

**JSS  
ACADEMY  
OF HIGHER  
EDUCATION  
AND RESEARCH**  
MAURITIUS

*A degree awarding institution registered with  
the Higher Education Commission, Mauritius*



**JSS Health & Education  
Newsletter  
Issue XIV  
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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 among the top 25 institutions ranked by National Institutional Ranking Framework, Government of India and ranked 1<sup>st</sup> in the World for Sustainable Development Goal 3 – Good Health & Well-being by Times Higher Education Impact Ranking 2024. Carrying the legacy of JSSAHER Mysuru, JSSAHERM entered the international ranking for the first time and has been ranked in the band of 81-100 in Times Higher Education and Sub-Saharan Africa University Ranking 2024.

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.

# JSS Health & Education Newsletter

## MAY - AUGUST 2025

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Message from the Hon. Dr Arvin Boolell, GOSK

Minister of Agro-Industry, Food Security, Blue Economy and Fisheries

It gives me immense pleasure to extend my warmest congratulations to the JSS Academy of Higher Education and Research, Mauritius, on the release of the Fourteenth Edition of the JSSAHERM Newsletter – “Health & Education.”

This commendable initiative provides a vital platform for sharing knowledge, scientific research, and innovative perspectives in the ever-evolving fields of health, education, and pharmaceutical sciences. It is particularly heartening to note the active participation of each and everyone in contributing to this publication. Such academic engagement not only fosters a culture of curiosity and inquisitiveness but also empowers the next generation of health professionals to play a meaningful role in building a healthier, more resilient society.

As Minister responsible for sectors so closely interlinked with public health and national development—namely Agro-Industry, Food Security, Blue Economy and Fisheries—I firmly believe that interdisciplinary collaboration between health, agriculture, and environmental sciences is key to addressing the complex challenges of our time. Initiatives like this newsletter are instrumental in reinforcing this shared vision by promoting evidence-based practices and public awareness.

I commend the editorial team for their dedication and extend my best wishes to all contributors. May this edition inspire continued excellence in education, research, and service to our communities.

Dr the Hon. Arvin Boolell, GOSK

Minister of Agro-Industry, Food Security, Blue Economy and Fisheries



# Bone Health: A Lifelong Foundation for Well-Being

Bone health is fundamental to overall health and quality of life. Bones not only provide structural support and protection for vital organs but also serve as a reservoir for essential minerals such as calcium and phosphorus. Maintaining bone strength is crucial across all ages, particularly in preventing disorders like osteoporosis, fractures, and mobility impairments later in life. Human bones are dynamic, living tissues composed of a matrix primarily made of collagen and mineral deposits, mainly calcium phosphate. The skeleton undergoes continuous remodeling—a process involving bone resorption by osteoclasts and formation by osteoblasts. This remodeling enables the repair of micro-damages and the adaptation of bone structure to mechanical stress [1].

## Determinants of Bone Health

Several factors influence bone strength and density:

**Nutrition:** Adequate intake of calcium and vitamin D is essential for bone mineralization. Calcium supports bone structure, while vitamin D enhances calcium absorption in the gut [2]. Dairy products, green leafy vegetables, and fortified foods are primary sources of calcium, while vitamin D is synthesized in the skin upon sun exposure.

**Physical Activity:** Weight-bearing and resistance exercises stimulate bone formation by exerting stress on the skeletal system. Regular physical activity during childhood and adolescence is particularly critical in attaining peak bone mass [3].

**Hormonal Balance:** Estrogen and testosterone play a key role in maintaining bone density. A drop in estrogen levels during menopause significantly increases the risk of osteoporosis in women [4].

**Lifestyle Factors:** Smoking, excessive alcohol consumption, and sedentary behavior negatively affect bone health. Moreover, excessive caffeine intake has been associated with reduced calcium absorption [5].

## Bone Health Across the Lifespan

**Childhood and Adolescence:** These are critical periods for building bone mass. Achieving optimal peak bone mass by early adulthood is one of the best defenses against osteoporosis [6].  
**Adulthood:** Bone remodeling continues, but the rate of formation gradually slows. Adequate nutrition, lifestyle, and regular screening for risk factors are key to maintenance.

**Older Adults:** After the age of 50, bone loss accelerates, particularly in postmenopausal women. Prevention strategies include pharmacological interventions, fall prevention measures, and supplementation as advised by healthcare professionals [7].

## Prevention and Monitoring

Bone Mineral Density (BMD) testing using dual-energy X-ray absorptiometry (DEXA) is the standard for evaluating bone strength. Preventive healthcare measures and early diagnosis can significantly reduce the burden of fractures and associated disabilities [8].

## Conclusion

Bone health is a crucial yet often overlooked component of lifelong wellness. Investing in proper nutrition, physical activity, and preventive care from early life stages significantly lowers the risk of fractures and bone-related diseases in later years. A proactive, multidisciplinary approach is vital for preserving skeletal health and ensuring functional independence throughout life.

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1. Raggatt LJ, Partridge NC. Cellular and molecular mechanisms of bone remodeling. *J Biol Chem*. 2010;285(33):25103–8.
2. Weaver CM, Gordon CM, Janz KF, et al. The National Osteoporosis Foundation's position on peak bone mass development and lifestyle factors. *Osteoporos Int*. 2016;27(4):1281–386.
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7. Watts NB, Bilezikian JP, Camacho PM, et al. American Association of Clinical Endocrinologists Medical Guidelines for clinical practice for the diagnosis and treatment of postmenopausal osteoporosis. *Endocr Pract*. 2010;16(Suppl 3):1–37.
8. Kanis JA, McCloskey EV, Johansson H, et al. European guidance for the diagnosis and management of osteoporosis in postmenopausal women. *Osteoporos Int*. 2013;24(1):23–57.

**Dr Khayati Moudgil**  
**Editor-in-Chief**



# Benefits and Drawbacks of Importing Foreign Pharmacists to Mauritius

The Mauritian healthcare system is facing a crucial decision regarding the importation of foreign pharmacists. While this move may address certain staffing shortages, it is essential to weigh the benefits against the potential drawbacks.

## Benefits of Importing Foreign Pharmacists

1. **Improved Access to Healthcare Services:** Foreign clinical pharmacists can ensure that patients have access to essential healthcare services, particularly in government hospitals and clinics.
2. **Enhanced Quality of Care:** Clinical foreign pharmacists can bring new skills, knowledge, and perspectives to the Mauritian healthcare system, ultimately improving the quality of care provided to patients.
3. **Better Patient Outcomes:** With more clinical pharmacists available, patients can receive more personalized attention, improved medication management, and enhanced health outcomes.

## Drawbacks of Importing Foreign Pharmacists

1. **Integration Challenges:** Foreign pharmacists will face difficulties integrating into the Mauritian healthcare system, including adapting to local regulations, protocols, and cultural differences.
2. **Language Barriers:** Language differences may pose a challenge, particularly if foreign pharmacists are not fluent in languages commonly spoken in Mauritius.
3. **Registration and Licensing:** Foreign pharmacists will need to meet the registration and licensing requirements of the Pharmacy Council of Mauritius.
4. **Job Market Implications:** The influx of foreign pharmacists may have implications for local pharmacists, including potential job competition and changes to the job market.
5. **Cultural and Social Challenges:** Foreign pharmacists will likely face cultural and social challenges, including adapting to local customs and ways of life.
6. **Unregulated Growth of Retail Pharmacies:** The influx of foreign pharmacists may lead to an unregulated growth of retail pharmacies across the island, which could be challenging for the Pharmacy Board to control and regulate.
7. **Downward Pressure on Salaries:** The increased supply of pharmacists may lead to a decrease in salaries, potentially affecting the livelihoods of local pharmacists.
8. **Closure of Existing Retail Pharmacies:** Some existing retail pharmacies may need to close, resulting in job losses for dispensers and pharmacists.
9. **Risk of Illegal Practice:** The influx of foreign pharmacists may also increase the risk of illegal practice of pharmacy.
10. **Impact on Rural and Remote Pharmacies:** The growth of chain pharmacies may threaten the viability of low-income retail pharmacies in rural and remote areas.



## Conclusion

While importing foreign clinical pharmacists can have benefits for patient care in government hospitals and clinics, the drawbacks of importing foreign pharmacists to work in the retail and wholesale sectors may outweigh the benefits. The potential risks to the job market, salaries, and regulation of pharmacies, as well as the potential impact on rural and remote areas, need to be carefully considered. A balanced approach that takes into account the needs of both patients and local pharmacists is essential to ensure the sustainability of the Mauritian healthcare system.

**Mr Arshad Saroar**  
**Senior Pharmacist**



# Shilajeet: The Ancient Resin Reawakening Modern Pharmaceuticals

Shilajeet, also known as Shilajit, is a sticky, tar-like substance formed by the slow decomposition of plant and microbial matter trapped in mountainous rock crevices over centuries. Historically employed in Ayurvedic medicine as a rejuvenator and "destroyer of weakness," this resin contains fulvic acid, humic substances, and various minerals that contribute to its therapeutic properties. The current surge in scientific interest aims to validate and harness these properties within modern pharmaceutical frameworks.

