JSS ACADEMY OF HIGHER EDUCATION AND RESEARCH MAURITIUS

A Degree Awarding Institution registered with the Higher Education Commission, Mauritius

JSS Health & Education Newsletter

Issue X

January – April 2024

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About JSS Academy of Higher Education and Research, Mauritius (JSSAHERM)

The JSS Academy of Higher Education and Research, Mauritius (JSSAHERM) was established in 2018 with degree-awarding powers and is an approved and registered institution with the Higher Education Commission (HEC), Mauritius.

JSSAHERM is located on a sprawling eight-acre freehold campus at Bonne Terre, Vacoas, the only one of its kind in the country, including some 15,000 sq. mts of built- up area with necessary academic, learning, and recreational infrastructure. The campus also comprises of hostels for boys' and girls' students, sports facilities such as Volleyball, Basketball, Football and in-door games. There are also residential units for staff and guests.

Building on its philosophy of quality education at affordable costs, JSSAHERM aims to present itself as the destination of choice for higher education and training in Mauritius and the Indian Ocean region.

JSSAHERM launched the Bachelor of Pharmacy (BPharm) programme in 2020 and Doctor of Pharmacy in 2023. The Bachelor of Pharmacy and Doctor of Pharmacy programmes of JSSAHERM have received Pre-accreditation from the Accreditation Council for Pharmacy Education (ACPE), USA, making JSSAHERM the first institution in the African region to get ACPE pre-accreditation. JSSAHERM has also received the accreditation of Doctor of Philosophy in Health Sciences, Life Sciences and Management Studies from HEC.

JSS Mahavidyapeetha (JSSMVP), Mysuru, India is the sponsoring society of JSSAHER, Mauritius. JSSMVP has established more than 350 educational institutions in India, Dubai, Mauritius, and USA, with a total student population over 100,000 and a staff strength of over 12,000.

The parent institution for the establishment of JSSAHERM, is the JSS Academy of Higher Education & Research, Mysuru (JSS AHER, Mysuru, India), formerly known as the JSS University. JSSAHER, Mysuru, India has been ranked in 351 to 400 rank band by THE 2023 ranking. THE Subject Ranking 2023, JSSAHER, Mysuru is ranked in the band of 125 - 150 in the world and becomes the first institution in India in the subject 'Clinical and Health'.

The School of Pharmacy, JSSAHERM started its Newsletter "Health & Education" in the year 2021 (Triannual issues) with the aim to cover general information related to health care & pharma sector, the latest happenings in the world of science, scientific articles of students and staff members on health and life sciences, invited papers and views, drug-related information and event corner of the JSSAHERM etc.

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Inside this Issue

Aneeta Ghoorah
Ombudsperson for Children

It is an honour for me to provide a foreword to the first edition of the 2024 "JSSAHER Newsletter-Health and Education" (Volume IV Issue X) of the JSS Academy of Higher Education and Research, Mauritius (the 'Academy').

Since the establishment of the Academy, we have witnessed how it has been working diligently towards a brighter future for the healthcare and patient care in the Republic of Mauritius.

The strategic location of Mauritius in the Indian Ocean makes it a perfect destination for establishing a pharmaceutical hub, encompassing manufacture, clinical trials and research. Our country is a highly attractive option for international students and the increase in the number of courses being offered by the Academy have led to enhanced opportunities being offered to the students who represent the future of Mauritius as well as to those from overseas

I am glad to note that the B Pharm, Doctor of Pharmacy, BSc Biotechnology, BSc Environmental Sciences, MBA (Hospital Administration), MSc (Microbiology) as well as PhD courses are currently being conducted. This provides ample avenues to students for expanding their knowledge in these fields in the Republic of Mauritius itself, without having to leave their motherland for further studies.

The different articles in the tenth edition of the Newsletter with its interesting topics are bound to enhance the knowledge of any reader. The enlightening articles on diseases such as Halitosis, Maple syrup Urine Disorder, Twilight struggle, Autism and Anthrax, together with the article on the glutathione injections serve as compelling evidence of the ever-evolving nature in the medical field.

My heartfelt congratulations go to the staff and students of the Academy, for their dedication and commitment in making the Academy the promising establishment that it is today.

I also seize this opportunity to commend the Academy for its valiant efforts in nurturing future leaders through various activities, events and motivational talks that are being held on the campus.

A special mention for the leadership and management of the JSSAHERM.

I wish all readers a fruitful Reading.

Aneeta Ghoorah
Ombudsperson for Children
Date: 19/03/2024

Artificial Intelligence in Education

The introduction of unique and powerful artificial intelligence models has resulted in a paradigm shift in numerous fields. What sparked curiosity about the extent to which boring work could be outsourced to AI has surfaced as a potential tool for pupils with personalised educational needs. Let us welcome AI into classrooms and explore how to use this revolutionary technology to educate and support every student and teacher. We suggest an augmented strategy using AI to help with content verification, peer, educator, and people involvement.

Pedagogical and education experts are discovering that there are numerous approaches to teaching, including blended learning. The most recent focus is on adaptive learning, which uses advanced technology and data analytics to provide personalised education, revolutionising learning. With traditional methods of teaching, an average of thirty students are instructed by one teacher. The demands of certain kids can be readily disregarded by this arrangement. A considerable proportion of students need a more individualised approach, even though the model has been beneficial for many of them. Regretfully, the quantity of instructors and providers that are on hand falls short of the demand.

While artificial intelligence (AI) may appear daunting at first, if educators at educational institutions employ it wisely, the benefits will enable a classroom where all students, regardless of their learning progress, find intellectual stimulation. With the freedom to ask questions and receive answers without fear of being judged, they will learn in a manner that suits them. In addition to assisting all of their students in understanding the material being studied, teachers will have more time to dedicate to helping their students develop a passion for learning. While the number of distinct learning styles and cutting-edge teaching methods is increasing, it is still far behind the rate at which new large-language and multimodal education models—such as visual, auditory, reading and writing, and kinaesthetic—are being developed.

Some ways can be followed for its enhancement such as:

- Invest in teacher training that focuses on utilising AI and integrating the technology into the classroom.
- Make lesson plans that are specific to each student's needs and learning style. Make sure people understand the limitations of AI as it stands now.
- Use technology to design evaluations that are more effective, saving teachers time and giving students feedback quickly.
- Examine how AI-based learning assistants can provide students with individualised learning routes and real-time answers to questions in the classroom.
- Encourage cooperation between AI developers and educational institutions to produce effective, user-friendly technologies.
- Provide technology that can handle administrative duties like scheduling and attendance monitoring so that teachers can concentrate on instructing.

By accepting the augmentation of AI in education, we may integrate a variety of tools into our system of learning and match instructional strategies to the best learning styles of our students.

Many people have been unable to reach their full potential due to the conundrum of measuring and instructing everyone according to a single metric. When AI is used properly, it can reduce the disparity in resources and equity between students by giving them access to tools that are customised to each persons' specific needs.

This is a critical moment in history. Let's endeavour to make it advantageous for people of all abilities.

"Everyone is a genius," says a popular quote attributed to Albert Einstein "But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid"

Dr Khayati Moudgil
Editor in Chief
JSSAHERM

Halitosis (Bad Breath) -
What you should know before meeting your healthcare professional!

Halitosis is also commonly known as Bad breath. It can be inconvenient and on a more serious note may cause a persistent mood of sadness and anxiety. That is why we find a variety of products that have been manufactured to fight halitosis. However many of these products have a short term effect on bad breath as they do not address the root cause of the problem which can only be diagnosed through proper tests by a physician.

Should there be no serious pathologies, you can improve bad breath with proper dental hygiene. If simple home care methods do not help erase the problem, see your pharmacist, dentist or physician to be sure that a more serious condition is not the cause of your halitosis.

Symptoms

Bad breath vary depending on the source or the underlying causes. Some people worry too much about their breath even though they have little or no mouth odor at all, while others have bad breath and do not know it. Because it is difficult to assess how your own breath smells, ask your partner, siblings or parents to confirm your bad-breath queries.

When to see a health care professional

If you have halitosis, analyze your dental hygiene habits. Try making some changes in your daily routine such as brushing your teeth and cleaning your tongue every time after eating, flossing,eating a healthy diet and drinking plenty of water- recommended 2 liters of water daily.

If your bad breath persists after making such changes consult your pharmacist or dentist. If your health care professional suspects a more serious condition is causing your bad breath, he/she may refer you to a physician to find the underlying cause of the bad breath.

Causes

Halitosis starts in your mouth, and there are many possible causes:

- **Food -** The leftover of food particles in your mouth and around your teeth can increase bacteria and cause a foul odor. Foods from the allium family such as chives, garlic and spices can cause bad breath. After their digestion, they enter your bloodstream and are carried to your lungs and affect your breath.
- **Tobacco -** We all know smoking causes mouth odour. Smokers and oral tobacco users are also more likely to have gum diseases, another source of bad breath, among other problems.
- **Poor dental hygiene -** If one does not brush and floss daily, food particles remain in your mouth which in turn cause bad breath and cavities. Formation of plaque (a colourless or white sticky film of bacteria) on your teeth. If not brushed carefully with the right toothbrush and toothpaste, this sticky film can eventually lead to periodontitis (plaque-filled pockets between your teeth and gums). Your tongue also needs to be taken care of as it traps bacteria which eventually produces

bad breath. Dentures that are not cleaned regularly or do not fit properly can give shelter to odor-causing bacteria and food particles. Orthodontics appliances if not cleaned daily and properly with specific tools can also cause bad breath.

- **Xerostomia also commonly known as dry mouth -** Saliva helps clean and balance your mouth, removing particles that cause bad odours. A decreased in the production of saliva may lead to bad breath. For instance, dry mouth naturally occurs during sleep thus causes a slight bad breath upon waking up and it worsens if you have an underlying condition where you sleep with your mouth open. Chronic dry mouth can be caused by a problem with your salivary glands and some diseases.
- **Drugs -** Some drugs can indirectly produce bad breath by contributing to dry mouth. Others can be broken down in the body to release chemicals that can be carried on your breath.
- **Pathologies in the oral cavity -** Bad breath can be caused by surgical wounds after oral surgery, such as tooth removal, or as a result of tooth decay, gum disease or mouth sores.
- **Other conditions -** Bad breath can occasionally arise due to infections or chronic inflammation of the throat, mouth, sinuses and nose.
- **Other causes -** Diseases and conditions such as metabolic disorders and some cancers can cause a distinctive bad breath due to chemicals they produce. GERD (gastroesophageal reflux disease) can be associated with bad breath. Bad breath in kids can be caused by very poor oral hygiene, cavities, a tiny chunk of food lodged in a nasal cavity, smelly food, ENT infections and certain medical conditions.

Treatment

To decrease mouth odor and other oral problems one needs to practice good oral hygiene daily. Further treatment for bad breath will vary, depending on the source. If your bad breath is thought to be caused by an underlying health condition, your pharmacist or dentist will likely refer you to a specialist physician.

For causes related to oral health, your pharmacist and dentist will work with you to help you better control that condition. Dental measures may include:

- **Mouthwash and toothpastes**. If your bad breath is due to a buildup of bacteria (plaque) on your teeth, your pharmacist or dentist may recommend mouthwash that has antibacterial effects. Your pharmacist or dentist may also recommend antiplaque toothpaste or tooth gel to kill the bacteria that cause plaque build-up.
- **Treatment of dental diseases**. If you have severe gum disease, you may be referred to a dentist. Gum disease can cause gums to loosen from your teeth, leaving deep pockets that fill with odour-causing bacteria. Sometimes only professional cleaning removes these bacteria. Your dentist might also recommend replacing faulty tooth restorations which is a breeding ground for bacteria.

To reduce or prevent bad breath:

- **Brush your teeth after eating**. Keep a foldable toothbrush at work to use after eating. Brush using a fluoride-containing toothpaste at least twice a day, especially after meals. Toothpaste with antibacterial properties has been shown to reduce bad breath odours.

- **Interdental cleaning at least once a day**. Proper interdental cleaning removes food particles and plaque from between your teeth, helping to control bad breath for these you may use dental tapes, spongy floss, expanding super soft floss or interdental brushes. Use an oral irrigator for a thorough oral and interdental cleaning.
- **Clean your tongue**. Your tongue harbors bacteria, so carefully cleaning it may reduce odours. People who have a coated tongue from a significant overgrowth of bacteria (from smoking or dry mouth, for example) may benefit from using tongue cleaner/ tongue scrapper. Or use a toothbrush that has a built-in tongue scrapper.
- **Clean dentures or dental appliances**. If you have bridges or dentures, clean it thoroughly at least once a day or as directed by your dentist. If you have orthodontics appliances, use appropriate toothbrush to clean your teeth and gums. If you have a dental retainer or night guard after removal of orthodontic appliances or to prevent teeth grinding respectively, clean it each time before you put it in your mouth. If you have implants, use a specific 3D toothbrush which is adapted for cleaning implants your pharmacist or dentist can recommend the best cleaning product.
- **Avoid dry mouth**. To avoid dry mouth one should avoid tobacco and drink plenty of water. Use chewing gums or candy (preferably sugar free) to stimulate saliva production. For chronic dry mouth, your pharmacist, dentist or physician may give an artificial saliva preparation or an oral medication that stimulates the flow of saliva.
- **Work on your diet.** Avoid foods which are from the allium family like garlic, onions and chives, shallots and leeks that can cause bad breath. Eating a lot of sugary foods is also linked with bad breath.
- **Regularly get a new toothbrush**. When our toothbrush becomes frayed, changed it, usually every three to four months, and choose one which is a soft-bristled toothbrush with a super flex handle to absorb pressure.
- **Schedule regular dental check-ups**. See your dentist on a regular basis — generally twice a year — to have your teeth examined and cleaned.

