Sem (Pharmacology)

Students of M. Pharm 3rd Sem (Pharmaceutics)

Students of M. Pharm 3rd Sem (Pharmaceutical Chemistry)

STUDENT PLACEMENT REPORT OF 2020-21

Out of 80 Students of B. Pharm,15Students of M.Pharm and 60 students of D. Pharm, 59have already been selected by different company for job in Various Sectors like Production, QA, QC and Marketing;some others have opted for higher studies and Hospital Training.

Sl. No	Stream	No Of Students Appeared	No. Of Student Passed
01	B.Pharm	99	80
02	M.Pharm	15	15
03	D. Pharm	61	60

Sl. No.	Name of the Student Placed	Name of the Employer	Nature of Job
1	Ambanish Bharadwaz	Sun Pharma Limited	Production, QA, QC, Warehouse
2	Partha Pratim Thakuria		
3	Banjit Kalita		
4	Dhanjit Bezbaruah		
5	Sabnam Nagris		
6	Bidisha Bordolai		
7	Ritupornaa Gogoi		
8	Nur Ahmed		
9	Nibedita Ghosh		
10	Mukul Das		
11	Jyotirmoy Das		
12	Sangita Medhi		
13	Musaddiqur Rahman		
14	Shruti Das		
15	Deepshikha Das		
16	Sabitri Pradhan		
17	Bhaskar Jyoti Kalita		
18	Jagyajyoti Dutta		
19	Toufikananda Rabha		
20	Kaushik Saud		
21	Hirak Jyoti Kumar		
22	Jitul Deka		
23	Hrishikesh Kalita		
24	Swagata Baruah	Hetero Healthcare Limited	Production, QA, QC, Warehouse
25	Eurupa Baruah		
26	Thairingdi Bathari		
27	Karishma Rahman		
28	Hirak Jyoti Patgiri		
29	Gariyashi Bora		
30	Arjina Sultana		
31	Mukhtararif Rahman		
32	Plabon Kachari		
33	Pallabi Bhuyan		
34	Karishma Sultana		
35	Ellora Kalita		
36	Chandrupal Brezbaruah		
37	Hashibul Hussain	Troikaa Pharmaceutical	

38	Debojit Sarmah		
39	Enamul Hussain Khadakar	Mankind Pharma Ltd.	Marketing
40	Nurnoby Sheikh	Indiabulls Pharmaceuticals	Marketing
41	Utpal Kalita	Phoenix Laboratories	Production
42	Jitul Deka	Evoke HR Solutions Pvt. Ltd.	Marketing
43	Prasun Kumar Das	Zydus Healthcare Limited	Marketing
44	Noor Hasina Haque	Apy Pharma	QA
45	Jitu Day	S10 Healthcare Solutions	Medical Coding
46	Mukul Das	Nestle India	Marketing
47	Bhaskar Jyoti Kalita	Ajanta Pharma Ltd	QC
48	Gobinda Das		
49	Nihar Yogi		
50	Ritu Kalita	Narayana Super Specialty Hospital	Hospital Pharmacy
51	Gaurav Jyoti Kalita		
52	Hirak Jyoti Patgiri	Systopic Pharma	Marketing
53	Mridupawan Baruah	Hetero Healthcare Ltd	Production
54	Ripunjoy Kalita	PMJAK, GIPS	Pharmacist
55	Jonmoni Saloi	Avizen Pharma	Production

STUDENTS PLACED IN EDUCATIONAL INSTITUTE

Sl. No	Nature of Job	Name of the student
1	Assistant Professor, GIPS, Guwahati	Mr. Alakesh Bharali
2	Assistant Professor, GIPS, Tezpur	Mr. Damanbhalang Rynjah
3	Assistant Professor, USTM, Meghalaya	Mr. Kamallochan Barman
4	Assistant Professor, Royal Global University, Guwahati	Ms. Payal Dasgupta
5	Assistant Professor, NEF College, Nagaon	Ms. Mayuri Phukan
6	Assistant Professor, RIPT College of Pharmacy,Guwahati	Mr. Bitopan Baishya
7	Teaching Assistant, Assam Pharmacy Institute, Jorhat	Ms.Karishma Rahman
8	Teaching Assistant, Assam Pharmacy Institute, Jorhat	Mr.Biswajit Bailong