## Pharmacological Properties

### 1. Antioxidant and Adaptogenic Effects

The principal bioactive component, fulvic acid, exhibits potent antioxidant capabilities by scavenging free radicals and mitigating oxidative stress. This mechanism underpins Shilajeet's traditional use for combating fatigue and promoting overall vitality. Enhancement of mitochondrial function has also been reported, suggesting a role in energy metabolism and cellular health.

### 2. Neuroprotective Potential

Emerging studies highlight Shilajeet's ability to inhibit tau protein aggregation, a pathological hallmark of Alzheimer's disease, thereby offering neuroprotection and cognitive benefits. These findings support its application in managing neurodegenerative disorders.

### 3. Anti-inflammatory and Immunomodulatory Actions

Shilajeet demonstrates significant anti-inflammatory effects by downregulating pro-inflammatory cytokines and modulating immune responses. Such properties hold promise for therapeutic use in autoimmune diseases, chronic inflammation, and possibly oncological conditions.

## Challenges in Pharmaceutical Development

The heterogeneity of Shilajeet composition, influenced by geographical and environmental factors, complicates the standardization process. Furthermore, contamination with heavy metals in unprocessed samples poses safety risks. Efforts are underway to develop purified, standardized extracts and novel delivery systems, including capsules and nano formulations, to ensure efficacy and safety for clinical use.

## Conclusion and Future Perspectives

Shilajeet exemplifies the bridge between traditional knowledge and contemporary pharmacology. Its diverse bioactivities merit further clinical investigation to establish therapeutic protocols. As research advances, Shilajeet may emerge as a valuable natural product in pharmaceuticals and nutraceuticals, especially in anti-aging, neuroprotection, and immune support domains.

## References:

1. <https://pubmed.ncbi.nlm.nih.gov/17533656/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3296184/>
3. <https://doi.org/10.1016/j.jep.2012.05.047>

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# Hutchinson-Gilford Progeria Syndrome: A Rare Childhood Aging Disorder

Hutchinson-Gilford Progeria Syndrome (HGPS), commonly known as Progeria, is a rare and fatal genetic condition that causes children to age rapidly, beginning in early childhood. Although children with HGPS typically appear normal at birth, symptoms start to emerge between 9 and 24 months of age, including severe growth delays, hair loss, joint stiffness, and an aged appearance of the skin.

## What Causes Progeria?

HGPS is caused by a mutation in the LMNA gene, which encodes lamin A, a crucial protein that supports the structure of the cell nucleus. The mutation leads to the production of an abnormal protein called progerin. Progerin destabilizes the nuclear envelope, causing cellular damage and premature cell death, which manifests as accelerated aging in affected children.

Unlike many genetic disorders, HGPS is almost always the result of a new mutation and is not inherited from the parents. The condition is extremely rare, occurring in approximately 1 in 4 million newborns worldwide. For families with one affected child, the risk of having another child with HGPS is slightly increased due to a phenomenon called mosaicism, where a parent carries the mutation in a small proportion of cells without showing symptoms.

## Symptoms and Clinical Features

Children with Progeria develop a distinctive appearance characterized by:

1. Prominent eyes and a small, beaked nose
2. Thin lips and a small chin
3. Hair loss (alopecia), including scalp hair, eyebrows, and eyelashes
4. Loss of subcutaneous fat leading to a thin, aged look
5. Joint stiffness and skeletal abnormalities
6. Prominent veins on the scalp and other areas

## Life-Threatening Complications

The most serious complications of HGPS arise from accelerated cardiovascular disease. Children develop severe arteriosclerosis (hardening of the arteries) early in life, which significantly increases the risk of heart attacks, strokes, and other vascular problems. These complications are the leading cause of death, with the average life expectancy around 14 to 15 years.

## Advances in Treatment

Until recently, there was no effective treatment for Progeria, and care focused on managing symptoms and complications. However, in 2020, the U.S. Food and Drug Administration approved the drug **Zokinvy (lonafarnib)**, a farnesyltransferase inhibitor originally developed for cancer treatment. Lonafarnib works by blocking the farnesylation process of progerin,

reducing its toxic effects on cells. Clinical trials have shown that lonafarnib can modestly improve weight gain and increase survival by approximately 1.6 years on average.

Research continues to explore additional therapies aimed at clearing progerin, preventing its production, or mitigating its cellular effects, offering hope for further improvements in outcomes.

### References:

1. <https://medlineplus.gov/genetics/condition/hutchinson-gilford-progeria-syndrome/>
2. <https://rarediseases.org/rare-diseases/hutchinson-gilford-progeria/>
3. <https://my.clevelandclinic.org/health/diseases/17850-progeria>

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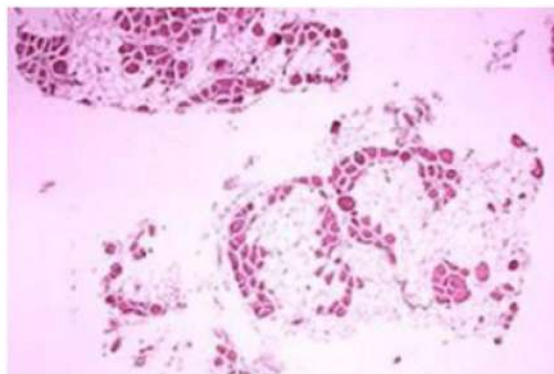


# Duchenne Muscular Dystrophy

DMD is a genetic disorder caused by mutations in the dystrophin gene located on the X chromosome, which leads to the absence or severe deficiency of dystrophin, a protein crucial for maintaining muscle fiber integrity. This disorder is followed by an X-linked recessive inheritance pattern which ultimately results in most of the cases being inherited from the mother and in some cases from a new mutation.

It is the most common and severe form of muscular dystrophy in children, primarily affecting boys with an incidence of about 1 in every 3,500 to 5,000 male births worldwide. However, it is considerably rarer in females, occurring in approximately 1 in 50,000,000 live female births.

At the cellular level there is an extensive replacement of muscle fibers by fat cells. The muscles that are affected initially are those in the thighs and the pelvis ultimately extending to the arm and shoulders. Therefore, in most cases by the age of 12, the patients are unable to walk due to loss of muscles and increase in fat content. Due to increased weight in the pelvic region, scoliosis is common in most individuals.

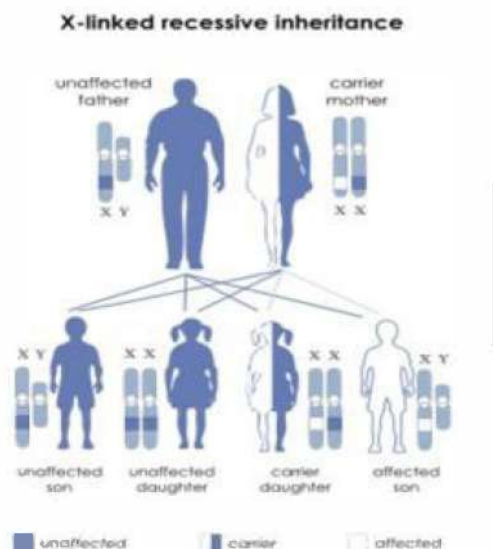


*Microscopy of cross-section of calf muscle from DMD patients*

DMD is caused by the mutation of the dystrophin gene which is located on the arm locus Xp21 of the X chromosome. The mutations can be both inherited or spontaneously occur during germline transmission. These cause a severe reduction in dystrophin which is crucial for connecting the active cytoskeleton of each muscle fiber to the underlying basal lamina (Extracellular matrix). It does so through the sarcoglycan complex which has a plethora of subunits. Due to the absence of dystrophin, excess calcium penetrates the sarcolemma. Ultimately the prolonged excess calcium can disrupt excitation-contraction coupling, the process by which nerve signals trigger muscle contraction, leading to increased fat content and fibrosis.

It is extremely rare in females; however, it can occur with an affected father and a carrier mother. The daughter of a carrier mother and an affected father will be affected or a carrier with equal probability, as she will always inherit the affected X-chromosome from her father and has a 50% chance of also inheriting the affected X-chromosome from her mother.





## Signs and Symptoms

1. Progressive muscle weakness and replacement with connective tissue or fat, starting in early childhood, typically recognized between ages 3 and 6. Muscles in the lower body typically those of hips, pelvic, thighs and calves and eventually it will progress to those in the shoulders, neck and then arms.
2. Calf muscle enlargement - Pseudohypertrophy.
3. Positive Gowers's Sign.
4. Increased difficulty in walking by the age of 12 and above.
5. By the age of 21, in most cases the patients become paralysed from the neck down.
6. Cardiomyopathy.
7. In late stages, it will progress to respiratory muscles which leads to respiratory impairment which can result in pneumonia.

DMD can be generally detected with high accuracy by genetic studies performed during pregnancy. In the DNA test, analysis of 79 exons of muscle-specific isoform of dystrophin gene can identify the exons which have mutated. If this method fails, a muscle biopsy is performed, examples include immunoblotting for dystrophin.