Diagnosis

Your pharmacist will likely know the reason of your halitosis through proper history- for this do the following:

Test yourself. Answer the following questions before meeting your pharmacist or dentist:

- When did you first notice you have bad breath?
- Is your halitosis occasional or continuous or at specific time daily?
- How often do you brush your teeth or clean your braces or clean your dentures?
- Do you ever clean in between your teeth?
- How often do you floss?
- What types of food do you eat most often?

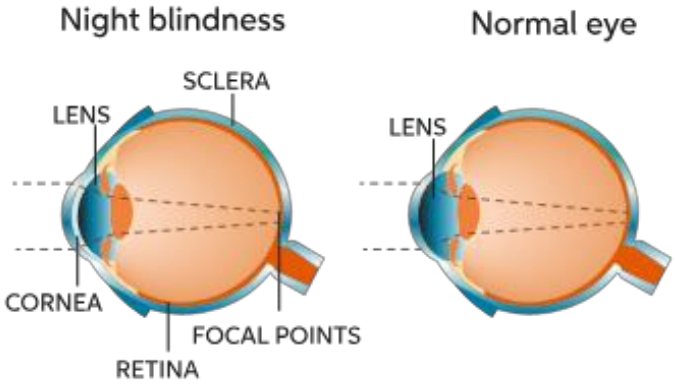
- What medications and supplements do you take?
- What known health conditions do you have?
- Do you breathe through your mouth?
- Do you snore?
- Do you suffer from sleep apnea?
- Do you wake up every morning noticing dry mouth and dry itchy throat or painful throat?
- After every nap do you experience mild or severe dry mouth?
- Do you have allergies or sinus problems?
- What do you suspect might be causing your bad breath?
- Did other people notice and comment on your bad breath?

You are now ready to visit your healthcare professional.

Mrs Tina Dassyne
Assistant Professor
JSSAHERM

The Twilight Struggle: Coping with Nyctalopia's Challenges

Nyctalopia, commonly known as night blindness, presents unique challenges in the realm of pharmacy. This condition, characterized by reduced vision in low-light conditions, significantly impacts individuals' daily lives and their ability to manage medications effectively. In this article, we explore the complexities of Nyctalopia within the context of pharmacy, examining its causes, implications for medication management, and strategies for supporting patients with this condition.



Understanding Nyctalopia requires insight into its underlying causes. While it can be a standalone condition, it is often associated with underlying health issues such as:

- retinitis pigmentosa,
- cataracts, vitamin A deficiency, and
- other retinal disorders.

Pharmacists play a crucial role in identifying these underlying conditions through comprehensive medication reviews and patient consultations. By recognizing the presence of Nyctalopia and its potential causes, pharmacists can tailor their care to meet the unique needs of affected individuals.

One of the primary challenges individuals with Nyctalopia face is the accurate identification and administration of medications, particularly in low-light environments. Many prescription labels and medication instructions rely on small print, which can be difficult for individuals with reduced night vision to read. Pharmacists can mitigate this challenge by providing large-print labels, utilizing high-contrast colour schemes, and offering magnifying devices to aid in reading medication information. Additionally, counselling sessions should be conducted in well-lit areas to ensure patients fully understand their medication regimens and any associated precautions.

Beyond medication labelling and counselling, pharmacists must also consider the potential impact of Nyctalopia on medication adherence. Diminished night vision may pose obstacles to patients when retrieving medications from storage areas, especially in poorly lit spaces. Pharmacists can address this concern by recommending practical solutions such as installing

motion-sensor lighting in medication storage areas or organizing medications in easily accessible, well-lit locations within the home. Moreover, pharmacists should emphasize the importance of consistent medication adherence and offer adherence aids such as pill organizers and reminder systems to help patients stay on track with their treatment plans.

In addition to medication management challenges, individuals with Nyctalopia may also experience difficulties in accessing pharmacy services, particularly during evening hours when lighting conditions are suboptimal. Pharmacies can enhance accessibility for these patients by ensuring adequate lighting in both interior and exterior areas, implementing clear signage with high-contrast lettering, and offering alternative service options such as home delivery or tele pharmacy services for those who may struggle to visit the pharmacy in person after dark.

Collaboration with other healthcare providers is essential in addressing the multifaceted needs of patients with Nyctalopia. Pharmacists should work closely with ophthalmologists, optometrists, and other specialists involved in the care of these patients to optimize treatment outcomes and ensure comprehensive support. By fostering interdisciplinary communication and sharing relevant patient information, healthcare professionals can collectively develop tailored care plans that address both the visual and pharmaceutical aspects of Nyctalopia management.

In conclusion, Nyctalopia presents unique challenges in the realm of pharmacy, affecting medication management, adherence, and access to pharmacy services. Pharmacists play a pivotal role in addressing these challenges by providing personalized care, implementing practical solutions to enhance accessibility and adherence, and collaborating with other healthcare providers to optimize patient outcomes. By recognizing the impact of Nyctalopia and adopting patient-centred approaches, pharmacists can empower individuals with this condition to effectively manage their medications and improve their overall quality of life.

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Written By:
Ms. Vanshita Devi Bhoojowon, 3rd year B Pharm Student, JSSAHERM

AUTISM SPECTRUM DISORDER

Autism spectrum disorder (ASD) is a neurological and developmental disorder that affects how people interact with others, communicate, learn, and behave.

Other characteristics are atypical patterns of activities and behaviors, such as difficulty with transition from one activity to another, a focus on details and unusual reactions to sensations. Characteristics of autism may be detected in early childhood, but autism is often not diagnosed until much later.

Symptoms generally appear in the first 2 years of life:

- Making little or inconsistent eye contact
- Appearing not to look at or listen to people who are talking
- Having an unusual tone of voice that may sound flat and robot-like
- Repeating certain words or phrases (a behavior called echolalia)
- Having a lasting intense interest in specific topics, such as numbers
- Showing overly focused interests, such as with moving objects

According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, a guide created by the American Psychiatric Association that health care providers use to diagnose mental disorders, people with ASD often have:

- Difficulty with communication and interaction with other people
- Restricted interests and repetitive behaviors
- Symptoms that affect their ability to function in school, work, and other areas of life

The abilities and needs of autistic people vary and can evolve over time. While some people with autism can live independently, others have severe disabilities and require life-long care and support.

Causes Of Autism:

The exact primary causes of ASD have not yet been discovered, but available scientific evidence suggests that many factors can make a child more likely to have autism, including environmental and genetic factors.

Some factors that are associated with an increased likelihood of developing ASD include:

- Having a sibling with ASD
- Having older parents
- Having certain genetic conditions (such as Down syndrome or Fragile X syndrome)
- Having a very low birth weight

Rights of the autistic people!

Each and every individual who is effected with autism have the right to the enjoyment of the highest attainable standard of physical and mental health. And yet, autistic people are often subject to stigma and discrimination, including unjust deprivation of health care, education and opportunities to engage and participate in their communities.

People with autism require accessible health services for general health-care needs like the rest of the population, including promotive and preventive services and treatment of acute and chronic illness.

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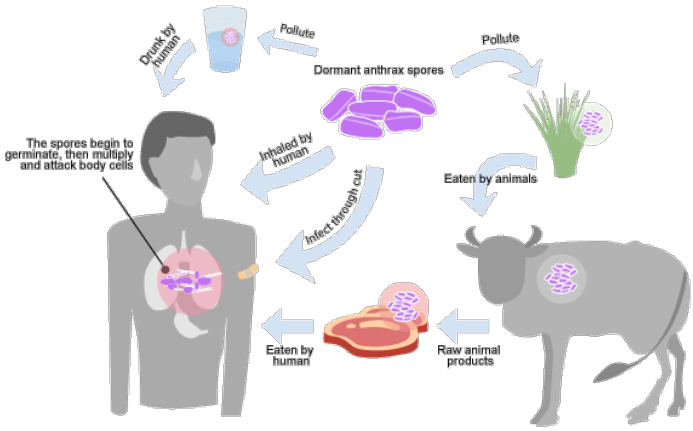
Written By: Ms Kissoon Shameemah Bint Imtehaz, 2nd Year B Pharm Student, JSSAHERM

Anthrax: Understanding the Deadly Bacterial Disease

Anthrax, a bacterial disease caused by the ***Bacillus anthracis bacterium***, has long been recognized as a potential biological weapon and a threat to both human and animal health. Despite its infrequency in humans, anthrax remains a topic of concern due to its high mortality rate and potential for use in bioterrorism.

Characteristics of Anthrax:

Anthrax is a zoonotic disease, meaning it can be transmitted from animals to humans, usually through contact with contaminated animal products or environments. It is primarily a disease of herbivorous animals, particularly cattle, sheep, and goats. The bacteria can form spores that are highly resistant to heat, cold, and disinfectants, allowing them to survive in the environment for long periods. These spores can be ingested, inhaled, or come into contact with broken skin, leading to infection. Anthrax is not contagious, which means you can't catch it from another person like the cold or flu.



Source: CENTERS FOR DISEASE CONTROL AND PREVENTION

Characteristics of Bacillus anthracis:

Bacillus anthracis is a Gram-positive, rod-shaped bacterium that forms spores. These spores are highly resistant to environmental factors such as heat, cold, and chemicals, allowing them to survive for long periods in soil and animal products. When conditions become favorable, such as when spores are ingested or enter a host's body through a wound or inhalation, they can germinate and grow, leading to infection.

Types of Anthrax:

There are three main forms of anthrax that affect humans:

- **Cutaneous Anthrax:** This is the most common form of anthrax in humans and occurs when spores enter the body through breaks in the skin, such as cuts, abrasions, or insect bites. Handling contaminated animal products, such as wool, hides, or meat from infected animals, can lead to cutaneous anthrax.
- **Inhalation Anthrax:** Inhalation anthrax occurs when spores are inhaled, usually through the inhalation of contaminated dust or aerosols. This form of anthrax is rare but can be highly lethal if not promptly treated. Inhalation anthrax is associated with occupations involving contact with infected animals or animal products, such as agriculture, veterinary medicine, and textile manufacturing.
- **Gastrointestinal Anthrax:** Gastrointestinal anthrax results from ingesting contaminated meat or dairy products from infected animals. This form of anthrax is rare but can cause severe illness and may be fatal if left untreated.

Symptoms:

The symptoms of anthrax vary depending on the route of transmission and the form of the disease:

- **Cutaneous Anthrax:** Symptoms typically begin with a small, painless sore or lesion that develops into a painless ulcer with a characteristic black center (eschar). Other symptoms may include fever, malaise, and swollen lymph nodes near the site of infection.
- **Inhalation Anthrax:** Inhalation anthrax initially presents with flu-like symptoms, including fever, cough, fatigue, and muscle aches. As the disease progresses, respiratory symptoms worsen, leading to difficulty breathing, chest pain, and shock.
- **Gastrointestinal Anthrax:** Symptoms of gastrointestinal anthrax include nausea, vomiting, abdominal pain, diarrhea, and fever. This form of anthrax can cause severe abdominal inflammation and may lead to septicemia (blood poisoning) and shock.

Diagnosis and Treatment:

Diagnosing anthrax can be challenging due to its rarity and similarity to other more common illnesses. Laboratory tests, including blood cultures and skin biopsies, may be used to confirm a diagnosis. Treatment typically involves antibiotics, such as ciprofloxacin, doxycycline, or penicillin, which are most effective when administered early in the course of the disease.

In severe cases, additional treatments such as intravenous antibiotics, supportive care, and antitoxins may be necessary. Prompt diagnosis and treatment are essential for improving outcomes and reducing the risk of complications.

Prevention and Control:

Preventing anthrax involves a combination of vaccination, public health measures, and surveillance. Vaccination is available for individuals at high risk of exposure, such as veterinarians, laboratory workers, and military personnel. Public health measures, including surveillance of animal populations, monitoring of bioterrorism threats, and education about the risks of anthrax, can help prevent outbreaks and reduce transmission.

Additionally, strict biosecurity measures, such as proper handling and disposal of animal carcasses, decontamination of affected areas, and surveillance of high-risk environments, are essential for controlling the spread of anthrax.

Conclusion:

Anthrax remains a significant public health concern due to its potential for causing severe illness and its use as a biological weapon. Understanding the characteristics, symptoms, diagnosis, treatment, and prevention of anthrax is crucial for mitigating its impact on human and animal health. By implementing comprehensive surveillance, vaccination, and public health measures, we can work together to reduce the risk of anthrax outbreaks and protect communities from this deadly disease.

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Written by: Ms Khitisha Bhurosah, 2nd Year B Pharm Student, JSSAHERM

Unlocking the Sweet Mystery of Maple Syrup Urine Disease: Navigating the Challenges of a Rare Genetic

In the realm of rare genetic disorders one with a name as intriguing as its symptoms emerges – Maple Syrup Urine Disease (MSUD). It's not about a love for pancakes; rather, MSUD presents a unique challenge for those affected. It is a rare but serious inherited condition that affects the body's ability to break down certain amino acids, which are the building blocks of proteins. Babies with MSUD are unable to break down amino acids called leucine, isoleucine and valine causing the buildup of these amino acids which become toxic (poisonous) in the body

Etiology:

The etiology of Maple Syrup Urine Disease (MSUD) lies in genetic factors. MSUD is an autosomal recessive genetic disorder, meaning that individuals develop the condition when they inherit two mutated copies of the gene associated with the disease – one from each parent.