STUDENTS PURSUING HIGHER STUDIES 2019-20

Sl. No.	Name of the Student	M. Pharm/ B. Pharm/Other	Higher study
01	1. Banjit Kalita 2. Nasreen Ahmed 3. Mansita Saha 4. Hemanta Kumar Gogoi 5. Fazid Ali 6. Sabnam Nargis 7. Priyanka Baruah 8. Palash Das 9. Abhigyan Borah 10. Nayana Bhuyan 11. Kangkana Bora 12. Debika Sarmah 13. Sabitri Pradhan 14. Hrishikesh Sarma 15. Kanishma Sultana 16. Pallabi Bhuyan 17. Shruti Das 18. Jitakshara Das 19. Nibedita Ghosh 20. Partha Pratim THakuria	**M. Pharm**	Girijananda Chowdhury institute of Pharmaceutical Science, (Assam Science and Technology University), Guwahati, Assam
02	1. Mr. Jyotirmoy Das	**M. Pharm**	University of North Bengal, Kolkata
03	2. Mr. Abhipshit Kalita 3. Mr. Ajay Das	**M. Pharm**	IIT, BHU, Varanasi NIPER,Guwahati
04	1. Mrinal Das 2 Suman Choudhury 3. Dhiraj Singh	**B. Pharm**	Girijananda Chowdhury institute of Pharmaceutical Science, (Assam Science and Technology University), Guwahati, Assam.

LIST OF STUDENTS QUALIFIED IN GPAT-2020-2021

S.N.	Name of Student	Qualified(Q)	All India Rank (AIR)
1.	Mr. Abhipshit Kalita	Q	30
2.	Mr. Ajay Das	Q	269
3.	Mr. Banjit Kalita	Q	1172
4.	Mr. Fazid Ali	Q	2625
5.	Ms. Nayana Bhuyan	Q	4568
6.	Mr. Somnath Mandal	Q	5299
7.	Mr. Niloy Deori	Q	19944

EVENTS	GROUP	REMARKS
Sprint event	Boys 100 m	Mr. Sanidhya Chaimuah (B.Pharm 3rd Sem)
		1st Runner's up: Mr. Bicki Chowdhury (D.Pharm 2nd Year)
		2nd Runner's up: Mr. AwasthiThapa (B.Pharm 3rd Sem)
	Boys 200 m	Winner: Mr. Sanidhya Chamuah (B.Pharm 3rd Sem)
		1st Runner's up: Mr. Namesha Bareh (B.Pharm 3rd Sem)
		2nd Runner's up: Mr. Mustaque Asif Baksi (B.Pharm 1st Sem)
	Girls 100 m	Winner: Ms.Pranami Changmai (M.Pharm 1st Sem)
		1st Runner's up: Ms. Mandira Das (B.Pharm 3rd Sem)
		2nd Runner's up: Ms. DarshanaThakuriya (B.Pharm 3rd Sem)
	Girls 200 m	Winner: Ms.Pranami Changmai (M.Pharm 1st Sem)
		1st Runner's up: Ms.Mandira Das (B.Pharm 3rd Sem)
		2nd Runner's up: Ms.Darshana Thakuriya (B. Pharm 3rd Sem)
Shot Put	Boys	Winner: Mr. Shahrukh Khan (B.Pharm 5th Sem)
		1st Runner's up: Mr.Bikash Chowdhury (B.Pharm 5th Sem)
		2nd Runner's up: Mr. Jayanta Daimary (D.Pharm 1st Year)
	Girls	Winner: Ms.Darshana Thakuriya (B.Pharm 3rd Sem)
		1st Runner's up: Ms.Neha Singh (B.Pharm 3rd Sem)
		2nd Runner's up: Ms. Puja Kalita (B.Pharm 7th Sem)
Long Jump	Boys	Winner: Mr. Hrishikamal Barman (B.Pharm 7th Sem)
		1st Runner's up: Mr.Debopratim Sarma (B.Pharm 3rd Sem)
		2nd Runner's up: Mr. Rudy Najair (B.Pharm 5th Sem)
	Girls	Winner: Ms. Darshana Thakuriya (B.Pharm 3rd Sem)
		1st Runner's up: Ms.Ridahun Kharsunai (D.Pharm 1st Year)
		2nd Runner's up: Ms.Jeba Akhtar (B.Pharm 7th Sem)
Blind Hit	Girls	Winner : Ms. Pamolima Baruah (B. Pharm 7th Sem)
		1st Runner's up: Ms.Pallabi Bhuyan (M.Pharm 1st Sem)
		2nd Runner's up: Ms. Jeba Akhtar (B.Pharm 7th Sem)