Since the last decade, treatment of DMD was aimed at managing the symptoms to maximise the quality of life of the patients. However, since late 2019 till now major discoveries have been made to tackle this life-threatening disease. The list below consists of all the FDA-approved targeted treatment with individuals with DMD;

1. Vyondys 53 – An antisense oligonucleotide golodirsen. (2019)
2. Viltepso - An antisense oligonucleotide viltolarsen. (2020)
3. Amondys 45 – Casimersen (2021)
4. Agamree – Vamorolone (2023)
5. Elevidys – Delandistrogene moxeparvovec- Gene Therapy (2024)
6. Duvyzat – Givinostat (2024)

Conclusively, Duchenne muscular dystrophy is a severe X-linked genetic disorder causing progressive muscle degeneration due to dystrophin deficiency, leading to loss of mobility, cardiac and respiratory complications, and reduced lifespan. The current management focuses

on symptomatic control, slowing disease progression and improving quality of life of the patient.

### References:

1. <https://www.ncbi.nlm.nih.gov/books/NBK482346/>
2. <https://www.mda.org/disease/duchenne-muscular-dystrophy>
3. <https://my.clevelandclinic.org/health/diseases/23538-duchenne-muscular-dystrophy-dmd>

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# Fat Embolism Syndrome

Fat embolism syndrome (FES) is a rare but life-threatening condition that occurs when a fat macro globule enters the systemic circulation due to orthopedic trauma. When the fat particle enters the bloodstream, it blocks the blood flow which as a result affects the brain, lungs, skin and other areas. When the embolic fat macro globules pass the capillaries in the lungs and other sites, endothelial damage is produced resulting in respiratory failure, cerebral dysfunction and petechial rash. This can happen to anyone; however, males are more prone in developing this condition than females and this rarely occurs in children aged 0-9 years of age.

## Etiology

1. Fractures of long bones like femur, tibia, fibula
2. Orthopedic procedures like knee or hip replacement
3. Bone marrow biopsy
4. Non-traumatic conditions like acute pancreatitis, fatty liver, sickle cell anemia

## Pathophysiology

There are two main theories for the formation of fat emboli:

1. Mechanical theory: Fatty tissue gets release directly from the bone marrow to the systemic circulation following a trauma.
2. Biochemical theory: Inflammatory responses to trauma cause the release of free fatty acids from bone marrow into the venous system. This causes damage to capillary beds & elevated levels of free fatty acids is associated with hypoxia and lung inflammation as well.

## Symptoms

They usually occur 2-3 days after the major bone fracture or other traumas. They include:

1. Breathlessness: vague pain in chest & depending on the severity this can progress to respiratory failure.
2. Fever: often exceeding 38°C with disproportionately high pulse rate.
3. Central Nervous system: it affects how the brain works causing headache, confusion, personality changes and makes patient unresponsive & disoriented. It also causes seizures/coma state.
4. Petechial rash: Small bruise-like spots on the skin due to capillaries burst. The spots appear on the head, neck, chest & arms.
5. Other symptoms include tachycardia, jaundice, vision changes, anemia & low blood oxygen saturation.

## Diagnostic tests

1. Imaging studies – X-rays, CT scans, MRI
2. Labs – fallen hemoglobin, fat demonstrated on blood clots, early thrombocytopenia
3. Other tests – ECG, skin biopsy



## Treatment

1. Management of FES consists of ensuring good arterial oxygenation.
2. Restrict fluid intake & use diuretics to minimize fluid accumulation in lungs ensuring circulation is maintained.
3. Maintaining intravascular volume as shock can aggravate lung injury caused by FES. Albumin is recommended for volume resuscitation to balance electrolyte solution & also restore blood volume, decreasing extent of lung injury.
4. Mechanical ventilation is required to maintain arterial oxygenation.
5. As for drugs to be used, more research is to be conducted to treat FES.

## Conclusion

Despite having an overall mortality rate of 5-15%, FES is a serious complication which occurs mainly due to long bone fracture causing respiratory distress. There is no specific diagnosis for treatment of FES, thus therapy is mostly directed in treating the acute respiratory distress syndrome (ARDS) and other organ systems affected by the fat embolization. Reports have shown that immediate operative fixation of long bone fractures have reduced incidence of FES.

## References:

1. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3665122/>
2. <https://my.clevelandclinic.org/health/diseases/23995-fat-embolism-syndrome>

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# Organoids: Accelerating Biotechnological Advances in Drug Screening

## Introduction

Organoids are tiny, lab-grown versions of human organs created from stem cells. These miniature structures closely mimic the function and complexity of real organs, making them invaluable tools in biotechnology. They are transforming how scientists study diseases and test new drugs, offering a faster, safer, and more reliable alternative to traditional methods. Organoids can be derived from a variety of sources, including pluripotent stem cells, specialized tissue cells, and even tumor tissue cells.

## Discovery of Organoids

The discovery of organoids traces back to advances in stem cell research and 3D cell culture techniques in the early 2000s. A major breakthrough occurred in 2009 when Hans Clevers and his team at the Hubrecht Institute developed the first intestinal organoids from adult stem cells. They demonstrated that these cells could self-organize and grow into miniature, functional versions of the intestinal lining that could self-renew over time. This pioneering work opened the door to creating organoids of other organs and has since revolutionized biomedical research by providing a new way to model human tissues in the lab.

## Organoid Screening Workflow

1. **2D Pre-Culture:** Cells from tissues or iPSCs (induced pluripotent stem cells) are grown in flat dishes.
2. **3D Formation:** Cells are placed in 24-well plates to form 3D tissue-like organoids.
3. **Culturing:** Organoids are fed with fresh media at different stages.
4. **Monitoring:** Growth and tissue structure are regularly checked.
5. **Imaging:** 3D confocal imaging is used to study structure and drug effects.

## Organoids applications

### Brain Organoids:

Tiny lab-grown models of the brain that help scientists understand how the brain develops, what causes brain disorders, and how different drugs affect brain cells. These organoids even have neurons that connect and communicate like in a real brain.

### Intestinal (Gut) Organoids:

Mini versions of the intestine used to study stomach and gut diseases. They help test how safe certain drugs are for the digestive system and how germs interact with our gut. These organoids can even absorb nutrients like our real intestines.

### Liver Organoids:

Small liver-like structures grown in the lab that are useful for studying liver diseases. They can also show how the liver processes drugs and toxins-just like a real liver.

### Cancer Organoids:

Made from actual tumor samples from patients, these organoids are used to test how well different treatments might work. This helps doctors choose the best therapy for each person.

### Lung Organoids:

Used to explore lung diseases like cystic fibrosis and see how inhaled medicines affect the lungs.

<b>Benefits of using Organoids</b>	<b>Challenges of using organoids</b>
Help study diseases and test medicines	Hard to control their growth and development
Made from patient's own cells	Difficult to produce in large amounts
Reduced animal use for experimentation	Missing blood supply, so may not function fully

## Conclusion

Organoids are changing the future of medicine by improving how we study diseases and test drugs. They offer hope for personalized treatments tailored to each patient and may one day help grow tissues to replace damaged organs, reducing the need for transplants.

Companies like Hubrecht Organoid Technology in the Netherlands are leading advances by building organoid collections that speed up drug discovery and cancer research. Studies show organoids can improve drug response predictions by up to 80%, making treatments safer and more effective. With growing global interest, organoids will continue to drive important breakthroughs in healthcare.

## References:

1. National library of medicine, NIH
2. STEMCELL Technologies. (n.d.). Improving drug discovery with organoids.
3. Sasai, Y., & Clevers, H. (Eds.). (2022). Organoid technology for disease modelling and personalized treatment.

Written by:

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**2<sup>nd</sup> Year, BSc Biotechnology**



## FDA Approved Drugs

S.N.	Drug	Indication	Date of Approval
1	Avmapki Fakzynja Co-Pack (avutometinib and defactinib, co-packaged) Capsules/Tablets	Treatment for KRAS-mutated recurrent low-grade serous ovarian cancer	08/05/25
2	Emrelis (telisotuzumab vedotin-tllv) Lyophilized Powder for Injection – formerly Teliso – V	Treatment of non-squamous non-small cell lung cancer with high c-Met protein overexpression	14/05/25
3	Nuvaxovid (COVID -19 Vaccine, Adjuvanted) Injectable Suspension – formerly Novavax COVID – 19 Vaccine	To prevent coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)	16/05/25
4	Brekiya (dihydroergotamine mesylate) Injection	For acute treatment of migraine and the acute treatment of cluster headaches	14/05/25
5	Starjemza (ustekinumab-hmny) Injection	Treatment of plaque psoriasis, psoriatic arthritis, Crohn's disease, and ulcerative colitis	22/05/25
6	Yutrepia (treprostinil) Inhalation Powder – formerly LIQ861	Treatment of pulmonary arterial hypertension and pulmonary hypertension associated with interstitial lung disease	23/05/25
7	Khindivi (hydrocortisone) Oral Solution – formerly ET-400	Indicated as replacement therapy in pediatric patients 5 years of age and older with adrenocortical insufficiency	28/05/25
8	Tryptyr (acoltremon) Ophthalmic Solution	Treatment for signs and symptoms of dry eye disease	28/05/25
9	mNEXSPIKE (COVID-19 Vaccine, mRNA) Injection	To prevent COVID-19 caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)	30/05/25
10	Widaplik (amlodipine, indapamide and telmisartan) Tablets – formerly GMRx2	Treatment of hypertension, including initiation of treatment	05/06/25
11	Xifyrm (meloxicam) Injection	Use in the management of moderate-to-severe pain	05/06/25
12	Enflonsia (clesrovimab-cfor) Injection	For the prevention of RSV lower respiratory tract disease in neonates and infants who are born during or entering their first RSV season	09/06/25
13	Ibtrozi (taletrectinib) Capsules	Treatment of adult patients with locally advanced or metastatic ROS1-positive non-small cell lung cancer	11/06/25
	Zusduri (mitomycin) for	Treatment of low-grade intermediate-	