The specific genetic basis of MSUD involves mutations in the genes that code for the subunits of the branched-chain alpha-keto acid dehydrogenase (BCKAD) enzyme complex. This complex is responsible for breaking down the branched-chain amino acids (leucine, isoleucine, and valine) from dietary proteins.

Genetic mutations lead to a deficiency or malfunction in the BCKAD enzyme, causing the accumulation of toxic byproducts, including branched-chain keto acids. Consequently, this leads to toxic effects on the central nervous system, contributing to the characteristic symptoms of MSUD.

Symptoms:

One of the characteristic symptoms of MSUD is sweet-smelling urine, which gives the condition its name.

Symptoms of MSUD usually appear within the first few days or weeks after birth. More general symptoms include:

- poor feeding or loss of appetite
- weight loss
- Lethargy (they may move slowly or appear tired or weak).
- Irritability or fussiness.

- Headaches, nausea and vomiting
- Developmental delays
- Seizures

If left untreated, MSUD can lead to severe neurological damage and other complications.

Treatment:

- Children diagnosed with MSUD are first referred to a specialist metabolic dietitian and given a low-protein diet. They may need to take medicine too. The diet is tailored to reduce the amount of amino acids received, especially leucine, valine and isoleucine.
- patients may require hemodialysis or hemofiltration to remove waste, certain fluids and specific amino acids from the blood
- Regular urine testing to check for the characteristic sweet odor and to assess the effectiveness of treatment.

Is there a cure for MSUD?

Since 2004, liver transplants have successfully treated people with classic MSUD. A new liver can produce the enzymes needed to break down the three amino acids therefore the person can eat an unrestricted diet, live without symptoms, and avoid further symptoms or complications.

Early diagnosis and proper management can significantly improve the long-term outcomes for individuals with maple syrup urine disease.

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Written By:
Ms Toshtee Jankee, 2nd Year B Pharm Student, JSSAHERM

Unveiling the science behind Glutathione Skin Whitening Injections

Glutathione injections are said to be the “Mother of antioxidant”, which became notorious for its effective skin brightening abilities. Eliminating all traces of hyperpigmentation from all parts of the body, is Glutathione reduced to this particular aspect?

This precious molecule possesses crucial importance for the wellbeing of the mind and body, as it stores a plethora of benefits.

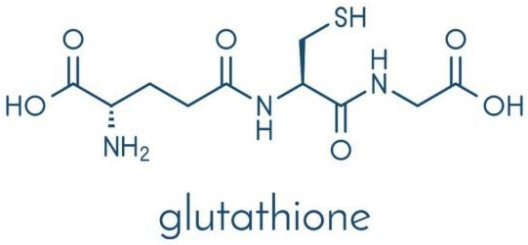
What is Glutathione exactly?

Glutathione is a tripeptide which consists of 3 amino acids glutamate, glycine and cysteine. This powerful antioxidant acts a shield against the free radical and the other DNA affecting compounds present in pollutants, overexposure of Ultraviolet rays and smoking habits.

It is naturally manufactured in the body by the liver.

Glutathione has proven its use in the cosmetic industry as it is rather an effective treatment for skin brightening and treating skin disorders such as psoriasis, eczema and atopic dermatitis,

These treatments use L-glutathione for a more pronounced and potent efficacy due to its power.



The surprising benefits of Glutathione

The tripeptide is available in tablets and capsules. However, its efficacy is even more accentuated using injections as it surpasses the digestive system.

1. **Reduces oxidative stress**

   Glutathione decreases the effect of oxidative stress. The latter occurs when there is an imbalance between the levels of free radicals and the body’s ability to fight them off.

   An excess of oxidative stress will cause cell damage and even worse, be the precursor of several diseases such as

   - Diabetes
   - Cancer

- Rheumatoid arthritis

Glutathione shots with micronutrients such as magnesium, vitamin E, vitamin C and L-glycine amino acids will help improve the tissue deterioration when oxidative stress gets reduced by glutathione deficiency.

2. May enhance Insulin levels

Glutathione injections can reduce the accumulation of fat stored in the abdomen which at its turn lower the risk of developing diabetes.

Researchers at Baylor school of medicine used the combination of animal and human studies to explore the impact of levels of this powerful antioxidant and its relationship with fat and insulin in the body.

The findings proved that low levels of glutathione were associated with less fat burning and more fat storing across the body.

In addition, the inclusion of cysteine and glycine in diets, will eventually produce more Glutathione levels and enhance their fat burning ability.

3. Lowers cell damage in fatty liver conditions

Glutathione has been shown to improve protein, enzyme and bilirubin levels in blood of individuals with alcoholic and non-alcoholic chronic fatty liver disease.

A study reported that when administered Glutathione intravenously to individuals suffering from chronic fatty liver, there was significant reduction in malondialdehyde a marker cell which damage the liver cells.

Further studies found that orally administered Glutathione had positive effects on people with nonalcoholic fatty liver disease. In this study, a supplement form in a dose of 300mg per day for 4 months was attributed to them.

4. Keep the autoimmune conditions at bay

Autoimmune diseases which are related to severe inflammation might increase the oxidative stress levels in the body.

It can elevate the risk of developing diseases such as

- Lupus
- Celiac disease
- Rheumatoid arthritis

Glutathione can impactfully lower oxidative stress by reducing the immunological response of the body.

Autoimmune diseases target the mitochondria cells which are meticulously shielded by the Glutathione by flushing out free radicals.

5. Increases mobility for people with peripheral artery disease

Glutathione improved the circulation, by increasing the ability of study participants to walk without any pain for longer distances.

As peripheral artery disease occurs when the peripheral arteries become clogged by plaque, it mostly occurs in the legs.

6. **Helps in skin whitening**

the melanin in the skin is divided into 3 types which are pheomelanin, eumelanin and neuromelanin.

The pheomelanin and eumelanin interchange roles for developing the skin, eye and hair color of an individual.

When exposed to sunrays, the eumelanin will cause the brown tan by burning the pheomelanin with a reddish tint.

It is important to tan as those melanin pigments will prevent folate depletion and dermal degradation risks.

For a lighter skin tone, pheomelanin must be higher than eumelanin. Therefore, glutathione injections, can help achieve this goal by regulating the concentrations of those pigments.

7. **May reduce respiratory disease symptoms**

N-acetylcysteine is a medication used to treat conditions such as asthma and cystic fibrosis.

As an inhalant, it aids in the thinning of mucus and will also reduce inflammation

N-acetylcysteine is a by-product of glutathione

Where is Glutathione found?

Glutathione is found in such food as

- Allium vegetables such as Onions and garlic
- Avocados
- Cruciferous vegetables such as broccoli, cauliflower, brussels sprouts and bok choy
- Eggs
- Nuts
- Lean proteins such as fish and chicken

There are also fruits which are proven to be rich in glutathione, such as

- Watermelon
- Grapefruit
- Oranges
- Strawberries

It is also found to be abundant in the rich and vibrant Indian food. It is packed with powerful antioxidants including glutathione. It is present in staple foods such as turmeric and almonds

Glutathione is also negatively affected by insomnia; hence a proper sleeping hygiene can help achieve a good level of this antioxidant.

In conclusion, the multifaceted benefits of Glutathione supplementation underscore the remarkable potential as a game-changer in skincare and overall health.

From its powerful role as antioxidant properties to its role in detoxification and immune support, Glutathione offers a holistic approach to enhancing skin radiance and wellbeing from within.

As ongoing research continues to unveil its advantages incorporating Glutathione into your daily regimen can only benefit your health, bringing out a more vibrant you.

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2. Glutathione injections for skin whitening; Benefits, uses and side effects by kolors Team
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Written By: Ms Rania Saarah Ahmed, 2nd Year, B Pharm Student, JSSAHERM

Reversing Ageing: The Secret to Eternal Youth

Eternal Youth. Two words that would arguably send anyone in a frenzy to have the means to achieve it. With the number of Botox injections performed every year rapidly increasing and the popularity of cosmetic surgery in this era, it is not with an assumptive mind that we can draw to the conclusion that ageing is not a desired phenomenon for most people. Aside from the obvious benefits of appearing radiant, remaining youthful also brings along several perks for the health of the individual. It is with this idea in mind that scientists are exploring the vast field of longevity science and have made quite a few breakthroughs on the way to discovering the secrets of eternal youth.

One such way of doing so is through reprogramming T cells such that their target is to attack ageing cells, also known as senescent cells. The latter is the main culprit for the occurrence of health disorders in the elderly. Senescent cells lose the power to undergo mitosis, hence leading to their accumulation in our body and the end result, inflammation. Chimeric antigen receptor (CAR) T cells have the power to get rid of aged cells and the best feature, patients only require a single dose of these cells to obtain lifelong benefits. No need to wonder anymore, here is the reason why this is so: Memory cells are developed from these T cells in the body, and they exist for quite a lengthy period of time. With CAR T cells, the body gains a powerful weapon to fight chronic conditions like diabetes and obesity. That's not all, research is still going on to find proof of its ability to also allow individuals to live a healthier life.

Stem cells is another path scientists are looking forward to exploring in this endeavor for long-lasting youth. Though stem cells are known for their capacity to self-renew, the fact that this ability is lost as we age is less acknowledged. With the introduction of a gene named **NANOG**, it has been found that the process of ageing in the cells could potentially be stopped or even reversed. What a surprise it came to the researchers when they realized that the ability of the aged stem cells to produce new cells was restored following the introduction of NANOG and they once again behaved as "young" stem cells. Aside from gene manipulation, chemical means are also being developed to undo the ageing process. It was this same technique that allowed the skin cells of a 53-year-old woman to be reprogrammed to 23-year-old ones, as long as 30 years younger! In an attempt to revitalize the whole body, another research team has developed

6 mixtures of chemical compounds, all of which have proven their capacity to do so to a certain extent, though the safety of some is under scrutiny. Nevertheless, extensive research will be carried out before these mixtures are approved for use.

These findings absolutely raise hope for novel treatment plans for persistent diseases. Though eternal youth is thought to be a myth, with such discoveries it might as well become a reality, or at least close to one.

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2. "Fountain of Youth" pill created by Harvard scientists reverses aging • Earth.com
3. Scientists Identify ‘Fountain of Youth’ Gene That Reverses Cellular Ageing - Bioeden US
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Picture Reference:

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Written By:

Ms Salvi Wahidna, 3rd Year B Pharm Student, JSSAHERM

FDA Approved Drugs

S.N	Drug	Indication	Date of approval
1	Zelsuvmi (Berdazimer sodium) Topical gel	Topical treatment of Mollusscum Contagiosum	01/05/24
2	Eohilia (budesonide) Oral suspension	Treatment of Eosinophilic esophagitis	02/09/24
3	Aurlumyn (iloprost) injection	Treatment of severe frostbite in adults to reduce risk of amputations	02/13/24
4	Amtagvi (lifileucel) suspension for intravenous infusion	Treatment for adult patients with unresectable or metastic melanoma	02/16/24
5	Exblifep (cefepime, enmetazobactam)	To treat complicated urinary tract infections	02/22/24
6	Simlandi (adalimumab-ryvk injection	Treatment of rheumatoid arthritis, juvenile idiopathic arthritis, psoriatic arthritis, ankylosing spondylitis, Crohn's disease, ulcerative colitis, plaque psoriasis, hidradenitis suppurativa and uveitis	02/23/24
7	Letybo (leitbotulinumtoxin A-wlbg)	To temporarily improve the appearance of moderate to severe glabellar lines	02/29/24
8	Jubbonti (denosumab-bbdz) injection	Jubbonti (denosumab-bbdz) is a RANK ligand (RANKL) inhibitor interchangeable biosimilar to Prolia (denosumab) used in the treatment of osteoporosis.	03/05/24
9	Wyost (denosumab-bbdz) injection	Osteolytic Bone lesions of multiple Myeloma, Osteolytic, Bone Metastases of Solid Tumours, Giant cell, Tumour of bone, Hypercalcemia of Malignancy	03/05/24

Drug Profile: Zelsuvmi

Brand Name: Zelsuvmi

Generic Name: Berdazimer Sodium

Dosage form: Topical gel

Class: Dermatologic

Indication: For treatment of Molluscum contagiosum in both children (above 1 year old) and adults.

Clinical purpose:

Molluscum Contagiosum (MC) is a highly contagious viral skin infection characterized by skin-coloured to red lesions with a central, umbilicated viral core. Molluscum contagiosum is an infection caused by a poxvirus (molluscum contagiosum virus) and the result of the infection is usually a benign, mild skin disease characterized by lesions (growths) that may appear anywhere on the body. Within 6-12 months, Molluscum contagiosum typically resolves without scarring but may take as long as 4 years. The lesions, known as Mollusca, are small, raised, and usually white, pink, or flesh-coloured with a dimple or pit in the centre. They often have a pearly appearance. They're usually smooth and firm.

The active ingredient in Zelsuvmi is 10.3% Berdazimer sodium, a new chemical entity affixed to a diazeniumdiolate silicon backbone that holds stable NO molecules, since the latter is an unstable gas, when combined with a hydrogel (proton donor) on the skin, NO is released in a controlled manner at the site of application.

Pharmacology:

The mechanism of action of Zelsuvmi is for now unclear, but based upon mechanism of action of sodium nitrite a brief and approximate description of its pharmacodynamics can be depicted.