Photography		Winner: Ms.Nishamoni Talukdar (B.Pharm 1st Sem) 1st Runner's up: Mr.Dhiman Kalita (B.Pharm 7th Sem)
MusicalChair		Winner: Ms. Koyal Sarkar (B.Pharm 5th Sem) 1st Runner's up: Ms.Jeba Akhtar (B.Pharm 7th Sem) 2nd Runner's up: Ms. Bidisha Deka (B.Pharm 3rd Sem)
ArtCompetition		Winner: Ms. Rupama Thakuriya (B.Pharm 7th Sem) 1st Runner's up: Ms.Madhusmita Paul (B.Pharm 5th Sem) 2nd Runner's up: Ms. Sanjana Choudhury (B.Pharm 7th Sem)
Carrom Single	Girls	Winner: Ms. Robina Ahmed (B.Pharm 7th Sem) 1st Runner's up: Nishmita Wary (B.Pharm 1st Sem) 2nd Runner's up: Lawikhampti Pyrtul (D.Pharm 1st Year)
Carrom Doubles	Girls	Winner: Ms. Manashree Kumar & Nishmita Wary (B.Pharm 1st Sem) 1st Runner's up: Ms.BhabanaKalita & Ms.Tamanna Sharma (B.Pharm 5th Sem) 2nd Runner's up: Ms. Mary Baruah & Ms.Lani Saikia (B.Pharm 5th Sem)
SingingCompetition		Winner: Mr. Chiranjib Deka (B.Pharm 1st Sem) 1st Runner's up: Mr.Achinta Kumar (D.Pharm 2nd Year) 2nd Runner's up: Ms. Koyal Sarkar (B.Pharm 5th Sem) Mr. Bitupan Kumar Dutta (B.Pharm 7th Sem)
Tug of War	Girls	Winner: B.Pharm 3rd Sem (10 participants) Runner's up: M.Pharm 3rd Sem (10 participants)
	Boys	Winner: B.Pharm 5th Sem (10 participants) Runner's up: B.Pharm 3rd Sem (10 participants)
Chess Competition	Boys	Winner: Mr.Pritam Goswami (B.Pharm 7th Sem) 1st Runner's up: Mr. Binoy Saloi (B.Pharm 7th Sem) 2nd Runner's up: Mr. Ripunjay Kalita (B.Pharm 5th Sem)