14	Intravesical Solution – formerly UGN-102	risk non-muscle invasive bladder cancer (LG-IR-NMIBC)	12/06/25
15	Andembry (garadacimab-gxii) Injection	To prevent attacks of hereditary angioedema in adult and pediatric patients aged 12 years and older	16/06/25
16	Arynta (lisdexamfetamine dimesylate) Oral Solution	Treatment of ADHD and binge eating disorder	16/06/25
17	Yeztugo (lenacapavir) Tablets and Injection	For pre-exposure prophylaxis (PrEP) to reduce the risk of sexually acquired HIV-1	18/06/25
18	Harliku (nitisinone) Tablets	Indicated for the reduction of urine homogentisic acid in adult patients with alkaptonuria	19/06/25
19	Zegfrovy (sunvozertinib) Tablets	Treatment of locally advanced or metastatic non-small cell lung cancer patients with EGFR exon 20 insertion (exon20ins) mutations	02/07/25
20	Lynozytic (linvoseltamab-gcpt) Injection	Treatment of relapsed or refractory multiple myeloma	02/07/25
21	Ekterly (sebetralstat) Tablets	Treatment of hereditary angioedema attacks in adults and pediatric patients aged 12 years and older	03/07/25
22	Kirsty (insulin aspart-xjhz) Injection	Indicated to improve glycemic control in adults and pediatric patients with diabetes mellitus	15/07/25
23	Anzupgo (delgocitinib) Topical Cream	Treatment of chronic hand eczema	23/07/25
24	Vostally (ramipril) Oral Solution	Treatment of hypertension and to reduce the risk of cardiovascular events	23/07/25
25	Sephience (sepiapterin) Oral Powder	Treatment of patients with phenylketonuria	28/07/25
26	Vizz (aceclidine) Ophthalmic Solution – formerly LNZ100	Treatment of presbyopia in adults	31/07/25
27	Modeyso (dordaviprone) Capsules	Treatment of diffuse midline glioma.	06/08/25
28	Hernexeos (zongertinib) Tablets	Treatment of non-squamous non-small cell lung cancer (NSCLC) with HER2 (ERBB2) tyrosine kinase domain activating mutations	08/08/25
29	Brinsupri (brensocatib) Tablets	Treatment of patients with bronchiectasis	12/08/25

Compiled by:

**Ms Laxshati Choony**  
**2<sup>nd</sup> Year, B Pharm**





# Drug Profile: Andembry

**Brand name:** Andembry

**Generic:** Garadacimab- gxii (also simplified to Garadacimab)

**Dosage form:** Single-dose prefilled autoinjector or syringe, 200 mg/1.2 mL SC

**Class:** Activated Factor XIIa (FXIIa) inhibitor, monoclonal antibody (IgG4  $\lambda$ )

**Indication:** For routine prevention of recurrent attacks of hereditary angioedema (HAE) in adults and adolescents aged 12 years and older.

## Clinical purpose:

Hereditary Angioedema (HAE) is a hereditary condition that often runs in families, but some people may not have a family history. It is a non-allergic disease that causes episodes of swelling and pain, known as HAE attacks. These attacks can cause swelling and pain in different parts of the body including hands and feet, face, eyelids, lips or tongue, voice box (larynx), which may make breathing difficult, genitals, stomach and intestine. Three types of HAE are known, based on the type of genetic defect and its effect on a protein that circulates in your blood, named C1 esterase inhibitor (C1-INH). A person can have low levels of C1-INH in the body (type I HAE), poorly functioning C1-INH (type II HAE), or HAE with normal functioning C1-INH (type III HAE). The last type is extremely rare. All three types of HAE can cause attacks.

These attacks are caused by excessive bradykinin, a peptide that increases vascular permeability (leaky blood vessels). Andembry's aims to prevent the attacks before they happen by blocking the earliest step in the bradykinin-forming pathway.

## Pharmacology:

Patients with hereditary angioedema have high levels of a substance called 'bradykinin', which causes blood vessels to widen and leak fluid into the surrounding tissue, leading to the swelling and inflammation seen in angioedema. In patients with type I and type II HAE, high levels of bradykinin are caused by low levels or poor functioning of a protein known as C1 esterase inhibitor. The active substance in Andembry, garadacimab, is a monoclonal antibody, a type of protein that has been designed to recognise and attach to FXIIa, which is a protein that triggers the production of bradykinin. By blocking FXIIa, Andembry prevents the production of bradykinin, which helps to prevent the swelling and related symptoms of angioedema.

## Pharmacokinetics:

### Absorption

Andembry is given by subcutaneous injection, with about **60% bioavailability**. It reaches peak blood levels around **5 days** after dosing, allowing for gradual and sustained absorption.

## Distribution

Once absorbed, Andembry distributes mainly within the extracellular fluid, with a volume of distribution around 6.5 liters. As a large monoclonal antibody, it remains mostly in the blood and interstitial spaces and specifically targets activated Factor XIIa, limiting extensive tissue penetration.

## Metabolism

Unlike small molecule drugs, Andembry is metabolized by proteolytic enzymes that break down the antibody into smaller peptides and amino acids throughout the body. It does not rely on liver enzymes for metabolism, which reduces the chance of interactions with other drugs processed by the liver.

## Excretion

The drug is not eliminated in its intact form through urine or feces. Instead, the metabolites resulting from proteolytic degradation are naturally recycled or excreted. Andembry has a long elimination half-life of about 21 to 24 days, enabling convenient once-monthly dosing while maintaining therapeutic levels.

## **Assessment of efficacy:**

The efficacy of Andembry has been demonstrated primarily through clinical trials involving patients with hereditary angioedema (HAE). In pivotal studies, such as the Phase III VANGUARD trial, Andembry significantly reduced the frequency of HAE attacks compared to placebo. Patients receiving Andembry experienced an approximately 89% reduction in the annualized rate of attacks, with about 62% of patients becoming completely attack-free during the treatment period. Additionally, long-term data showed that the majority of patients (over 90%) rated their response to treatment as “good” or “excellent” over extended periods (up to 14 months), indicating sustained benefit. The reduction in attacks also correlated with decreased use of on-demand rescue medications, fewer emergency visits, and overall improved quality of life. Clinical assessment of its efficacy includes monitoring the number, severity, and duration of HAE attacks, as well as patient-reported outcomes related to symptom control and daily functioning.

## **Contraindications:**

As per current FDA and EMA labeling, Andembry has no known absolute contraindications. However, there are some precautions and considerations to be aware of:

1. **Hypersensitivity Reactions:** Although not commonly reported, like all monoclonal antibodies, Andembry may cause allergic or hypersensitivity reactions. It should be discontinued if serious hypersensitivity occurs.
2. **Pregnancy and Lactation:** There are no adequate human data on the use of Andembry in pregnant or breastfeeding women. Use only if clearly needed and if the potential benefit justifies potential risks.
3. **Pediatric Use:** Safety and efficacy are established only in patients 12 years and older. It is not approved for children under 12.

## References:

1. [www.ema.europa.eu/en/medicines/human/EPAR/andembry](http://www.ema.europa.eu/en/medicines/human/EPAR/andembry).
2. [www.drugs.com/andembry.html](http://www.drugs.com/andembry.html).
3. [www.medicines.org.uk/emc/files/pil.100625.pdf](http://www.medicines.org.uk/emc/files/pil.100625.pdf).
4. [www.rarediseaseadvisor.com/disease-info-pages/hereditary-angioedema-treatment/#:~:text=Luconest,in%20both%20adults%20and%20adolescents](http://www.rarediseaseadvisor.com/disease-info-pages/hereditary-angioedema-treatment/#:~:text=Luconest,in%20both%20adults%20and%20adolescents)

Compiled by:

**Ms Toshtee Jankee**  
**3<sup>rd</sup> Year, B Pharm**



## Events' Corner

### **Event 1: World Health Day 2025**

A ceremony to celebrate the World Health Day 2025, was organized on 7 April 2025 at the JSS Academy of Higher Education and Research, Mauritius (JSSAHERM)

The Honourable Anil Kumar Bachoo, GOSK, Minister of Health & Wellness was the chief guest of the event. The Chairperson of Pharmacy Council of Mauritius Mr Siddique Khodabocus, the Chief Executive Officer and Vice Chancellor of JSSAHERM, Professor (Dr) Praveen Mohadeb; the Dean School of Pharmacy Prof (Dr) Ashish Wadhwani; the Registrar Mr Naveen K P, and other personalities were present. In his address, The Honorable Minister spoke about the recently unveiled Health Sector Strategic Plan 2025-2030 which encapsulates Government's vision and ambition for the coming years and promoting Mauritius as a destination for medical tourism. The Honorable Minister commended JSSAHERM's contributions to research in biotechnology, environmental sciences, and public health are positioning Mauritius as a leader in innovative healthcare solutions. The inclusion of MBBS program, will undoubtedly enhance the quality of healthcare delivery, strengthen research capabilities, and improve healthcare accessibility in the region.