Nitric oxide (NO) has been shown to have antiviral effects in DNA, RNA, enveloped and encapsulated viruses. It reduces replication of herpes simplex type 1, vaccinia and the orthopox ectromelia virus, murine coronavirus and in vitro, but not in vivo, has antiviral properties for avian reovirus infection. Not all viruses are inhibited by NO, e.g. tick-borne encephalitis virus is resistant to its effects.

Nitric oxide functions as both a short-lived immune modulator and a direct broad-spectrum antimicrobial agent to provide localized immunity against foreign organisms. Nitric oxide has regulatory functions that affect immunomodulation, inflammation, cytokine production, and apoptosis likely through S-nitrosylation of proteins. Nitric oxide has cytotoxic functions that

affect viral replication through reactive oxygen and/or nitrogen molecules.

Within keratinocytes, the molluscum virion colonies are isolated in a unique sac which provides an immunologically privileged environment for replication. Lesions lack a T-cell and

killer cell infiltrate, reflecting absence of a host response.

The sodium nitrite probably acts on several targets by inhibiting RNA synthesis, DNA replication, early and late viral protein synthesis and by nitrosylating viral structural proteins.

It is therefore possible that NO acts through DNA toxicity to infected cells, promoting apoptotic cell death.

Pharmacokinetics:

Metabolism and Distribution:

Plasma hydrolysed MAP3 (hMAP3), a structural marker for Berdazimer, and nitrate levels were evaluated in n=34 subjects 2 to 12 years of age. Subjects applied Berdazimer once daily for two weeks to a total treatment area of 484 cm2 (mean lesion count=34), applying a mean dose of approximately 3 mL/day. No subjects had quantifiable plasma hMAP3 concentrations on day 1; two subjects had quantifiable concentrations on day 15. Mean plasma nitrate levels were similar on days 1 and 15 and remained relatively flat during the pharmacokinetic sampling period (baseline through 1-, 3-, and 6-hours post-application). There were no apparent differences in methaemoglobin levels throughout the study.

The primary endpoint was the pharmacokinetic profile of hMAP3 and nitrate as markers for systemic exposure to Berdazimer sodium. Plasma hMAP3 and nitrate concentrations.

Plasma nitrate profiles remained relatively flat across the sampling interval for both patients, suggesting there was minimal, if any, systemic absorption of Berdazimer sodium.

Assessment of efficacy:

The efficacy of ZELSUVMI was evaluated in 3 multicentre, randomized, double-blind, parallel-group, vehicle-controlled trials in subjects with MC. Trial 1 enrolled 891 subjects, Trial 2 enrolled 355 subjects, and Trial 3 enrolled 352 subjects. Subjects were randomized 1:1 in Trial 1, and 2:1 in Trials 2 and 3 to receive ZELSUVMI or vehicle applied to MC lesions once daily for up to 12 weeks.

In the three trials, 3% of subjects were less than 2 years of age and 96% of subjects were 2 to 17 years of age. The trial population included 51% male, 88% White, 6% Black, and 6% other; for ethnicity, 21% of subjects identified as Hispanic/Latino, 78% as non-Hispanic/Latino, and 1% were not reported. Subjects had 3-70 baseline MC lesions. At baseline, the average MC lesion count was 20.2.

The primary efficacy endpoint was the proportion of subjects achieving complete clearance at Week 12. Complete clearance was defined as the subject having a total MC lesion count of 0 at assessment. The key secondary efficacy endpoint was complete clearance rate at Week 8.

Incidental effects:

The most common adverse reactions reported with Zelsuvmi were application site reactions,

including pain (e.g., burning or stinging sensations), erythema, pruritus, exfoliation, dermatitis, swelling, erosion, discoloration, vesicles, irritation, and infection following application of Berdazimer.

Contraindications:

For now, no drug interactions have been found, however lack of clinical trials and studies geriatrics (people above 65 y/o) and in pregnant women, doesn't provide a clear safety profile of Berdazimer for this category of patients.

Additionally, the infection from molluscum contagiosum can be severe in patients with human immunodeficiency virus (HIV) -induced immunosuppression, where disfiguring facial lesions are a therapeutic problem.

References:

1. www.rxlist.com
2. reference.medscape.com
3. www.cdc.gov
4. https://jddonline.com/articles/pharmacokinetic-profile-safety-and-tolerability-of-topical-berdazimer-gel-103-in-patients-with-molluscum-contagiosum-S1545961622P1104X

Events' Corner

Event 1: School of Pharmacy starting Doctor of Pharmacy – 28th January 2024

On the 28th of January, the Faculty of Health Sciences started the Doctor of Pharmacy course with its first batch of students.

Event 2: Orientation week for PhD, B Pharm and Biotechnology freshers'

- 27th Febuary to 01st March 2024

The starting of the 1st batch of BSc Biotechnology, 1st batch of PhD Health Sciences, Life Sciences and Management Studies and 5th Cohort of B Pharm program.

The one-week induction and orientation program was organized between 27 Feb to 3 March 2024 where eminent personalities from various sectors delivered lectures and wished the students for the successful career.

JSS ACADEMY OF HIGHER EDUCATION AND RESEARCH MAURITIUS
A degree awarding institution registered with the Higher Education Commission, Mauritius

Orientation Program for B Pharm and B Sc
27 February - 01 March 2024

AGENDA

Day 1: Tuesday, 27 Feb 2024 — **Venue: Classroom G2**

10:00 AM	Welcome and About JSSAHER, Mauritius, and Transition from School to College	Prof (Dr) Praveen Mohadeb, CEO & Vice-Chancellor
10:30 AM	Overview of administrative and student services	Mr Naveen K P, Registrar
11:00 AM	General Laboratory Safety Measures (Dos and Don'ts)	Prof (Dr) V Jaishree, Head, Faculty of Life Sciences
11:20 AM	Campus Visit	Dr Goutham Y, Assistant Professor and Ms Aumita, Admin Assistant
01:15 PM	Introduction and Icebreaking session with III, IV, VI and VIII semester students	Dr Khayati Moudgil, Assistant Professor, and selected students of B Pharm and BSc

Day 2: Wednesday, 28 Feb 2024 — **Venue: Conference Room 2.11**

09:30 AM	Guest Lecture: Drug Abuse and Drug Prevention	Mrs S Sumsurooah, Chief Inspector of Police, ADSU Education and Training Cell
10:30 AM	About the School of Pharmacy and Program Orientation (Room: G2) About the Faculty of Life Sciences and Program Orientation (Room: 2.11)	Prof (Dr) Ashish Wadhwani, Head, Faculty of Health Sciences, Dean, School of Pharmacy Prof (Dr) V Jaishree, Head, Faculty of Life Sciences
01:15 PM	Guest Lecture: Campus Mental Health Awareness Lecture	Dr Sumera Keenoo, Department of Medicine, Faculty of Medicine and Health Sciences, University of Mauritius
02:30 PM	Guest Lecture: Current Scenario of Pharmacy / Biotechnology in Mauritius	A Representative from the respective sector

Day 3: Thursday, 29 Feb 2024 — **Venue: Conference Room 2.11**

09:30 AM	Safety & Health visit and Fire Safety Training & Fire drill	Health and Fire Safety Department
11:15 AM	Briefing on JSSAHER E-learn Platform (BPharm)	Dr Datta Kumar and the team Enhanzed, India
01:15 PM	Guest Lecture: Crime Prevention and Safety	Representatives from the Police Crime Prevention Unit, Mauritius

Day 4: Friday, 1 March 2024 — **Venue: Conference Room 2.11**

09:00 AM	First Aid Awareness Lecture	By the trained professionals from the field

Avenue Droopnath Ramphul, Bonne Terre, Vacoas, Mauritius
Tel: +230 4016415 Fax: +230 4270334 Email: info@jssaher.edu.mu Website: www.jssaher.edu.mu

DAY 1: Tuesday 27th February 2024

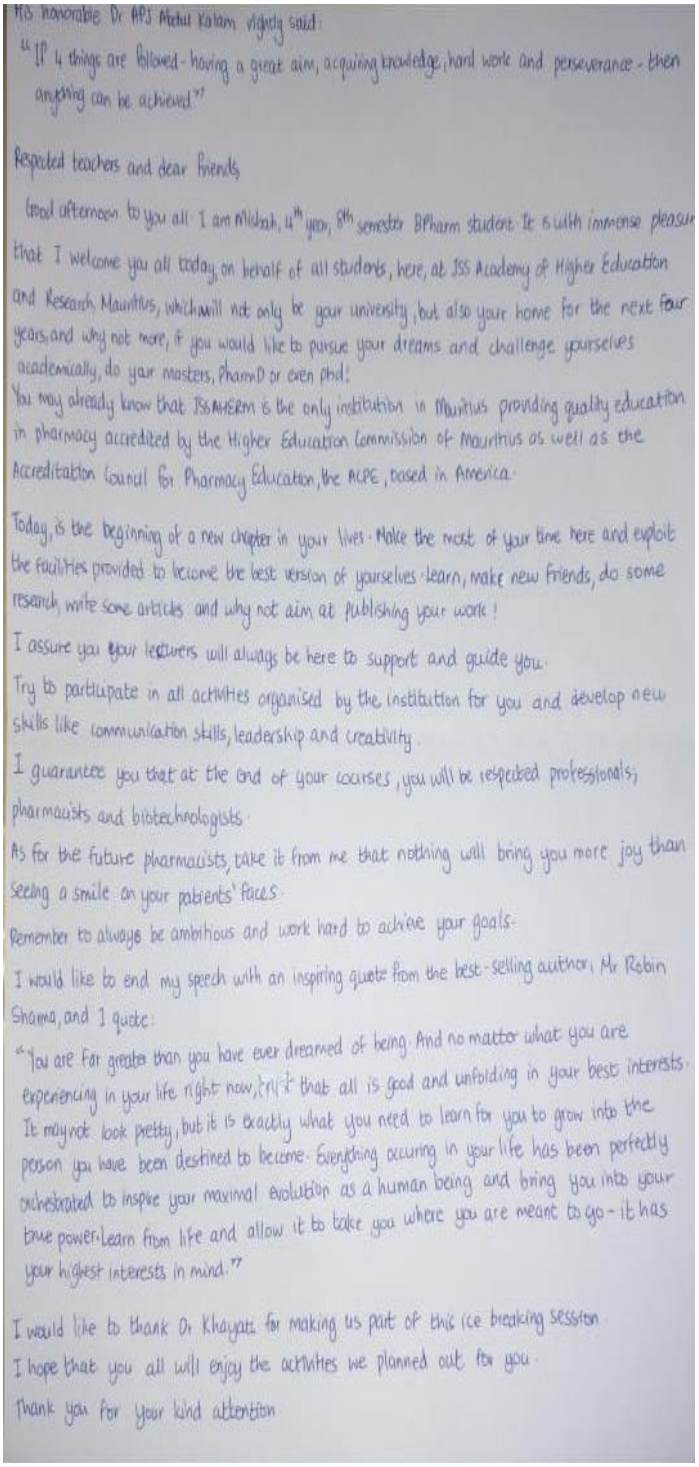
JSSAHERM has welcomed its 5th Cohort of B Pharm students and 1st Cohort of BSc Biotechnology and PhD students on the 27th of February 2024 and organized the introductory week to familiarize the new batch of aspiring pharmacists and biotechnologists. There have been activities such as campus visit, guest and motivational lectures, library-use handling, introduction to E-Learning platform, fire safety instructions and the traditional ice-breaking session with the senior students.

The icebreaker session was organized as part of the orientation program with the aim of helping the freshers get acquainted and interact with their seniors. Out of the 34 students who participated in this activity, 11 students were from cohorts 1,2,3, and 4, and 23 students were from cohort 5 among whom 18 BPharm students and 5 Biotechnology students were present.

Dr Khayati Moudgil, Assistant Professor at JSSAHERM, was the coordinator of this activity and the ice-breaking session consisted of the following:

- Address by Dr Khayati Moudgil.
- Welcoming speech by Ms Misbah Dhuny of cohort 1 during which she urged the newcomers to make the most of their academic years and to make use of the resources provided by JSSAHERM.
- A set of games such as Zip Zap Zop, Birth Map, Pictionary, Pass-the-chicken, Two truths and 1 lie were organised in an attempt to help the newcomers feel at ease in this new environment.
- Vote of thanks by Ms Chunalvee Ramparsad of cohort 1 who also emphasised on making the most of their academic years at JSSAHERM.

Speech of Ms Misbah Dhuny



His Honorable Dr APJ Abdul Kalam rightly said:

"If 4 things are followed - having a great aim, acquiring knowledge, hard work and perseverance - then anything can be achieved."

Respected teachers and dear friends,

Good afternoon to you all. I am Misbah, 4th year, 8th semester BPharm student. It is with immense pleasure that I welcome you all today, on behalf of all students, here, at ISS Academy of Higher Education and Research, Mauritius, which will not only be your university, but also your home for the next four years, and why not more, if you would like to pursue your dreams and challenge yourselves academically, do your masters, PharmD or even phd!

You may already know that ISSAHERM is the only institution in Mauritius providing quality education in pharmacy accredited by the Higher Education Commission of Mauritius as well as the Accreditation Council for Pharmacy Education, the ACPE, based in America.

Today, is the beginning of a new chapter in your lives. Make the most of your time here and exploit the facilities provided to become the best version of yourselves. Learn, make new friends, do some research, write some articles and why not aim at publishing your work!

I assure you your lecturers will always be here to support and guide you.

Try to participate in all activities organised by the institution for you and develop new skills like communication skills, leadership and creativity.