	Girls	Winner: Ms. Jeba Akhtar (B.Pharm 7th Sem)
		1st Runner's up: Ms.Seema Saikia (B.Pharm 3rd Sem)
		2nd Runner's up: Ms. Jharna Phukan (B.Pharm 7th Sem)
Solo DanceCompetition		Winner: Ms. Sanjana Chowdhury (B.Pharm 7th Sem)
		1st Runner's up: Ms. Angela Goswami (B.Pharm 5th Sem) Ms. Antara Saha (D.Pharm 2nd Year)
		2nd Runner's up: Ms. Aparna Thakuriya (B.Pharm 3rd Sem)
Table Tennis Boys (Single)		Winner: Mr.Boblin Das (B.Pharm 1st Sem)
		Runner's up: Mr. Abhishek Bhattcharya
Table Tennis Boys(Doubles)		Winner: Mr. Benputong Longkumar (B.Pharm 3rd Sem) & Mr.Abhishek Bhattacharya (B.Pharm 7th Sem)
		Runner's up: Mr. A.A.I. Parvaj Lashkar & Mr. Abdul Sajid (B.Pharm 5th Sem)
Badminton Singles	Girls	Winner: Ms.Sabnam Nargis (M.Pharm 1st Sem)
		Runner's up: Ms. Safeya Shamma (B.Pharm 5th Sem)
Badminton Doubles	Girls	Winner: Ms.Rashmita Kalita & Ms. Nancy Kashyap (B.Pharm 5th Sem)
		Runner's up: Ms. Rupshika Kalita & Ms.Tasrina Rahman (M.Pharm 3rd Sem)
Carrom Single	Boys	Winner: Mr. Ijajul Hussain (B.Pharm 7th Sem)
		1st Runner's up: Mr.Partha Pratim Khaklary (B.Pharm 3rd Sem)
		2nd Runner's up: Mr.Prabal Basumatary (B.Pharm 1st Sem)
Carrom Doubles	Boys	Winner: Mr.Partha Pratim Khaklary &Mr.Tushar Roy (B.Pharm 3rd Sem)
		1st Runner's up: Mr.Mohibul Islam & Mr.Aksadul Alom (D.Pharm 2nd Year)
		2nd Runner's up: Mr.Saheed Nadeem & Mr.BishalSaha (D.Pharm 1st Year)
Table Tennis Doubles	Boys	Winner: Ms. Abhijeeta Talukdar (M.Pharm 1st Sem)
		Runner's up: Ms. Pratyasha Mohan (B.Pharm 3rd Sem)
Badminton Singles	Boys	Winner: Mr.Janjani Pegu (D.Pharm 2nd Year)
		Runner's up: Mr. Saubhik Dutta (B.Pharm 7th Sem)

Badminton Doubles	Boys	Winner: Mr.Janjani Pegu & Mr.Titutparna Pani Phukan (D.Pharm 2nd Year)
		Runner's up: Mr. Manthan Dey & Mr.Saurav Sarma (B.Phaarm 7thSem)
Art &Craft		Winner: Ms.Rashmita Dutta (B.Pharm 7thSem)
		Ms.Rupama Thakuria (B.Pharm 7thSem)
		Ms. Zannatun Firdousi (B.Pharm 7thSem)
		1st Runner's up: Ms. Sanskrita Das (B.pharm 5thSem) Ms. Monideepa Dey (B.pharm 5thSem) Ms. Minerva Kalita (B.pharm 5thSem)
		2nd Runner's up: Ms. Antara Saha (D.Pharm 1stYear) Ms. Neeha Das (D.Pharm 1st Year) Ms.Nupur Saha (D.Pharm 1stYear)
Power Lifting	Above 80 kg Category,Boys	Winner: Mr. Akash Ajith (M. Pharm. 3rd semester)
		1st Runner's up: Mr.Koustav Koushik (B. Pharm. 1st Semester)
		2nd Runner's up: Mr. Partha PratimDeka(B. Pharm. 3rd Semester)
	70-79 kg Category, Boys	Winner: Mr. Bhargav Das (B. Pharm. 7th Semester)
		1st Runner's up: Mr.Partha Pratim Khakhlari (B. Pharm. 3rd Semester)
		2nd Runner's up: Mr.Nayanmoni Das (B. Pharm. 5th Semester)
	60-69 kg Category, Boys	Winner: Mr.Debarshi Ghita Koushik (B. Pharm. 7th Semester)
		1st Runner's up: Mr. David Deka (B. Pharm. 7th Semester)
		2nd Runner's up: Mr. Jyotirmoy Malakar (B. Pharm. 1st Semester)
	45-59 kg Category, Boys	Winner: Mr. Asish Ahmed (B. Pharm. 5th Semester)
		1st Runner's up: Mr. Jyotishman Saud (D. Pharm 1st year) 2nd Runner's up: Mr. Pranab Jyoti Deka (B. Pharm. 5th Semester)
Instagram Reels competition		Winner: Ms. Ayantika Bhowmick (B.Pharm 1stSem)