Honorable Minister congratulated JSSAHERM for being the young education institution who participated in Times Higher Education Sub-Saharan Africa University Rankings 2024 and has been ranked in the band 81-100 in this ranking which is very close to the other public University locally. Also, to note that JSSAHERM stands number 1 in Mauritius for the criteria "student engagement" when compared to other universities and number 12 in the entire Africa. This ranking shows the dedication and commitment of JSSAHERM in the Education sector. The Honorable Minister mentioned that both Bachelor of Pharmacy and Doctor of Pharmacy programmes of JSSAHERM are not only accredited by Higher Education Commission of Mauritius but also pre accredited by Accreditation Council for Pharmacy Education, USA. This shows the dedication of JSS towards quality education.

The Honorable Minister also fondly recalled the interaction with the former Prime Minister of India, Shri Atal Bihari Vajpayee on bringing eminent Indian Institutions to Mauritius. This resulted in the establishment of JSS Academy, Mauritius in the year 2002. In his address, The Honorable Minister commended the JSSAHERM for graduating very good Engineers in the past and the Pharmacists now. The event commenced with a warm welcome address by Professor (Dr) Ashish Wadhwani, Head of Health Sciences. Following that, Professor (Dr) Praveen Mohadeb, CEO & VC delivered the opening remarks, setting the tone for the proceedings. He spoke about the journey of JSS Academy in Mauritius since its inception in 2006. He also mentioned that an investment of more than Rs 700 million in the infrastructure has been made and further an additional investment of Rs 500 million in the construction of 2 more floors on the Academic Block, construction of 3 Hostel blocks and construction of an Auditorium for the MBBS Programme.

The Honorable Minister also released the JSSAHERM "Health and Education" Newsletter Issue XIII Volume 5(1). The program concluded with a heartfelt vote of thanks presented by Mr. Naveen K. P, Registrar.



The Honorable Minister later unveiled plaque of **Mr Canayalall Seechurn SONAH Human Anatomy & Physiology Lab** in the presence of family members of Mr Canayalall Seechurn SONAH and other dignitaries.

The Honorable Minister visited the various facilities and laboratories on the campus and was very impressed with the facilities.





Title of the talk: Pharmacy in the Digital Age: How Technology is Transforming Pharmacy Practice by **Dr Deanne Mary Graham Johnston**, Senior Lecturer in Pharmacy Practice, University of KwaZulu-Natal, South Africa; Digital Medicine Society (DiMe), USA



# Faculty of Health Sciences

## School of Pharmacy

**JSS Academy of Higher Education and Research, Mauritius**

APPROVED CPD WEBINAR ON

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### Advances in Drug Delivery Technology; Pharmacy Practice in Digital Age; Artificial Intelligence: Changing the Perspective of Pharmacy

Approved by the Pharmacy Council of Mauritius for THREE (3) CPD Credit Points

PATRONS	RESOURCE PERSONS	CONVENOR
 <b>Prof (Dr)</b> <b>PRAVEEN MOHADES</b> CEO and Vice-Chancellor, ISAMER, Mauritius	<div style="text-align: center;"> <b>15<sup>th</sup> March 2025</b>  <b>9:30 AM</b>   <b>RECENT ADVANCES IN FORMULATIONS &amp; DRUG DELIVERY TECHNOLOGY</b> </div>  <b>Dr Ravi Mahalingam</b> Founder/CEO, ResonPharma Ltd., Newark, CA, USA	 <b>Prof (Dr) B SURESH</b> Pro-Chancellor and Director ITIS ISAMER, Mysuru
 <b>Prof (Dr)</b> <b>ASHISH WADHAVANI</b> Head, Faculty of Health Sciences Dean, School of Pharmacy ISAMER, Mauritius	<div style="text-align: center;"> <b>5<sup>th</sup> April 2025</b>  <b>9:30 AM</b>   <b>ARTIFICIAL INTELLIGENCE IN PHARMACY – IS FUTURE OF PHARMACISTS AT RISK?</b> </div>  <b>Dr Karri V V S Narayana Reddy</b> Asst. Professor and Research Coordinator, JSS College of Pharmacy, Ooty, India	
	<div style="text-align: center;"> <b>9<sup>th</sup> April 2025</b>  <b>4:00 PM</b>   <b>PHARMACY IN THE DIGITAL AGE: TRANSFORMATION OF PHARMACY PRACTICE</b> </div>  <b>Dr Deanne Mary Graham Johnston</b> Senior Lecturer in Pharmacy Practice, University of KwaZulu-Natal, South Africa Digital Medicine Society (DSMed), USA	

E-certificate will be issued to all the attendees


<https://us06web.zoom.us/j/5840229547?pwd=cnB0bDRhbnVlJTJEcmlwZWlnZjZlQmF1aUo.>

For more information visit [www.jssaher.edu.mu](http://www.jssaher.edu.mu) or call on +230 57130426 / 54896172

## **Event 2: Health Camp**

### **Healthcare Beyond the Campus: JSSAHERM WHD Health Camp at Cascavelle**

To mark the conclusion of World Health Day 2025 celebrations, JSS Academy of Higher Education and Research, Mauritius hosted a Free Health Check-up Camp on Saturday, 12th April 2025, at Cascavelle Shopping Mall. The camp provided the public with access to a wide range of health screenings, including eye and ear examinations, Complete Blood Count (CBC), Body Fat Analysis, Body Mass Index (BMI), Blood Pressure monitoring, and assessment of heart and respiratory rates. Attendees also benefited from personalized nutritional guidance, emphasizing the role of diet and lifestyle in the prevention and management of health conditions.

Beyond clinical services, the event carried an engaging and vibrant atmosphere. The welcoming ambiance at Cascavelle drew families, shoppers, and community members alike, who actively participated in health awareness activities while enjoying an approachable and interactive learning experience. To encourage involvement, interactive quizzes were held for individuals undergoing check-ups. Winners received health-related prizes such as glucometers, multivitamins, and oral rehydration solutions (ORS). A special radio quiz segment further broadened outreach, with gift vouchers sponsored by MedActiv awarded to successful participants.

The initiative was supported by esteemed partners, including MedActiv, Lions Club Albion, Spectra Eye, Trident Health Care, Soza Health, Biswas Traders, Sihha Medical Centre, and Intercare Pharmacy, whose collaboration was instrumental in making the program a success.

A notable highlight was the contribution of JSSAHER students, whose enthusiasm and dedication brought energy to the camp. Their participation not only ensured smooth execution but also provided them with valuable hands-on learning in public health and community engagement. The health camp witnessed an encouraging turnout, with a lot of individuals benefitting from the free services provided.

The camp reflected JSSAHER's commitment to bridging education with service, empowering students while contributing to the well-being of the wider community. It successfully combined health awareness, preventive care, and experiential learning, reaffirming the institution's role in shaping future healthcare professionals and strengthening community health initiatives in Mauritius.

At JSS, we proudly uphold the belief that “Learning Never Stops”



### **Event 3: Awareness, Action, Prevention: HIV Initiative**

JSSAHERM hosted an HIV and AIDS awareness session on 17 April 2025, with active participation from students, aimed at informing and empowering the campus community. The event provided an interactive platform for students and staff to learn about HIV prevention, testing, and sexual health. The expert speakers delivered presentations on HIV transmission, safe sexual practices, and the significance of early testing and timely treatment, fostering informed discussions and emphasizing the importance of knowledge in safeguarding health. Following the talks, participants had the opportunity to undertake confidential HIV testing on-site in a supportive, stigma-free environment. Attendees also received condoms and educational materials, providing practical resources to encourage responsible health choices.

For students, the initiative offered more than academic learning; it served as an avenue to engage in health promotion and community service. By integrating education with practical testing and prevention resources, JSSAHERM continues to cultivate a campus culture that prioritizes awareness, responsibility, and proactive health practices. Such initiatives not only reinforce individual health management but also contribute to broader public health objectives in Mauritius, demonstrating how informed communities can actively participate in HIV prevention and support.