I guarantee you that at the end of your courses, you will be respected professionals; pharmacists and biotechnologists.

As for the future pharmacists, take it from me that nothing will bring you more joy than seeing a smile on your patients' faces.

Remember to always be ambitious and work hard to achieve your goals.

I would like to end my speech with an inspiring quote from the best-selling author, Mr Robin Sharma, and I quote:

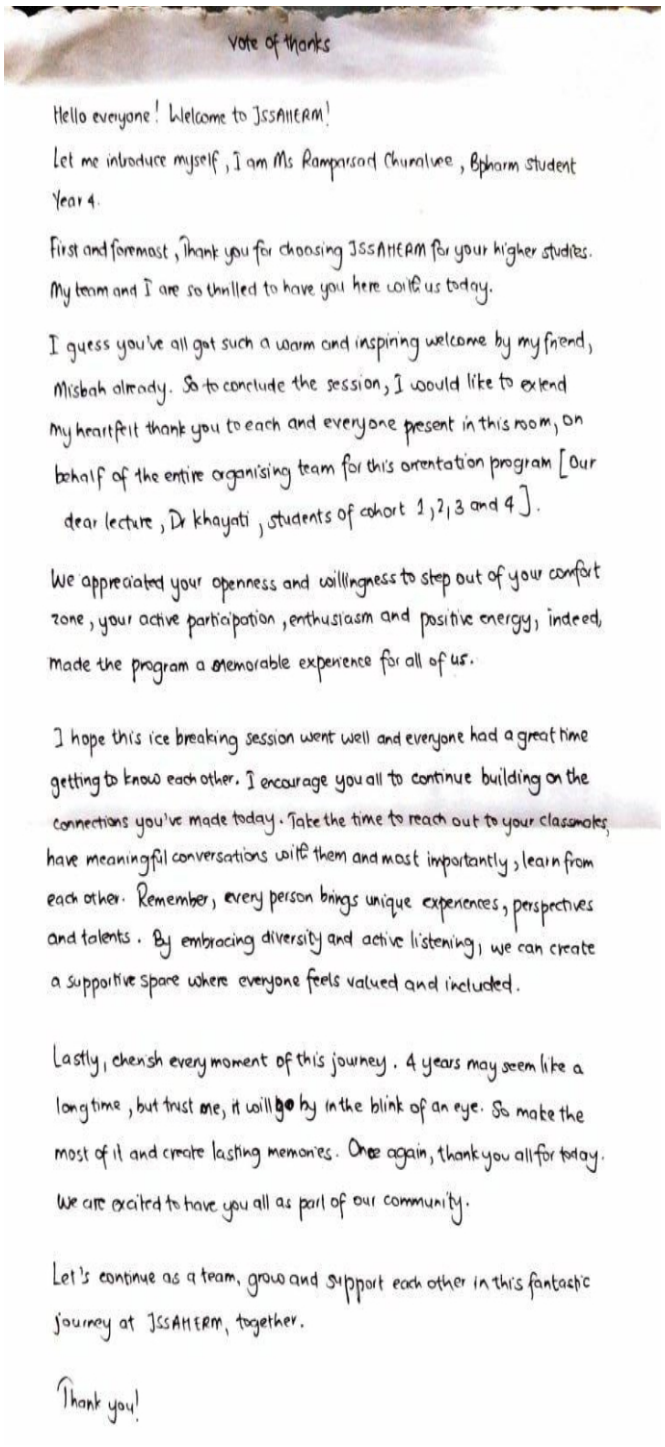
"You are far greater than you have ever dreamed of being. And no matter what you are experiencing in your life right now, trust that all is good and unfolding in your best interests. It may not look pretty, but it is exactly what you need to learn for you to grow into the person you have been destined to become. Everything occurring in your life has been perfectly orchestrated to inspire your maximal evolution as a human being and bring you into your true power. Learn from life and allow it to take you where you are meant to go - it has your highest interests in mind."

I would like to thank Dr Khayati for making us part of this ice breaking session.

I hope that you all will enjoy the activities we planned out for you.

Thank you for your kind attention.

Speech of Ms Chunalvee Ramparsad



Vote of thanks

Hello everyone! Welcome to ISSAHERM!

Let me introduce myself, I am Ms Ramparsad Chunalvee, Bpharm student Year 4.

First and foremost, Thank you for choosing ISSAHERM for your higher studies. My team and I are so thrilled to have you here with us today.

I guess you've all got such a warm and inspiring welcome by my friend, Misbah already. So to conclude the session, I would like to extend my heartfelt thank you to each and everyone present in this room, on behalf of the entire organising team for this orientation program [Our dear lecture, Dr khayati, students of cohort 1, 2, 3 and 4].

We appreciated your openness and willingness to step out of your comfort zone, your active participation, enthusiasm and positive energy, indeed, made the program a memorable experience for all of us.

I hope this ice breaking session went well and everyone had a great time getting to know each other. I encourage you all to continue building on the connections you've made today. Take the time to reach out to your classmates, have meaningful conversations with them and most importantly, learn from each other. Remember, every person brings unique experiences, perspectives and talents. By embracing diversity and active listening, we can create a supportive space where everyone feels valued and included.

Lastly, cherish every moment of this journey. 4 years may seem like a long time, but trust me, it will go by in the blink of an eye. So make the most of it and create lasting memories. Once again, thank you all for today. We are excited to have you all as part of our community.

Let's continue as a team, grow and support each other in this fantastic journey at ISSAHERM, together.

Thank you!

The day completed with the online orientation program for the PhD students.

DAY 2: Wednesday 28th February 2024

Mrs Sumsurooah, Chief Inspector of Police and her team from ADSU sharing the information on Drug Abuse and Drug Prevention

Mental Health Awareness Lecture by Dr Sumera Keenoo

Mr Ajay from MedActiv addressing the students on Current Scenario of Pharmacy	Mrs Nandini from MIB addressing the students on Current Scenario of Biotechnology

DAY 3: Thursday 29th February 2024

Fire Safety training and Fire drill

Lecture on Crime Prevention and Safety from Police department

Event 3: Visit of Prof. Hazel Miseda, Vice Chancellor, Great Lakes University of Kimsu

Prof. Hazel Miseda Vice Chancellor of Great Lakes University of Kimsu, Kenya and Prof. Pamela Raburu visited JSS Academy of Higher Education & Research Mauritius on 28th February 2024. The CEO & Vice Chancellor Prof (Dr) Praveen Mohadeb, welcomed the visitors and made a brief presentation on the facilities and activities carried out by JSSAHERM. Prof. Hazel Miseda presented about Great Lakes University of Kimsu.

The common interest for Community Pharmacy services and Life Sciences Programs was discussed and was agreed to look forward to build a strong academic partnership between both institutions.

Event 4: Student Learning Experience at the Ganga Talao Medical Camp

JSSAHER Mauritius collaborated with clinic Preventive Medicare Ltd for the medical camp at the Ganga Talao, Grand Bassin on the occasion of the Maha Shivratee to do the community service for the pilgrims on 4th March 2024. The director of Stemrx Clinic (Mauritius) Dr Kevin Ramdhun and Dr Goutham Yerrakula, Assistant Professor, JSSAHERM coordinated the free health camp.

The following services were provided:

- Blood Group Test
- Diabetic Awareness
- Providing information about regenerative medicine
- Pain clinic for the pilgrims – Helping them with cuts, abrasion and muscular pain
- Patient Injury Analysis

The camp was very much appreciated by the pilgrims and the community.


• Musculoskeletal diseases
• Autoimmune disease
• Eye conditions
• Muscular diseases
• Cosmetic
• Neurological
• Orphan


StemRX Wishes You A Pious
MAHA SHIVRATRI
Treatments We Provide


StemRX Wishes You A Pious
MAHA SHIVRATRI


You A Pious

Event 5: Women's Day celebrated on 6th March 2024

It has been the yearly tradition for JSS Academy of Higher Education and Research, Mauritius, to celebrate International Women's Day, this year has been no exception. The institution beyond doubt rejoiced the event in honouring the achievements of women by intricately following the 2024 theme 'Inspire Inclusion'.

The International Women's Day is celebrated annually on the 8th of March serving as a focal point in the women's right movement. 'Inspire Inclusion' encourages everyone to recognize the unique perspectives and contributions of women from all walks of life, including those from marginalized communities.

Our establishment debuted this glorious occasion with Dr Khayati Moudgil, Assistant Professor of the Faculty of Health Sciences followed by Prof (Dr) Jaishree Vaijhanathappa, Professor and Head of the Faculty of Life Sciences, both of our professors being the role models aspiring and persuading all of us to attain the pinnacle of our capabilities. Furthermore, reminding us to be compassionate and respect our own standards and boundaries while also enhancing on the fact that it is crucial to remember we have women all over the world not only dreaming of success but making enormous efforts in order to achieve it.

We then welcomed on stage with roars of applause our esteemed Chief guest, an accomplished professional, a dynamic lady who has made a meaningful influence in our country, Fellow of Royal Society of Biology, UK. Prominent personality in the Council Members of Mauritius Institute of Education, working for more than 10 years in the Mauritius Examination Syndicate as well as part time lecturer at Open University and of course the Chairperson of the Rajiv Gandhi Science Centre since 2022, Dr Ellora Mishra Dhunnoo. Undoutedly, her powerful and intriguing perseverance on life has left no heart untouched , elaborating how a woman can

strive any spheres of life, whether personal, academic or professional, a woman has the ability to shoulder all her responsibilities and still portray impactful roles for each and everyone. Moreover, elaborating on how female emancipation has led to increased accessibility to education for more girls and women thereby paving a pathway in diminishing the risks of gender inequality in male dominated areas.

The event then proceeded with presenting our Chief guest with the token of appreciation on behalf of JSSAHER thanking her for gracious presence followed by a vote of thanks by Dr Gotham Yerrakula, Assistant Professor. Dr Ellora Mishra Dhunnoo also visited the campus and appreciated the facilities available for teaching-learning and experimentation.

We eventually continued our next session of the event with a Pop Quiz, testing everyone's knowledge regarding the Great Women in History presented by Ms Saniya Issimdar where we received the lively participation of all our students.

Moreover, Mrs Nathalie shared with us her wonderful insights on womanhood, grasping our attention with all the struggles and blessings accompanied in being a woman and how in the end we should be happy and inspired by the success of other ladies. Eventually, it was time for our seniors to discuss with us of their delightful journey showcasing their Internship in India.

Finally, we ended our program on a joyous note with a beautiful saying ‘One is not born, but rather becomes a woman, as womanhood is a journey we all must cherish'. Happy Women’s Day!

Written By: Ms Aaliya Edoo
Chief Student Editor

Event 6: National Day celebrations

56th Independence Day and 32nd Anniversary of the Republic of Mauritius celebrations at JSSAHER MAURITIUS

On the 11th March 2024 around 11.45 AM the 56th Independence Day and 32nd Republic Day of Mauritius was celebrated. The celebration started off traditionally with the National Anthem being harmoniously sang by the students of JSSAHERM and the staff. This was simultaneously conducted with the raising of the flag by the newly joined staff Mrs Sugeeta and one of the 3rd semester students. The CEO & Vice Chancellor Prof (Dr) Praveen MOHADEB addressed the gathering and conveyed the Honourable Prime Minister's message to the students and the celebrations concluded with refreshments.

Students' Learning Experience - Internship

B Pharm Students Internship to India

On the 27th of January 2024, students from cohort 1 and 2 embarked on a transformative journey from SSR International Airport, Mauritius, to pursue an enriching internship experience in India. Accompanied by Ms Varuna, Administrative staff from JSSAHERM, all students boarded the plane and arrived at Bengaluru airport, on the 28th of January 2024. There, in the company of Dr Shailesh T, left for Mysore which was the destination for the next few days for the students.

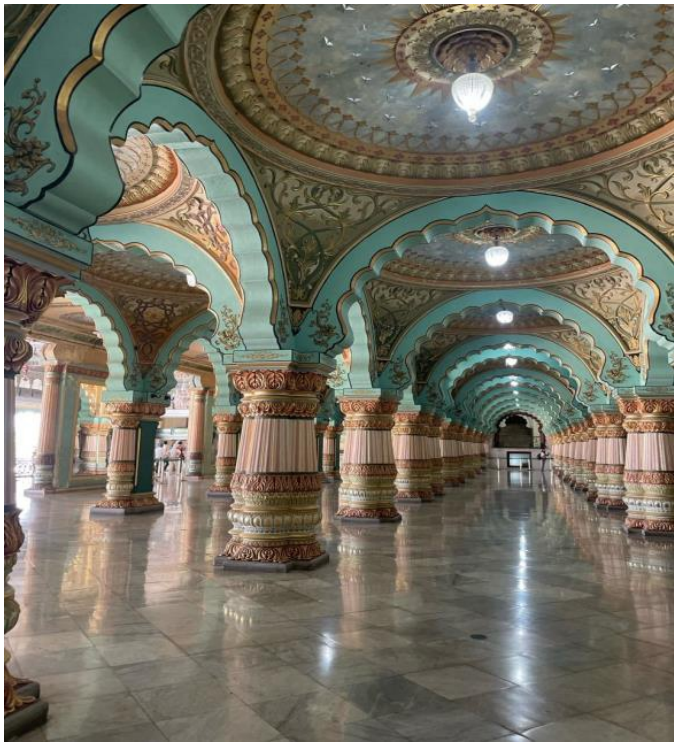
On Monday 29th January, a meet and greet session was organized between the students and the principle, Dr. TM Pramod Kumar, VP, Dr. G V Pujar and AAO and other staffs following which the students were given a tour of the pharmacy college. Different departments were visited including the Regulatory Affairs, Drug Testing Labs, Pharmaceutical Microbiology Lab and the Library. In the afternoon a lecture class was conducted on the overview of clinical pharmacy practice by Mr. Atiqulla Shariff, Research Scholar, Dept of Pharmacy Practice. The day was concluded by an evening meeting with Dr. B. Suresh, Pro Chancellor of JSS Academy of Higher Education and Research, Mysuru, where he shared his personal journey, spanning from his early days as a pharmacist to the present moment.