Cricketcompetition		Winner: B.Pharm 5th Sem (11 participants)
		1st Runner's up: M.Pharm 1st Sem (11 participants)
Kabaddicompetition		Winner: B.Pharm 3rd Sem (7 participants)
		Runner's up: B.Pharm 5th Sem (7 paticipants)
Footballcompetition		Winner: B.Pharm 5th Sem (14 paticipants)
		Runner's up: B.Pharm 3rd Sem (15 participants)
Volleyballcompetition		Winner: B.Pharm 1st Sem (9 participants)
		Runner's up: B.Pharm 5th Sem (9 participants)
MobileGame		Winner: Mr. BitopanRajbongshi (B.Pharm 3rd Sem) Mr. Momin Khan (B.Pharm 3rd Sem) Mr. Dhiraj Singh (B.Pharm 3rd Sem)
		1st Runner's up: Mr. DhimnjyotiDeka (B.Pharm 7th Sem) Mr.Ankurjyoti Bora (B.Pharm 7th Sem) Mr. AbhilashNath (B.Pharm 7th Sem) Mr. Deepjyoti Sharma (B.Pharm 7th Sem)
		2nd Runner's up: Mr.Abid Manjur (B.Pharm 1st Sem) Mr. Amjadirfan (B.Pharm 1st Sem) Mr. MasudNurNiaz (B.Pharm 1st Sem) Mr.Mostaque Asif Baksi (B.Pharm 1st Sem)

ACHIEVEMENTS

AWARENESS PROGRAMME

INAUGURATION OF CELL CULTURE LABORATORY

NATIONAL PHARMACY WEEK CELEBRATION

WORLD PHARMACIST DAY

SPORTS WEEK








OFFLINE FDP

NATIONAL SCIENCE DAY

WORKSHOP


WORKSHOP
"FIRE SAFETY RULES AND
EMERGENCY MANAGEMENT"


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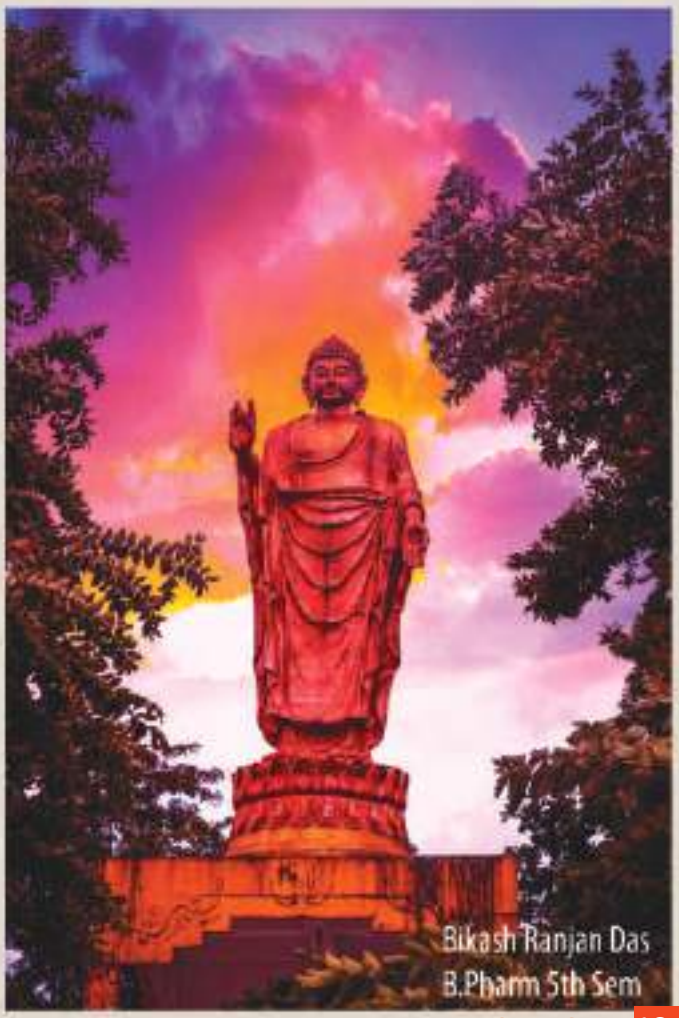
Shot on OnePlus
3:34 PM


Shot on OnePlus

Webinars (GIPS Activities)