#### **Event 4: Basava Jayanthi Celebration**

The 892<sup>nd</sup> Basava Jayanthi was organized on 11<sup>th</sup> May 2025 at JSSAHERM by Mallige Kannada Balaga, Mauritius, Rashtriya Basava Dal (Central Committee, Bengaluru), Guru Basava Foundation, Hyderabad in cooperation with JSS Academy of Higher Education and Research Mauritius and celebrated with grandeur and spiritual fervour, bringing together dignitaries, devotees and cultural representatives from Mauritius and India. The event commemorated the life and teachings of Jagadguru Basavanna, the 12th-century philosopher, social reformer and spiritual leader who laid the foundation for a society based on equality, devotion and moral righteousness.

#### **Program Highlights**

The program was graced by the esteemed presence of the Chief Guest: Pujya Shri Jagadguru Dr. Channabasavananda Swamiji, Sri Channa Basaveswara Jnanapeetha, Basava Gangotri, Bengaluru, President of the Function: Prof Dr Praveen Mohadeb, Vice-Chancellor and CEO, JSSAHER, Mauritius, Presiding Guest: Dr. Sunil Patil. The event commenced with the hoisting of the Basava Flag by Mr. Shivasharanappa Patil, Rashtriya Basava Dal, Bidar. A welcome address to all dignitaries, guest of honour and others and highlighted the significance of Basavanna's teachings, especially his principles of Kayakave Kailasa (Work is Worship) and the Anubhava Mantapa (platform for spiritual discourse) by Prof. Dr. Jaishree Vaijanathappa, Head, Faculty of Life Sciences, JSSAHER Mauritius. Chief Guest Pujya Swamiji delivered a spiritually enriching speech, emphasizing the contemporary relevance of Basavanna's ideals. Guests of Honour shared their insights on Basava philosophy and its unifying, inclusive message. Cultural performances, vachana recitations, and devotional songs were presented by local artists and youth groups, adding vibrancy to the event. Several prominent cultural and spiritual leaders from Mauritius attended and enriched the event: Mr. Ashveen Kutowaroo – Chairman, Arya Sabha Education Council, Mr. Narendra Kumar Jain – President, International Jain Association, Mr. Heyvyv Gurayya – President, Mauritius Telugu Mahasabha, Mr. Premchand Boojhawon, MSK, CSK – Trustee, Human Service Trust, Krishnanand Seva Ashram, Mrs. Luxshmee Ramdhun Bundhun – President, Hindu House, Mr. Vinay Dosoji – President, GOPIO, Mauritius. The event saw enthusiastic participation and seamless coordination by the Mallige Kannada Balaga team including Dr. Shashi Sewsurun, Dr. Veeresappa Akki, Dr. Darshan Devang, CA Raghavendra Shettar, Mrs. Maya Seeraton, Behenji Priya Teeluck, Mrs. Nirmala Ramsokul, Mr. Vijay Patil, and the JSSAHER staff.

The 892<sup>nd</sup> Basava Jayanthi celebration was a profound blend of devotion, learning, and cultural unity. It not only honoured the legacy of **Jagadguru Basavanna** but also strengthened the bonds of spiritual brotherhood between Mauritius and India. The active participation of distinguished guests, the organizing teams, and the devotees made the event a resounding success and a spiritually uplifting experience for all.





### **Event 5: Annual Sports Fest**

The vibrant and energetic atmosphere of JSSAHERM came alive this May with the much-anticipated Annual Sports Day 2025, held across three exciting days—May 22, 23 and the grand finale on May 24<sup>th</sup> at Hindu Girls SSS College. It was a celebration of teamwork, resilience, and shared memories. The festivities commenced on May 22nd with an inspiring opening ceremony, presided over by CEO and Vice-Chancellor, Prof. (Dr) Praveen Mohadeb. The first two days featured a mix of indoor and outdoor games, encouraging widespread participation from students across various programs. Indoor events included dominoes, carrom, and table tennis, with students displaying remarkable focus and technique. Outdoor matches such as football, basketball, and dodgeball brought intense competition and camaraderie to the field. The final day—the most awaited—truly lived up to the anticipation. Volleyball matches began the day on a high note, followed by handball and a thrilling conclusion with badminton, where the matches were played in three dynamic formats: men's, women's, and mixed doubles. Each match stood as a testament to teamwork, discipline, and mutual respect. One of the most exhilarating highlights was the football final, which drew a roaring crowd. The match, full of determination and tactical brilliance, saw Team A secure victory with a score of 4–2. Handball also kept the crowd on edge, with a nail-biting finish in extra time. Team B clinched the win in a dramatic finish.

As the final whistle blew and cheers echoed across the grounds, one thing became clear: this Sports Day was not just about games—it was about growing together, celebrating unity, and creating lifelong memories. “Sportsmanship is not just about winning—it's about honoring the game, your team, and your opponents.” “These moments with friends, now family, are what make university life truly unforgettable.”

In recognition of exceptional talent and team spirit, the following students and teams were awarded:

EVENT	WINNERS
<b>Tug of War</b>	Qays, Farhaan M., Kushmita, Juwairya, Neelakshi, Narmeen, Sunil
<b>Petanque</b>	Qays, Tabassoom
<b>Table Tennis (Boys)</b>	Arshaad
<b>Table Tennis (Girls)</b>	Ilham
<b>Carrom</b>	Arshaad, Waseem
<b>Domino</b>	Saniya, Gitikha
<b>Football</b>	Qays, Anasheed, Farhaan M., Raees, Karthik, Haiman, Yuvraj, Faizaan
<b>Basketball</b>	Raees, Yaseen, Anasheed, Farhaan M., Rulaiyah, Haadiyah, Milan, Narmeen

<b>Dodgeball</b>	Qays, Toshtee, Waseem, Anasheed, Shameemah, Salvi, Angeli
<b>Volleyball</b>	Yaseen, Haiman, Shreyas, Khitisha, Aaliya, Shameemah
<b>Handball</b>	Farhaan M., Amishka, Aaliya, Tabassoom, Arshaad, Raees
<b>Badminton (Boys' Singles)</b>	Yaseen
<b>Badminton (Girls' Singles)</b>	Narmeen
<b>Badminton (Boys' Doubles)</b>	Yaseen, Farhaan M.
<b>Badminton (Girls' Doubles)</b>	Narmeen, Hadiya Gokhool
<b>Badminton (Mixed Doubles)</b>	Yaseen, Zeenat
<b>Chess</b>	Shreyas

The JSS Academy Sports Day 2025 will be remembered not only for its competitive spirit but for the laughter, friendships, and bonds it strengthened. It stands as a reminder that while medals fade, memories endure.

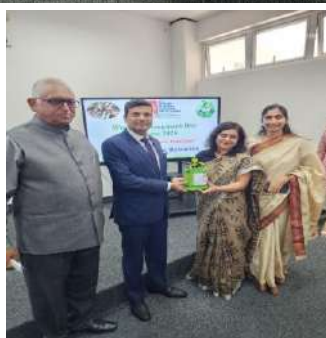
To every athlete, organizer, volunteer, and cheering friend—thank you. Let's carry this energy forward, not just into the next tournament, but into everything we do.

Here's to the memories, the friendships, and the magic of Sports Day. Until 2026—game on!



## **Event 6: World Environment Day 2025**

School of Life Sciences, JSS Academy of Higher Education and Research, Mauritius World Environment Day 2025 on 5<sup>th</sup> June 2025. For this occasion, an elocution competition was organised where students from all the schools took part in it. The celebration of World Environment Day started with welcome address delivered by Prof. (Dr) Jaishree Vaijanathappa, Head of Faculty of Life Sciences, setting the tone for the event and emphasizing the importance of environmental sustainability. The opening remarks was given by Prof. (Dr) Praveen Mohadeb, CEO & Vice-Chancellor of JSSAHERM, who underscored the institution's commitment to eco-friendly initiatives. The keynote address was delivered by Mr. Ranjan Kumar Singh, First Secretary (ECO) at the High Commission of India to Mauritius. He shared valuable insights into India's and the global community's efforts toward combating plastic pollution. The prize distribution and certificates were given to students for the elocution competition on the theme "Ending Plastic Pollution," recognizing their efforts in environmental advocacy. The green gift drive (Donate to Save) an initiative launched by the chief guest and dignitaries to promote eco-conscious giving and sustainable living. Vote of thanks was concluded by Mr. Naveen K P, Registrar of JSSAHERM, appreciating all contributors and attendees. The event ended with informal interactions and refreshments for all guests and participants. The World Environment Day 2025 celebration at JSSAHERM was a meaningful event that emphasized education, engagement, and action against plastic pollution. It served as a platform to inspire students and stakeholders to contribute toward a cleaner, greener future. The event ended with informal interactions and refreshments for all guests and participants. The World Environment Day 2025 celebration at JSSAHERM was a meaningful event that emphasized education, engagement, and action against plastic pollution. It served as a platform to inspire students and stakeholders to contribute toward a cleaner, greener future.