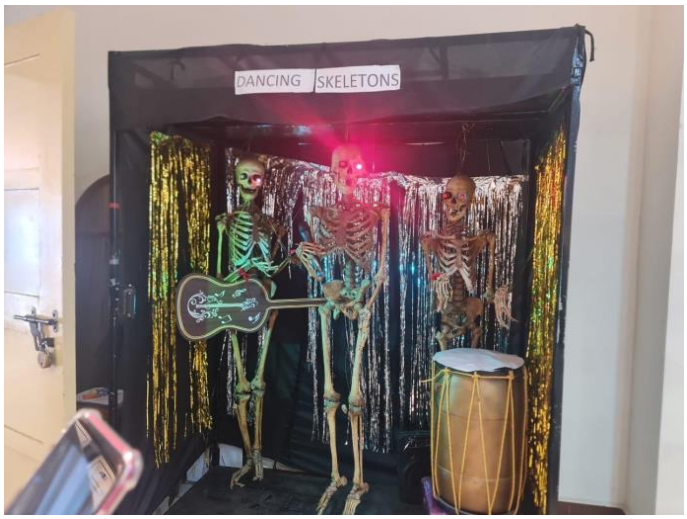
The following day was spent visiting the JSS Hospital of Mysore. A welcoming speech by Dr. Harsha, Dr. Savita and a PharmD student was given and students visited various departments such as the Oncology department, the Male and female ward, the immunization center and the Drug and Poison Information center. In the afternoon, the students attended a lecture in the CAL lab following a practical on Enalapril by RP-HPLC and GC.

On the 31st of January, students visited the pharmacology Department and students expressed their great appreciation to the professors, Dr Jeetoo, Dr KI Krishna and PhD students for generously dedicating their time to provide thorough explanations to the students regarding their research works. During this visit, Tissue Homogenizer, Documentation system and elevated plus-maze apparatuses were encountered and students studied the anxiolytic effect of drug Diazepam on mice using those apparatus. Students from JSSAHER, Mauritius were also interviewed for the student Exchange Program Internship Documentation purpose including Ms. Angeli, Mr. Abdallah, Ms. Zeenaat, Ms. Vanshita, Ms. Umairaa and Ms. Zina.

Test on banana flies

The following day, the students in company of Ms. Varuna and Dr. Sailesh were taken on a visit to the JSS medical college. There, the students received a warm welcome by Dr. Vidya, Dr. Poonam and Dr. Imrani. The anatomy museum, Gross Anatomy theater and the Biochemistry lab were visited and many apparatuses were encountered during the visit. Afterwards, the Centre for Experimental Pharmacology and Toxicology Central Animal Facility was visited where a welcoming speech by Mr. T. A. Hediyal was given. Thorough explanations on the experiments were given and the students were delighted to observe live animals and witness firsthand the experiments conducted on them.





Later in the afternoon, the Mysore palace and Brindavan garden were visited where students were enlightened on the history of the palace as well.

On the 2nd of February, the students visited the Supreme Pharmaceuticals Mysore PVT LTD, which is one of the leading manufacturers of a wide range of bulk stabilized vitamins, minerals, and nutraceuticals. Students observed a wide variety of manufacturing, packaging, and storage techniques. After this visit, all the students were taken to the Mysore ZOO, and they were all delighted and pleasantly surprised by the diverse wildlife there.

The students left on Saturday 3th of February and reached the guest house of JSSAHER, OOTY later in the afternoon. Lunch was served to the students and later in the evening, the students were transferred to The Monarch Hotel for their stay. The supervisors that were responsible for the stay of the student in Ooty was Ms. Manisha and Mr. Chandan. On Sunday 04th of February, the students were taken for some local sightseeing and they visited the Tamil Nadu Viewpoint,

Doddetta peak followed by a visit to the chocolate and tea factory. Students were also taken to the Karnataka Siri Horticulture Garden. The following day was also spent visiting the Government Rose Garden and the Government Botanical Garden of Ooty where the students had a great time.

On the 6th of February, the students conducted a visit to the campus of JSSAHER, OOTY. They visited the Pharmacognosy and Phytochemistry Lab, the Pharmacy Practice Lab, the Pharmaceutics lab as well as the lab of Pharmacology. The students were also provided with a briefing by Dr. Surash and Dr. Ganesh for the Pharmaceutical Regulatory affairs. Later in the afternoon, the students were taken to Pykara Waterfalls, pine forest and Nilgiri Mountain Railway (Coonoor travel). In the evening, the students were taken to try the hot chocolate of Ooty at Moddy's shop which they enjoyed thoroughly.

The next day, the student visited the temple in the morning where they offered their prayers following a meet and greet with Dr. S.P Dhanabal, Dr. K.P Arun and Mr. H.K Basavalingadevaru at the campus of JSSAHER, Ooty. Students were enlightened about the courses and opportunities that the academy was offering to the students and many of them showed their keen interest as well. After the meeting, the students were taken to the Pasteur Institute where there was an interactive session and a video clip was shown to the students

about the operations being carried out in the institution. In the afternoon, the students visited a tea estate where they were all mesmerized by the beauty of Ooty.

On Thursday 8th of February, the students in company of Ms. Varuna travelled to Sutturu, Karnataka, to meet His Holiness Jagadguru Sri Shivarathri Deshikendra Mahaswamiji and received his blessings. Finally, the students were back at the hostel in afternoon, in Mysore. The next day was spent engaging in sightseeing and shopping activities by the students. And finally, the trip was concluded on Saturday, where the students departed for Bangalore with the authorization from JSSAHERM. On Monday 12th of February, the students departed from Bangalore to return to Mauritius.

We thank the Management and the staffs of JSSAHER, Mauritius and JSS AHER, Mysuru, for encouraging us and providing us with this wonderful opportunity.

Internship of Mr Abdallah Sultan in India

An Internship Journey three thousand miles away from home …

The 27th of January 2024 marked a crucial chapter in my on-going quest to become a pharmacist and as I leapt into the airplane, I looked back throughout my academic years at JSSAHERM and realised what an opportunity I was being given. Indeed, a pharmacy internship in my ancestral Motherland was quite something to be enthralled about. This not only meant that I would be able to bolster my pharmaceutical knowledge on an international scale but also discover this fascinating country. The internship would last two weeks and be split in two phases- one in Mysore and the other in Ooty.

A timeline of events succeeding touchdown on Indian soil on the 28th of January 2024 is given below:

Mysore phase:

28th January - Following a warm welcome by the programme coordinator at the airport, Dr Shailesh T., we hit the road by bus from Bengaluru to the JSS Mysore Guest house and a 'mere' 3 hours later we arrived just in time for dinner.

29th January- A ceremonial Meet & Greet was held on the college campus where we had the opportunity to interact with the principal and lecturers. Some discussions were held between the students and Mr Atiqulla Sheriff a PhD scholar in the afternoon

30th January- The main event of the day was a visit to the JSS Hospital where students encountered the various quarters of the medical facilities and had a hands-on experience on how they run. Students, in the afternoon, assisted by Dr Anand Kumar Tengli, Ms Monica and Ms Erica were able to learn about HPLC and other laboratory techniques. A training aspect on these was also given.

31st January- Visit to animal house and some demonstrations of pharmacological tests done.

1st February- Visit to Human Anatomy Museum, biochemistry& cell culture laboratory and Supreem pharmaceutical, an exporting manufacturer of various supplements.

2nd February- Trip to Mysuru Palace, a 14th century marvel of architecture

Ooty phase

Due to a change in scheduling, this part of the internship mainly included a Meet & Greet with the Principal and lecturers, an enriching visit to the Pasteur Institute of India which is a leading producer of various vaccines of deadly diseases such as Rabies and various sightseeing. The picturesque hilly scene of Ooty and its lavish gardens particularly left the students in awe.

In all, I want to express my gratitude towards JSSAHERM for monitoring such an event on such a scale, the admirable coordinators in India and the maintenance/hospitality employees in the guest houses which made our stay enjoyable. I sincerely thank my teachers for providing me this valuable opportunity.

Internship of Ms Simran Shrishtee in India

I am a student of B Pharm from 3rd year cohort 2. I`m glad to share my very enriching experience I got when I embarked into this journey from Mauritius to India on 27th January 2024.

I am extremely grateful to JSS Academy Mauritius Academy Mysore and JSS Academy Ooty to give a such opportunity whereby not only I have acquired knowledge concerning my career but as well as knowledge towards life and new cultures. Today I can understand why India is known as the Incredible India.

On the 27th of January 2024, students from both cohort 1 and 2 embarked on the enriching journey from SSR International Airport, Mauritius, to gain an enriching internship experience in India. In our journey we were accompanied by Miss Varuna where I must say she did a really good job and took care of us the whole journey. On 28th February we landed at Bangalore Airport. There, in company of Dr Shailesh T we left for Mysore which was the destination for the next few days for the students.

On Monday 29th January there was a meet and greet session between the students and the principle, Dr. TM Pramod Kumar, VP, Dr. G V Pujar and AAO and other staffs following which the students were given a tour of the pharmacy college. The pharmacy college consist of many superior facilities. It was a good experience as to gain new knowledge about apparatus and how they functioned.

We visited different departments including the Regulatory Affairs, Drug Testing Labs, Pharmaceutical Microbiology Lab and the Library. In the afternoon a lecture class was conducted on the overview of clinical pharmacy practice by Mr. Atiqulla Shariff, Research Scholar, Dept of Pharmacy Practice. Late evening there was a meeting with Dr. B. Suresh, Pro Chancellor of JSS Academy of Higher Education and Research, Mysuru, where he shared his personal journey.

The next day was spent visiting the JSS Hospital of Mysore. A welcoming speech by Dr. Harsha, Dr. Savita and a PharmD student was given and students visited various departments such as the Oncology department, the Male and female ward, the immunization center and the Drug and Poison Information center. The hospital part I found it very interesting as we could really see how clinical pharmacist perform in hospital such as their duties were distributed efficiently among them. In the afternoon, the students attended a lecture in the CAL lab following a practical on Enalapril by RP-HPLC and GC.

Then students in company of Ms. Varuna and Dr. Sailesh were taken on a visit to the JSS medical college. There, the students received a warm welcome by Dr. Vidya, Dr. Poonam and Dr. Imrani. The anatomy museum, Gross Anatomy theater and the Biochemistry lab were visited. I was fascinated to see the real conservation of human organ which was totally a new experience and something unseen in Mauritius .We also visited the D section whereby human body was used so that students can learn about the Dissection practice on human body.

Afterwards, the Centre for Experimental Pharmacology and Toxicology Central Animal Facility was visited where a welcoming speech by Mr. T. A. Hediyal was given whereby a deep explanation on the experiments were given and the students were delighted to observe live animals and witness the experiments conducted on them.

Then in the afternoon, the Mysore palace and Brindavan garden were visited where students were enlightened on the history of the palace as well.

On the 2nd of February, the students visited the Supreme Pharmaceuticals Mysore PVT LTD, which is one of the leading manufacturers of a wide range of bulk stabilized vitamins, minerals, and nutraceuticals. Students observed a wide variety of manufacturing, packaging, and storage techniques. After this visit, all the students were taken to the JSS ZOO, and they were all delighted and pleasantly surprised by the diverse wildlife there.

We left Mysore on Saturday 3th of February and reached the guest house of JSSAHER, OOTY later in the afternoon. Lunch was served to the students and later in the evening, the students were transferred to The Monarch Hotel for their stay.

On Sunday 04th of February, we were taken for some local sightseeing and they visited the Tamil Nadu Viewpoint, Doddetta peak and after that we visited the chocolate and tea factory. Students were also taken to the Karnataka Siri Horticulture Garden. The following day was also spent visiting the Government Rose Garden and the Government Botanical Garden of Ooty where the students had a great time.

On the 6th of February, we visited the campus of JSSAHER, OOTY. They visited the Pharmacognosy and Phytochemistry Lab, the Pharmacy Practice Lab, the Pharmaceutics lab as well as the lab of Pharmacology. The students were also provided with a briefing by Dr. Surash and Dr. Ganesh for the Pharmaceutical Regulatory affairs. Ooty campus consist of very enriching knowledge as well as competent lectures also. The lecturers were very welcoming and they explained many topics nicely which ensured that each and every student is getting new knowledge.

In Ooty we also visited waterfall as sightseeing and visited Moddy's chocolate shop.

On Thursday 8th of February, the students in company of Ms. Varuna travelled to Suturru, Karnataka, to meet His Highness, Swami Jagadguru Sri Shivarathrishwara Mangala Mantapa and received his blessings. Finally, the students were back at the hostel in afternoon, in Mysore. The trip was concluded on Saturday, where the students departed for Bangalore with the authorization from JSSAHERM. On Monday 12th of February, the students departed from Bangalore to return to Mauritius.

I sincerely express my gratitude towards JSSAHERM management and my teachers who gave me this opportunity. I wish all the best to my future colleagues who will be going for their internship in India.