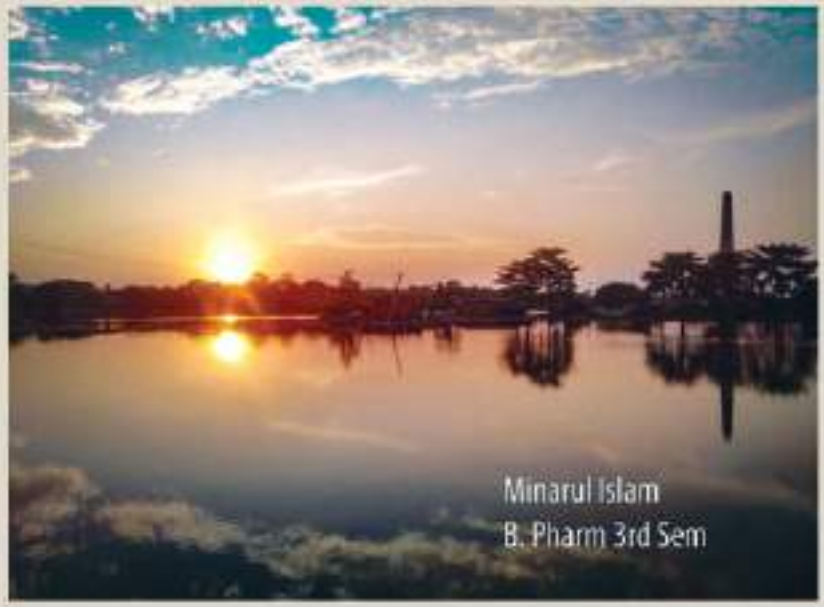
PHOTOGRAPHY


Bidyut Jyoti Ahmed
B.Phrm 1st Sem


Bikash Ranjan Das
B.Pharm 5th Sem


Bitopan Deka
B.Pharm 5th Sem


Dhiraj Ballab Saikia
B.Pharm 1st Sem


Minarul Islam
B. Pharm 3rd Sem


Janu Hazarika
B. Pharm 1st Sem


Rajarshi Kashyap
B.Pharm 3rd Sem


Rituraj Deka
B.Pharm 5th Sem

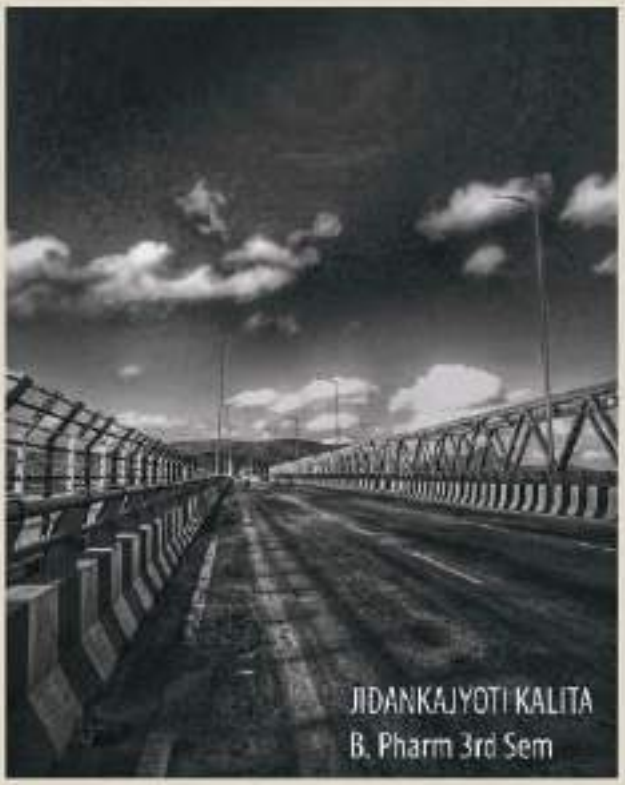

Raj Hussain
B.Pharm 3rd Sem


John Saikia
B.Pharm 3rd Sem


Rituraj Chetia
D.Pharm 1st Year