## Event 7: 79<sup>th</sup> Independence Day of India



79<sup>th</sup> Independence Day of India was proudly celebrated on 15<sup>th</sup> August 2025 between 11.00-11.30 a.m. in the premises of JSSAHERM. Prof Dr Praveen Mohadeb, CEO and Vice-Chancellor hoisted the Indian flag with the participation of faculties and supporting staff. The Registrar, Mr. K. P. Naveen, addressed the gathering and paid tribute to the sacrifices made by freedom fighters for the Nation's independence. The theme for this year's celebration was "Naya Bharat."

# Memorandum of Understanding/Agreements



**The JSSAHER Mauritius signed MoUs with the following;**

1. University of Ghana, Ghana
2. GeneX Medical Laboratory, Mauritius
3. Kanhye Moringa, Mauritius

## **Program of Cooperation and Areas of Partnership**

The parties to this MOU wish to engage with each other in a program of cooperation to explore potential collaborations such as:

- (a) Develop mutual collaboration in the field of education and research
- (b) Discuss and develop mechanism for identifying potential area of joint research, innovation and enterprise project
- (c) Identify potential opportunities for staff and student mobility between both Parties including but not limited exchange programmes
- (d) Identify and offer joint short-duration courses as per expertise and demand
- (e) Identify potential opportunities and areas for students to take up internship, placements, project, field trip and mentorship by both the parties
- (f) Co-authorship in joint publications and Co-supervisors for research programs

This partnership underscores JSSAHER Mauritius's commitment to fostering excellence in education and practice, contributing to the overall advancement of the life sciences and healthcare sector.



## Publications, Visits, Workshops and Conferences Attended (September - December 2025))

### 1. International Workshop on Role of Women in Science, Technology and Innovation in the Global South

Prof Dr Jaishree Vaijanathappa and Dr Khayati Moudgil attended the two days International Workshop on Role of Women in Science, Technology and Innovation in the Global South from 17-18 April 2025 at Royal green wellness resort, Reduit, Mauritius and presented the papers for the same. The workshop was very informative and observed the participation of 21 International and 20 Local delegates. There were six technical sessions, under the technical session II- Advancing gender equity in STEM for empowering women, Prof Jaishree Vaijanathappa presented the paper on “Implementation of Gender Equality Strategies for Mitigating Barriers in Scientific Organizations: Supporting Initiatives and Resistances”. Whereas for the technical session V- Bridging the gender gaps in STEM: addressing barriers and challenges, Dr Khayati Moudgil presented a paper on “Rising above: Overcoming barriers and empowering women in Science and technology”. All the six sessions were informative and advanced the knowledge in gender equality and equity in the Science and Technology.



## 2. Medical Symposium on Oncology

Dr Khayati Moudgil attended a medical symposium on the topic: Recent advance in Breast Cancer & HIPEC in Ovarian cancers - Medical Oncology perspective on 2 May 2025 at Royal Green Wellness Resort. This symposium was organised by Oncology Society Mauritius in association with Apollo Proton Cancer Centre, Chennai, India. It was a very fruitful and informative session with real clinical cases.



**OUR CASE**

- 59 years old female
- **Diagnosis:** 2019: Metastatic carcinoma right breast (HER2-positive)
- ER+, HER 2 NEU-3+
- **Stage:** Breast mass-T4b + Nodal + Skeletal metastasis
- **Initial Therapy:** Docetaxol + Trastuzumab
- **Palliative RT:** 30 Gy to L4-S3 spine
- Multiple lines of prior chemotherapy including Trastuzumab, Docetaxel, Capecitabine, Nabociclib, Vinorelbine, Gemcitabine (as patient was not able to afford for INNOVATOR TDM1 - KADCYLA)
- **Started TDM-1 (Ujvira) in 2022 as subsequent line**

**HORMONE POSITIVE  
STAGE 4 - BREAST CANCER**

**Palbociclib 200mg Film-Coated Tablets**  
**KRYXANA 200 mg**  
FOR SALE IN INDIA ONLY

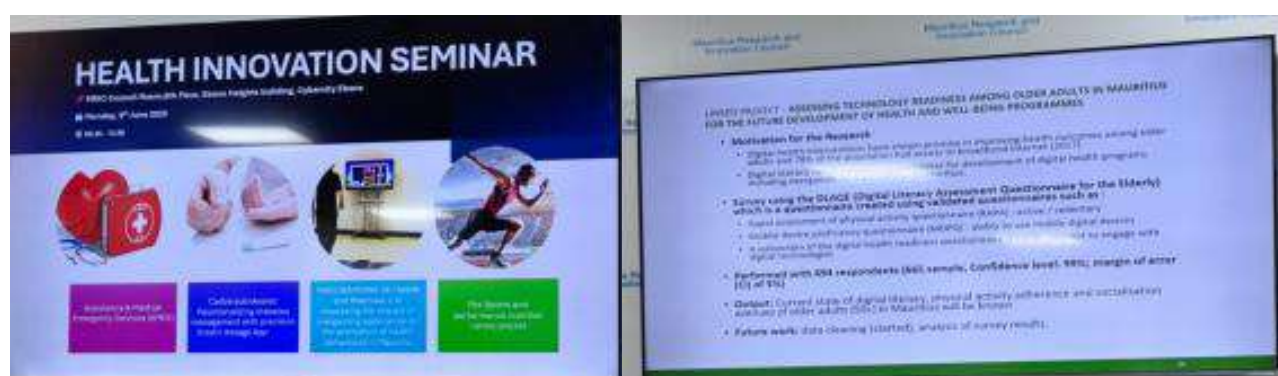
**Abemaciclib  
Ramiven 150 mg**  
Film Coated Tablet  
Oral Use

**Palbociclib Capsules 125 mg**  
**PALBOCIB**  
21 Capsules

### 3. Health Innovation Dissemination Event at MRIC

Dr Khayati Moudgil participated in Health Innovation Dissemination event held on 9<sup>th</sup> June 2025 at MRIC. The event comprised of four major presentations by the project leaders for their projects which was funded by MRIC. The event was very informative and highly scientific in nature.

In his opening remarks, the Executive Director of the MRIC, Prof. Theesan Bahorun, recalled that the projects being presented received funding following Les Assises de la Recherche et de l'Innovation held in 2022. He noted that the projects which aimed to address health challenges faced by Mauritians, exemplified the power of applied research and user-driven innovation, which directly deal with pressing national health issues with evidence-based solutions.





#### **4. National Medicines Policy Elaboration**

A three-day workshop focusing on the National Medicines Policy, which is a joint initiative of the Ministry of Health and Wellness and the World Health Organisation (WHO), was held between 30<sup>th</sup> June – 2<sup>nd</sup> July 2025 in the presence of the Senior Chief Executive of the Ministry of Health and Wellness, Mr Sarwansingh Purmessur, and the WHO Representative, Dr Anne Marie Ancia. The National Medicines Policy aims to ensure a stable and affordable supply of essential medicines, improve pharmaceutical regulation and governance, support local production, and promote rational medicine use. It also emphasizes quality assurance, strict pharmacovigilance, and strong monitoring systems. In his address, Senior Chief Executive Mr. Purmessur highlighted the importance of a unified national strategy to avoid fragmented approaches in procurement and distribution. He affirmed that the policy will guide both public and private sectors, supporting universal health coverage by ensuring access to safe, effective, and affordable medicines. He also stressed the need for regular policy updates to match the evolving pharmaceutical landscape.

Despite progress, Mauritius still faces challenges such as rising non-communicable diseases and dependence on imported medicines. WHO Representative Dr. Ancia praised the policy as a milestone for health security, ensuring access, safety, and affordability. She emphasized that it strengthens the entire pharmaceutical system and promotes transparency, accountability, and resilience—key to overcoming future health and economic pressures.



**Source: GIS Mauritius**

## **5. Felicitation of Prof (Dr) Praveen Mohadeb, CEO and Vice-Chancellor during celebration of Silver Jubilee Anniversary at University of Technology, Mauritius**

The University of Technology, Mauritius (UTM) officially kicked off its highly anticipated “Week-Long” (16-21 June 2025) activities on Monday 16 June 2025 at the University, marking the start of the Silver Jubilee anniversary celebrations.

The inaugural event saw the presence of several distinguished personalities, including Mr. Navindsing Jugmohunsing, PS Ministry of Tertiary Education, Science and Research and President of the Board of Governors of UTM, Mr Kadress Pillay GOSK, former minister of Education and Human Resource Development. Professor (Dr) Kiran Bhujun, Director of Tertiary Education & Scientific Research, Dr. Dinesh Kumar Hurreeram, Director General of UTM, Professor Kavi Kumar Khedo, Deputy Director of UTM, Miss Nikita Peeroo, Registrar of UTM, former Directors, Registrars of UTM and sponsors who supported the event.

During the event the eminent personalities who were and are associated for the growth of UTM were felicitated.