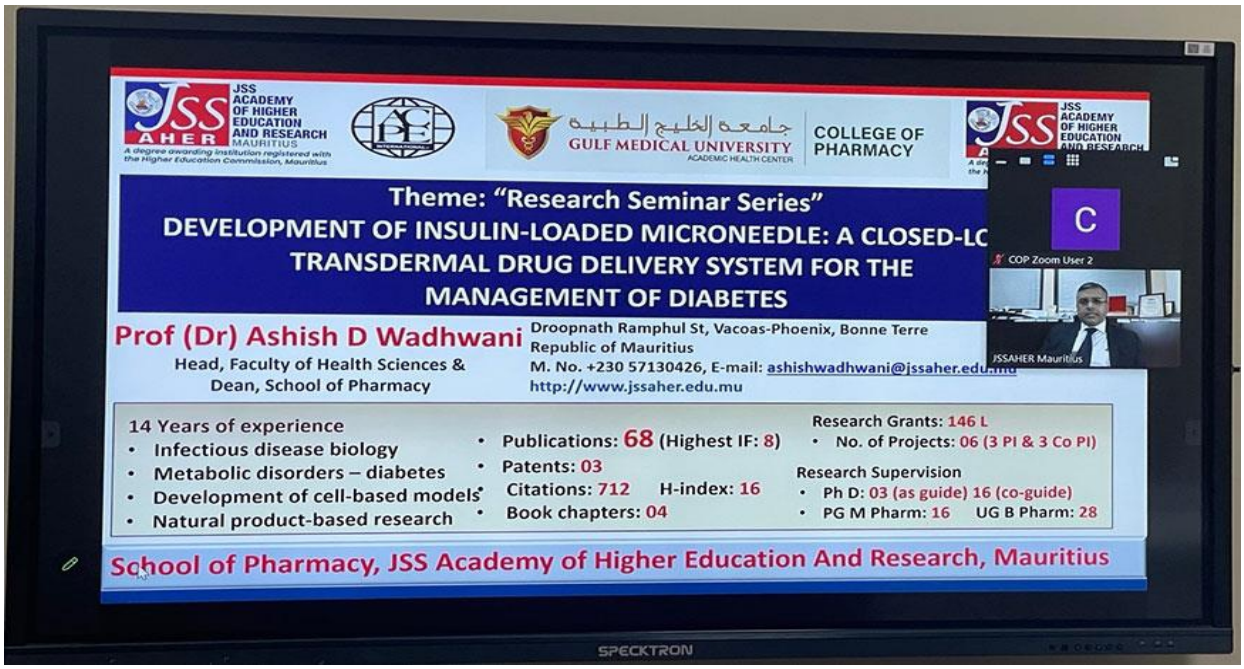
JSSAHERM Publications and Conferences Attended (January-April 2024)

Conference:

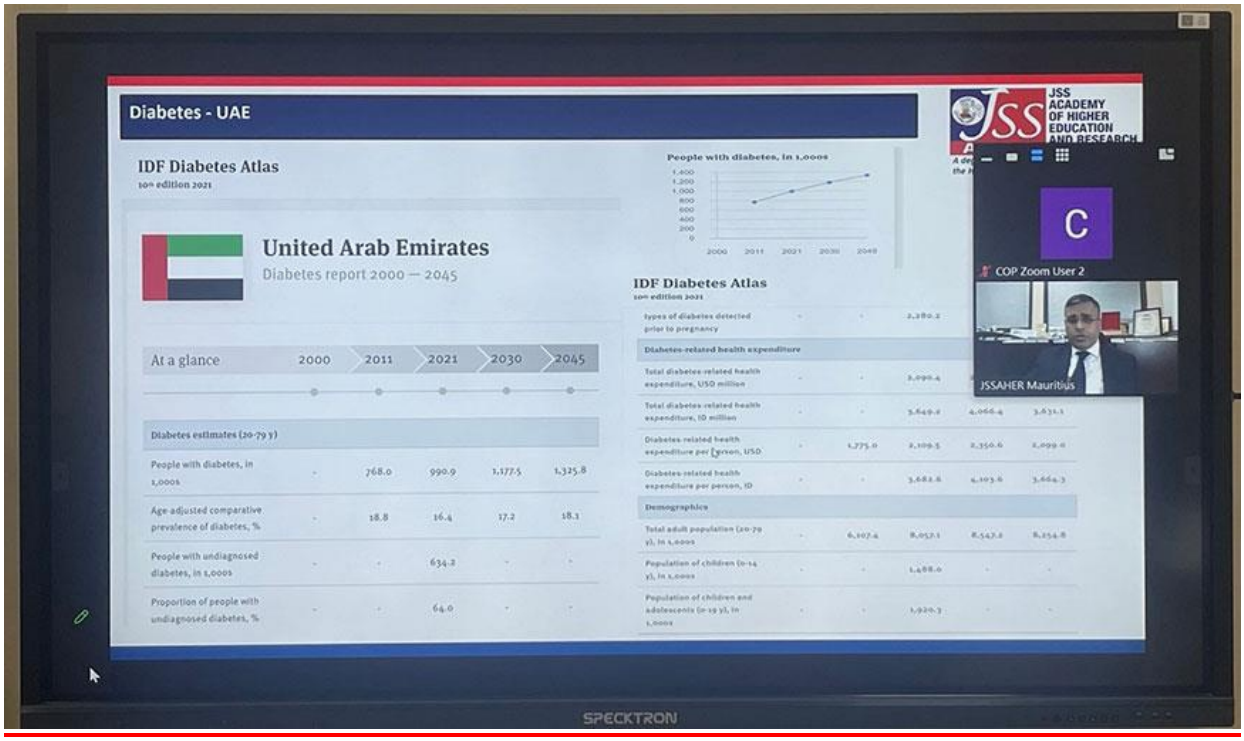
Gulf Medical University's College of Pharmacy hosted Prof. Ashish D Wadhwani, in a research seminar that attracted an audience of Master's in Drug Discovery and Development candidates and faculty members of the college.

On Thursday, February 22nd, 2024, the Gulf Medical University's College of Pharmacy hosted Prof. Ashish D Wadhwani, in a research seminar that attracted an audience of Master's in Drug Discovery and Development candidates and faculty members of the college, under the title: "Development of insulin-loaded microneedle: a closed-loop transdermal drug delivery system for the management of diabetes."

Dr. Wadhwani is the Head of Faculty of Health Sciences and Dean of the School of Pharmacy at JSS Academy of Higher Education and Research, Mauritius. He worked as a Research Associate at the National AIDS Research Institute, Pune, for a DBT-ICMR joint project. Dr. Wadhwani presented his research findings and won several awards at international conferences in Amsterdam, Malaysia, USA, Japan, Sri Lanka, and Singapore sponsored by Government National & International agencies. He has Sixty-Eight papers published in peer-reviewed journals with an H-index of 16, three chapters in a book, and three patents to his credit.



During the session, Dr. Wadhwani delved into epidemiological data about diabetes mellitus, shedding light on the prevalence and incidence in the UAE and Mauritius, with projections extending to 2045. He elucidated the experimental design employed in formulating the insulin-loaded microneedle, showcasing its potential as a revolutionary approach to target diabetes globally. The promising effects of this solution were highlighted, paving the way for potential advancements in diabetes management.



The session reached its conclusion with a robust and insightful discussion, emphasizing the critical need for further clinical investigations. Attendees engaged in a dialogue about capitalizing on the outcomes and determining the optimal regimen for utilizing this treatment modality.

Workshop:

Workshop on Recruitment of Young Blood Donors - 29th February 2024

The students Ms Aaliya Edoo and Ms Saniya Issimdar along with Dr Khayati Moudgil, Assistant Professor have been appointed as Ambassadors for Young Blood Donors an initiative by the Blood Donors Association of Mauritius in the function organized by the Ministry of Education and Ministry of Health and Wellness, Mauritius on 29th Feb 2024.

Workshop aiming to inspire the youth to become regular safe blood donors launched.

A one-day workshop aiming to inspire the youth to donate blood from an early age and motivate them to become regular safe blood donors opened, this morning, in the presence of the Vice-Prime Minister, Minister of Education, Tertiary Education, Science and Technology (VPM), Mrs Leela Devi Dookun-Luchoomun, and the Minister of Health and Wellness, Dr Kailesh Kumar Singh Jagutpal, at the Mahatma Gandhi Institute in Moka.

The workshop is an initiative of the Blood Donors Association in collaboration of the Ministry of Education, Tertiary Education, Science and Technology and the Ministry of Health and Wellness. Around 100 students attended the workshop.

Addressing the students, VPM Dookun-Luchoomun underscored that the youth could significantly contribute to ensuring the supply of blood as the country is facing an ageing population as well as an acute shortage of blood. The youth, she said, have great potential to become regular and safe blood donors for long term period thereby helping to maintain an adequate stock of blood in cases of emergencies and illnesses.

Speaking on the concept of responsible citizenry, she observed that youngsters, through the benevolent act of donating blood, can make a difference in someone's life. As future policy makers and leaders, the youth have a huge potential in creating awareness among the population and motivating them to donate their blood regularly, she indicated. As such, she pointed out that it is essential to inculcate, in the youth, their civic sense of donating blood as from an early age and saving a life.

The VPM advocated for the significance of giving blood in a selfless manner while reiterating that Government is doing all in its capacity to safeguard the welfare and wellness of the population. She thus exhorted the youth to become role models and be compassionate towards other people, underlining that the creation of blood donor's club will allow more youth to be part of the noble cause of donating blood.

As for Minister Jagutpal, he remarked that there are several patients who require blood in public/private hospitals for their survival adding that since blood is required regularly, it is important to respond to this call and donate blood. Blood, he indicated, cannot be kept over a long period of time and blood platelets cannot be stored for long and hospitals constantly need blood, thus, all the more reason for people to become conscious of the need to donate blood. He observed that around five cardiac operations are conducted daily necessitating five to six pints of blood.

He thus urged the youth to integrate blood donation as part of their routine activities and to reflect on the necessity of meeting the demand for blood especially for people who need blood due to illnesses or accidents.

Also present at the event, the Chairperson of the Blood Donors Association, Mr Dewanand Hossen, pointed out that annually 50,000 pints of blood are collected highlighting that this number is expected to rise to around 60,000 pints this year. The demand for blood is increasing year by year and it is imperative that certain initiatives are taken to ensure a regular supply of blood, hence the need to target the youth to become voluntary blood donors, he added.

Source: GIS.Mauritius

Publications:

1. Neena Elsa Varghese, K. Jegaveerapandi, Goutham Yerrakula, Choosing the Right Angiotensin Converting Enzyme Inhibitors; Gender –Specific Approach, Archives of Medicine and Health Sciences, 2024; 12(1):1-5

2. Magham Sai Varshini , Praveen Thaggikuppe Krishnamurthy , Ramakamma Aishwarya Reddy , Ashish Wadhwani*, V M Chandrashekar Insights into the Emerging Therapeutic Targets of Triple-negative Breast Cancer Curr Cancer Drug Targets 2024 Feb 21 (IF: 3). doi: 10.2174/0115680096280750240123054936.

ARCHIVES OF MEDICINE & HEALTH SCIENCES

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REVIEW ARTICLE

Choosing the Right Angiotensin Converting Enzyme Inhibitors; Gender –Specific Approach

Varghese, Neena Elsa[1]; Jegaveerapandi, K.[1]; Yerrakula, Goutham[2]

Author Information

Archives of Medicine and Health Sciences ():10.4103/amhs.amhs_226_23, February 28, 2024. | **DOI:** 10.4103/amhs.amhs_226_23

OPEN PAP Metrics

Abstract

This review article explores the importance of a masculinity- and feminine-specific approach in choosing the appropriate angiotensin-converting enzyme (ACE) inhibitors for patients with cardiovascular diseases. This review highlights the historical underrepresentation of women in clinical trials for cardiovascular medications, leading to a knowledge gap regarding the effectiveness and safety of these drugs in female patients. The article discusses the potential differences in treatment outcomes between men and women when it comes to ACE inhibitors and the gender-specific factors that can impact drug responses. The integration of bigender-specific data into clinical guidelines and decision-making processes can contribute to a more equitable and evidence-based approach to cardiovascular care. The article also references a report by the American College of Obstetricians and Gynecologists Force on Hypertension in Pregnancy, which emphasizes the importance of managing hypertension in pregnant women. By embracing a personalized medicine framework that accounts for gender-related differences, health-care professionals can optimize therapeutic interventions, minimize treatment disparities, and strive for improved cardiovascular health outcomes for all individuals. Overall, this review article provides insights into the potential mechanisms underlying sexuality-related differences in ACE inhibitor efficacy, safety, and adverse effects and discusses the implications of these findings in advancing personalized cardiovascular medicine.

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Curr Cancer Drug Targets. 2024 Feb 21. doi: 10.2174/0115680096280750240123054936. Online ahead of print.