Pranab Jyoti Deka
B. Pharm 5th Sem

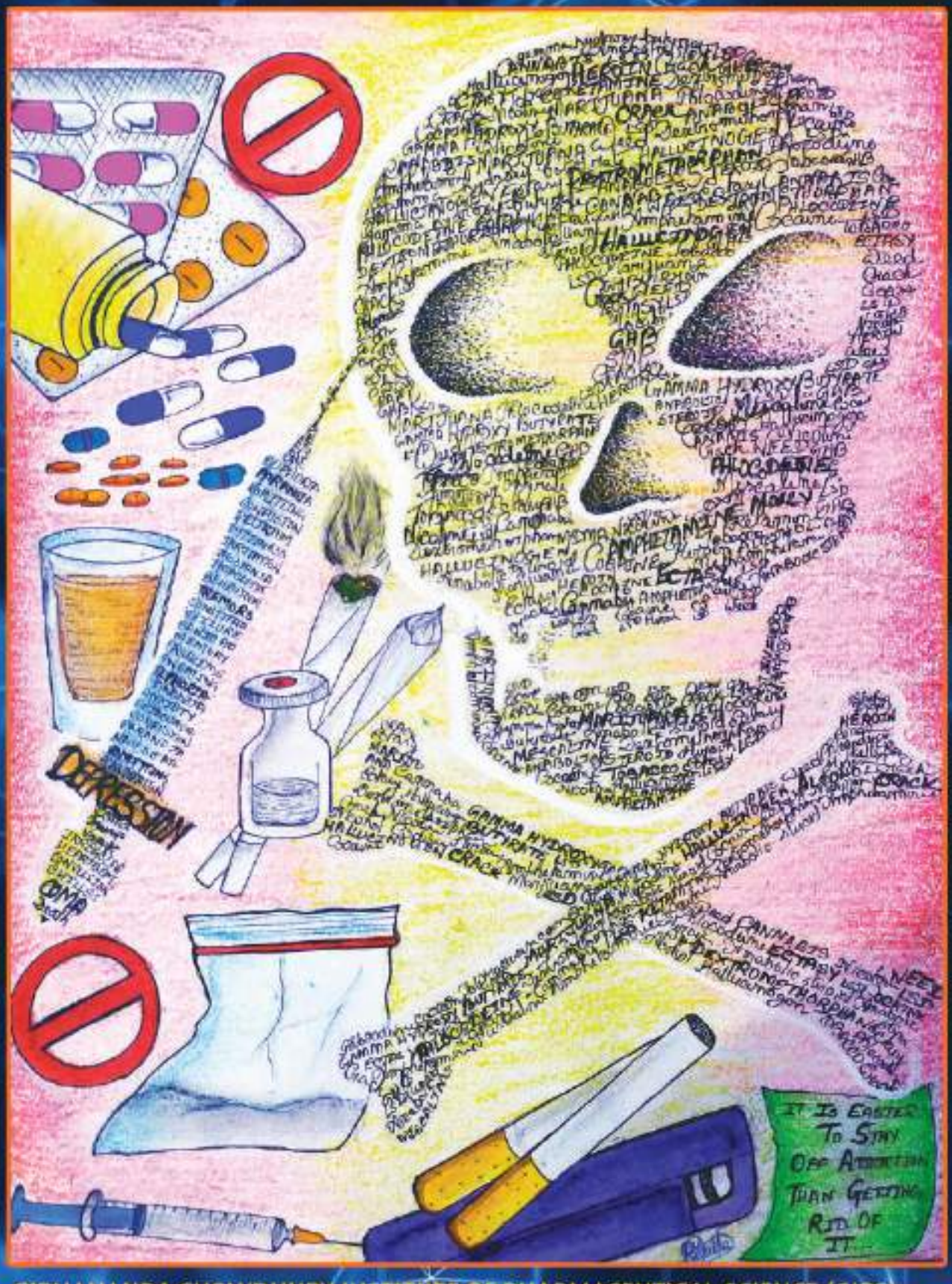

Supratim Boruah
D.Pharm 2nd year


JIDANKAJYOTI KALITA
B. Pharm 3rd Sem


Priya Bhuyan
B.Pharm 3rd Sem


Doipayaan Bhattacharjee
B.Pharm 3rd Sem


GIRIJANANDA CHOWDHURY INSTITUTE OF PHARMACEUTICAL SCIENCE
GIPS
Estd. 2007
GUWAHATI



Designed by Rupam Dutta, Rajgarh, Guwahati

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E-mail : gips_guwahati@rediffmail.com, Website : www.gips-guwahati.ac.in