Insights into the Emerging Therapeutic Targets of Triple-negative Breast Cancer

Magham Sai Varshini [1], Praveen Thaggikuppe Krishnamurthy [1], Ramakamma Aishwarya Reddy [2], Ashish Wadhwani [3 4], V M Chandrashekar [5]

Affiliations + expand

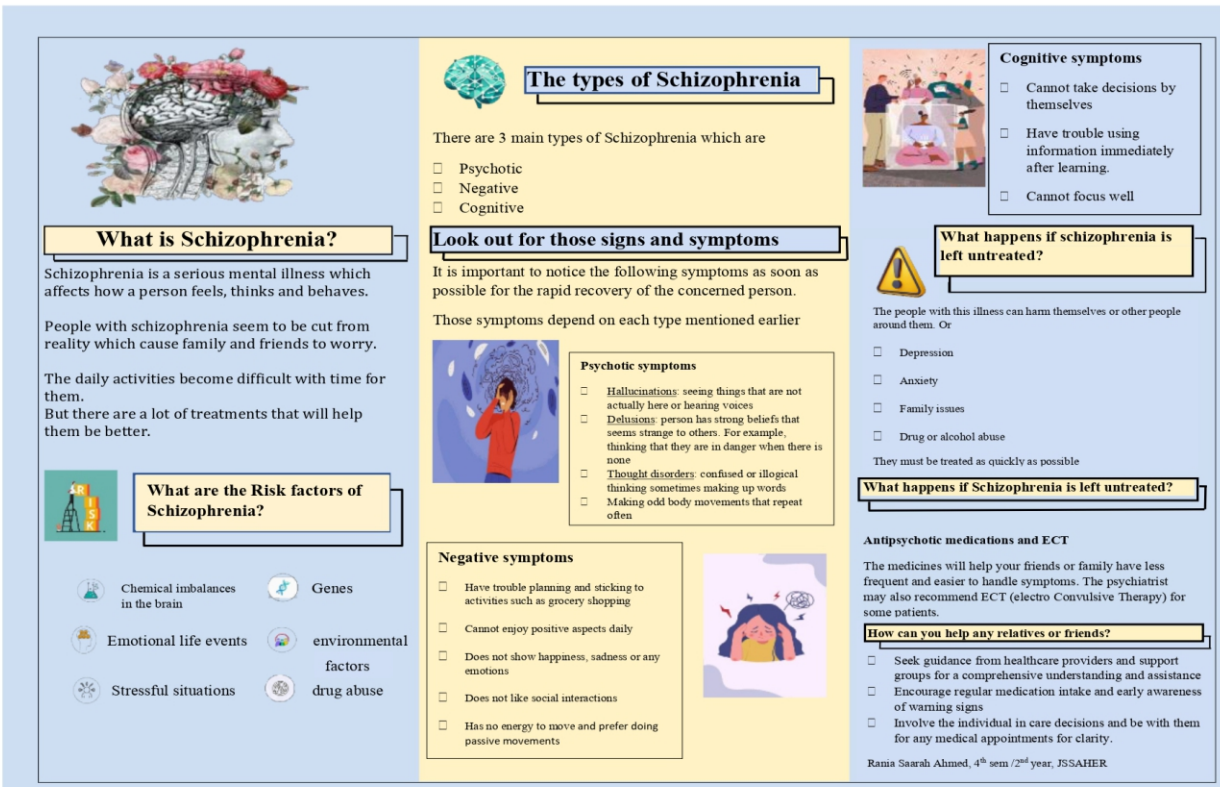
PMID: 38385495 DOI: 10.2174/0115680096280750240123054936

Abstract

Triple-negative Breast Cancer (TNBC), the most aggressive breast cancer subtype, is characterized by the non-appearance of estrogen receptor (ER), progesterone receptor (PR), and human epidermal growth factor receptor 2 (HER2). Clinically, TNBC is marked by its low survival rate, poor therapeutic outcomes, high aggressiveness, and lack of targeted therapies. Over the past few decades, many clinical trials have been ongoing for targeted therapies in TNBC. Although some classes, such as Poly (ADP Ribose) Polymerase (PARP) inhibitors and immunotherapies, have shown positive therapeutic outcomes, however, clinical effects are not much satisfiable. Moreover, the development of drug resistance is the major pattern observed in many targeted monotherapies. The heterogeneity of TNBC might be the cause for limited clinical benefits. Hence,, there is a need for the potential identification of new therapeutic targets to address the above limitations. In this context, some novel targets that can address the above-mentioned concerns are emerging in the era of TNBC therapy, which include Hypoxia Inducible Factor (HIF-1α), Matrix Metalloproteinase 9 (MMP-9), Tumour Necrosis Factor-α (TNF-α), β-Adrenergic Receptor (β-AR), Voltage Gated Sodium Channels (VGSCs), and Cell Cycle Regulators. Currently, we summarize the ongoing clinical trials and discuss the novel therapeutic targets in the management of TNBC.

Keywords: Triple negative breast cancer; hypoxia inducible factor-1α; matrix metalloproteinase-9; tumour necrosis factor-α; voltage gated sodium channels.; β-adrenergic receptor.

PATIENT INFORMATION LEAFLETS



What is Schizophrenia?

Schizophrenia is a serious mental illness which affects how a person feels, thinks and behaves.

People with schizophrenia seem to be cut from reality which cause family and friends to worry.

The daily activities become difficult with time for them.
But there are a lot of treatments that will help them be better.

What are the Risk factors of Schizophrenia?

- Chemical imbalances in the brain
- Genes
- Emotional life events
- environmental factors
- Stressful situations
- drug abuse

The types of Schizophrenia

There are 3 main types of Schizophrenia which are

- Psychotic
- Negative
- Cognitive

Look out for those signs and symptoms

It is important to notice the following symptoms as soon as possible for the rapid recovery of the concerned person.

Those symptoms depend on each type mentioned earlier

Psychotic symptoms

- Hallucinations: seeing things that are not actually here or hearing voices
- Delusions: person has strong beliefs that seems strange to others. For example, thinking that they are in danger when there is none
- Thought disorders: confused or illogical thinking sometimes making up words
- Making odd body movements that repeat often

Negative symptoms

- Have trouble planning and sticking to activities such as grocery shopping
- Cannot enjoy positive aspects daily
- Does not show happiness, sadness or any emotions
- Does not like social interactions
- Has no energy to move and prefer doing passive movements

Cognitive symptoms

- Cannot take decisions by themselves
- Have trouble using information immediately after learning.
- Cannot focus well

What happens if schizophrenia is left untreated?

The people with this illness can harm themselves or other people around them. Or

- Depression
- Anxiety
- Family issues
- Drug or alcohol abuse

They must be treated as quickly as possible

What happens if Schizophrenia is left untreated?

Antipsychotic medications and ECT

The medicines will help your friends or family have less frequent and easier to handle symptoms. The psychiatrist may also recommend ECT (electro Convulsive Therapy) for some patients.

How can you help any relatives or friends?

- Seek guidance from healthcare providers and support groups for a comprehensive understanding and assistance
- Encourage regular medication intake and early awareness of warning signs
- Involve the individual in care decisions and be with them for any medical appointments for clarity.

Rania Saarah Ahmed, 4th sem /2nd year, JSSAHER

Marburg Virus Disease

Definition:

It is a rare but severe haemorrhagic fever which affects people and non human primates

Background

Caused by an infection with Marburg virus or Ravn virus
Marburg viruses are zoonotic (Animal borne)

Countries affected

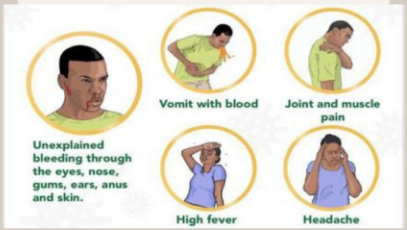
Mostly African countries

- Angola
- Kenya
- Uganda

WHAT YOU NEED TO KNOW ?

Mode of transmission

Signs and Symptoms



Treatment

No specific treatment for MVD
Maintain oxygen status and blood pressure, balance body fluid and electrolytes of patients

Diagnosis

- Firstly, the person should be isolated and health authorities shall be notified
- Antigen capture enzyme linked immunosorbent assay (Elisa) testing
- Polymerase chain reaction(PCR)
- IgM CAPTURE Elisa

Prevention

- Avoid contact with blood and body fluid of sick people
- Avoid contact with Egyptian rousette bats

Faculty of Health Sciences

School of Pharmacy

JSS Academy of Higher Education and Research, Mauritius

APPROVED CPD WEBINAR ON

"Pharmacist an Integral Part of the Healthcare System – Behind the Counter to Bedside"

Approved by the Pharmacy Council of Mauritius for TWO (2) CPD points

Date: 26th March, 2024 Time: 05:00 PM – 08:00 PM (MUT)

PATRONS

Prof(Dr) PRAVEEN MOHADEB
CEO and Vice-Chancellor, JSSAHER, Mauritius

Prof(Dr) B SURESH
Pro-Chancellor and Director(TED) JSSAHER, Mysuru

RESOURCE PERSON

PROFVARSHABANGALEE
Universityof KwaZulu-Natal South Africa

PROFFRASIAOOSTHUIZEN
Universityof KwaZulu-Natal South Africa

PROFNEELAVENI PADAYACHEE
Universityof the Witwatersrand South Africa

CONVENOR

Prof(Dr) ASHISHWADHWANI
Head, Faculty of Health Sciences
Dean, School of Pharmacy
JSSAHER, Mauritius

COORDINATOR

Dr KHAYATI MOUDGIL
Assistant Professor
School of Pharmacy
JSSAHER Mauritius

Learning Objectives:

- Understanding the role of Pharmacists in healthcare and pharmacy practice
- Optimizing patient care - Future pharmacist roles
- Innovating the pharmacy practice

05:00 PM	Welcome Address and about the Webinar	Prof (Dr) Ashish Wadhwani
05:15 PM	Opening Remarks	Prof (Dr) Praveen Mohadeb
05:30 PM	Pharmacist an integral part of the Healthcare system - Behind the Counter to Bedside	Prof Varsha Bangalee
		Prof Frasia Oosthuizen
		Prof Neelaveni Padayachee
07:30 PM	Q & A Session and Closure	Ms TAN WEE Angeli Sophia Student Representative

Click the below link for registration:

https://us06web.zoom.us/webinar/register/WN_kfQ63WotS4OlQH0smoYA

E-certificate will be issued to all the attendees

For more information visit www.jssaher.edu.mu or call on +230 57130426/57179041

Faculty of Health Sciences

School of Pharmacy

JSS Academy of Higher Education and Research, Mauritius

APPROVED CPD WEBINAR ON

Mindful Eating: Cultivating the Relationship with Food in Today's "Fast-life: Fast-food and My Health, My Right" Era With Special Emphasis on Obesity and Diabetes

Approved by the Pharmacy Council of Mauritius for ONE (1) CPD point

Date: 22th April, 2024 Time: 05:00 PM – 06:00 PM (MUT)

RESOURCE PERSON

Dr (Mrs) SHILPA JOSHI
Director, Mumbai Diet and Health Centre, India

PATRONS

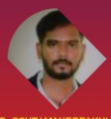
Prof(Dr) PRAVEEN MOHADEB
CEO and Vice-Chancellor, JSSAHER, Mauritius

Prof(Dr) B SURESH
Pro-Chancellor and Director(TED) JSSAHER, Mysuru

CONVENOR

Prof(Dr) ASHISHWADHWANI
Head, Faculty of Health Sciences
Dean, School of Pharmacy
JSSAHER, Mauritius

COORDINATOR



Dr GOUTHAM YERRAKULLA
Assistant Professor
School of Pharmacy
JSSAHER, Mauritius

Learning Objectives:

- Basic eating guidelines on obesity and diabetes
- Patterns of nutrient-rich food
- Tips on a wholesome diet

05:00 PM	Welcome Address and about the Webinar	Prof (Dr) Ashish Wadhwani
05:05 PM	Opening Remarks	Prof (Dr) Praveen Mohadeb
05:10 PM	Mindful eating	Dr (Mrs) Shilpa Joshi
06:00 PM	Q & A Session and Closure	Ms Zeenath Bhatoo Student Representative

Click the below link for registration:

https://us06web.zoom.us/webinar/register/WN_H4atrcwbQPqYJS6IDA

E-certificate will be issued to all the attendees

For more information visit www.jssaher.edu.mu or call on +230 57130426/5717904


JSS ACADEMY OF HIGHER EDUCATION AND RESEARCH MAURITIUS
A Degree Awarding Institution registered with the Higher Education Commission, Mauritius
WORLD HEALTH DAY 2024
"My health, My right"
5th April 2024
09:30 AM – 10:30 AM
Chief Guest
Mrs Aneeta Ghoorah
Ombudsperson for Children
Mauritius
Guest of Honor
Mr Siddique Khodabocus
Pharmacy Council of Mauritius
Mauritius
Yoga & Mindful Meditation
Ms Sowmya
Indira Gandhi Centre for Indian Culture (IGCIC),
11:15 AM to 12:15 PM
For Invited Guests Only
JSS ACADEMY
Droopnath Lamphust St, Vacoas Phoenix
6th April 2024
10:00 AM – 02:00 PM
FREE Health Check Up
Breast Cancer Screening
Complete Blood Count (CBC)
Body Fat
Eye Check-up
Ear Check-up
Dental Check-up and Oral Care Tips
Blood Glucose Level
Blood Pressure
Body Mass Index (BMI)
Patient Guidance
Mauritius
22nd April 2024
05:00 PM – 06:00 PM
ONLINE CPD for 1 Credit Points approved by Pharmacy Council of Mauritius
Mindful Eating: Cultivating the Relationship with Food in Today's "Fast-life: Fast-food And My Health, My Right" Era, with Special Emphasis on Obesity and Diabetes
By Dr (Mrs) Shilpa Joshi
Director, Mumbai Diet and Health Centre, India
For more information visit www.jssaher.edu.mu or call on +230 57128527 / 57179041

For Clarifications/Feedback, Write

To:

The Chief Editor

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