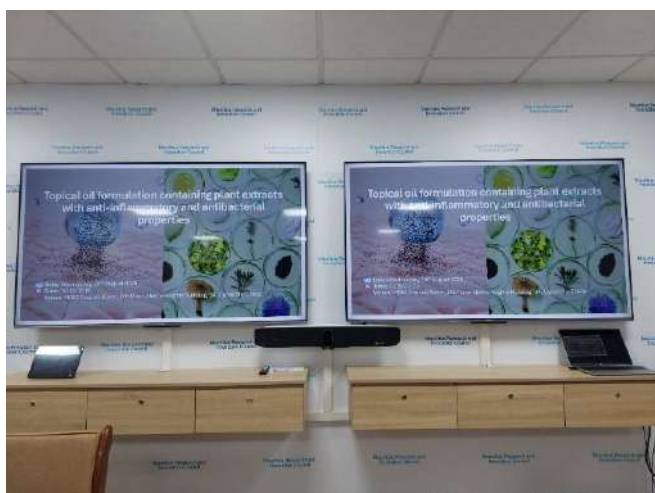


## **6. Seminar on Plant-Based Innovation:**

Prof Dr Jaishree V and Mrs Tina Dassyne, attended the MRIC a half-day seminar on 20<sup>th</sup> August 2025 in Ebene. The project “Topical Oil Formulation Containing Plant Extracts with Anti-inflammatory and Antibacterial Properties” was presented during the workshop.

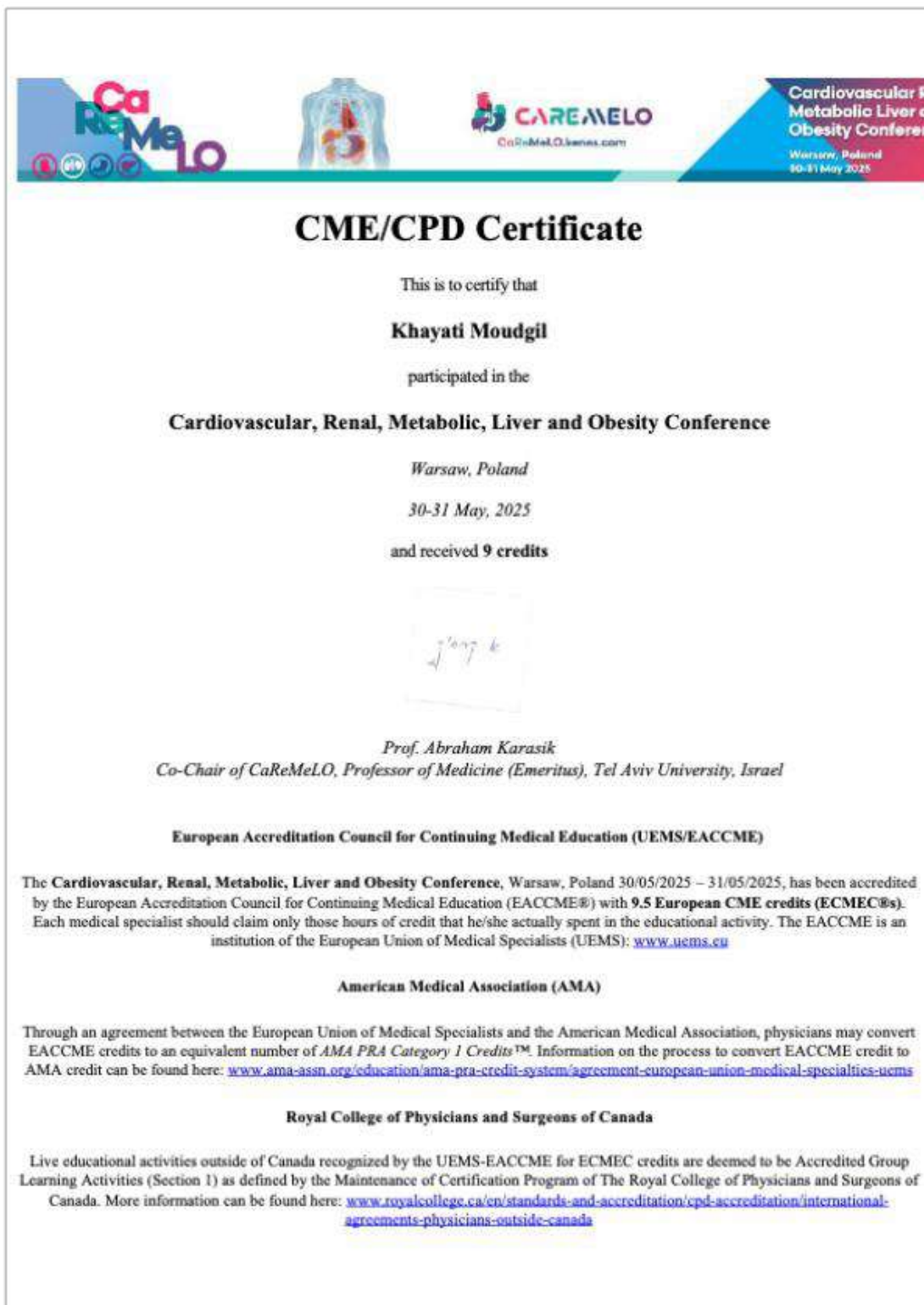
The initiative highlights the potential of Mauritian biodiversity in developing health and wellness products. By formulating nanoemulsions from five locally available plants, the project aims to enhance absorption, improve the release of bioactive compounds, and reduce irritation—advancing the effectiveness and commercial viability of topical oils.

The seminar underscored the importance of scientific innovation in transforming local plant resources into validated, high-value wellness solutions.



## 7. Virtual presentation: Pivotal Role of Clinical Pharmacist in Lifestyle Modification Factors

Dr Khayati Moudgil participated virtually and presented a paper on “The Pivotal Role of Clinical Pharmacist in Lifestyle Modification Factors” in the Cardiovascular, Renal, Metabolic, Liver and Obesity Conference held at Warsaw, Poland from 30-31 May, 2025. The conference was very much informative and enhanced the clinical skills.



## RESEARCH PROJECT:

We are delighted to announce that the staff of JSSAHERM have been awarded a research project entitled "An Investigation of Mauritian Endemic Plants – Bottle Palm and Blue Latan Palm – for their Antimicrobial and Anticancer Activities" worth of 1.15 million MUR by Mauritius Research and Innovation Council (MRIC), Mauritius and co-sponsored by JSSAHERM.

This marks our first project under the JSSAHERM banner.

The banner features the JSSAHERM logo on the left and right, with the text 'JSS ACADEMY OF HIGHER EDUCATION AND RESEARCH MAURITIUS' and 'A degree awarding institution registered with the Higher Education Commission, Mauritius'. In the center, it says 'Innovation Boost Grant' and 'MRIC' with a logo. The main title is 'An Investigation of Mauritian Endemic Plants – Bottle Palm, and Blue Latan Palm for its Antimicrobial and Anticancer Activities'. Below this, it lists the 'Project Leader' as Mrs Niteesha Dassyne, Faculty of Health Sciences, JSSAHERM, and the 'Team Member' as Prof (Dr) Ashish Wadhwani, Head, Faculty of Health Sciences, JSSAHERM. The funding amount is 'MUR 1.15 M (MRIC: 770,710; JSSAHERM: 384,600)'. Thematic Areas are 'Health Innovation', Unique ID is '1329152197', and Application No is 'MRIC/IBG3/HI/018'. Two images of the plants are shown: 'Bottle Palm' and 'Blue Latan Palm'.

## PUBLICATIONS: 06

1. Sai Varshini, **Ashish Wadhwani\***, Antidiabetic Potential of Indian Medicinal Plants/Crops: An Overview, Native Crops in India: Biochemical, Processing, and Nutraceutical Aspects, Taylor and Francis, Edition 1, Chapter 1, 2025, pg.no. 1 - 59
2. **Jaishree Vaijanathappa\***, Igguda Achaiah Chethan, Medicinal and Nutraceutical Fruits from the Himalayas, Native Crops in India: Biochemical, Processing, and Nutraceutical Aspects, Taylor and Francis, Edition 1, Chapter 2, 2025, pg.no. 60-96
3. Murunwa Madzinga, Mammoloro Boitshoko L. Malefo, Chris van der Merwe, Marco Nuno De Canha, **Ashish Wadhwani**, Namrita Lall, Quenton Kritzing. Exploring indigenous South African plants as alternative treatments for dermatophytosis: Focusing on the antifungal properties and mechanism of action of *Searsia lancea*, Fitoterapia Journal, Volume 184, 2025 (Q2 - Impact Factor: 2.5)
4. Devaki Kondaveeti, Jeevan Kumar Badvel, Supriya Rayana, Sravani Thommandru, Rohit Chandra, **Goutham Yerrakula**, Sindura Gollamudi, Bhanu Nirmal Koganti, Sai Tejaswi Pennepalli, Snehitha Yanda, Srikanth Mahasamudram Sreehari, Pujitha Chatragadda, Exploring the gaps and gains: a comprehensive study on knowledge, Attitude, practices, and prescribing trends related to anaemia Among In-Patients, ScienceRise: Pharmaceutical Science, 3(55) 2025, Scopus indexed – Q3



5. Sai Varshini Magham, Misbah Dhuny, Salvi Wahidna, **Ashish Wadhvani\***, Praveen Mohadeb, Green Synthesis of Nanoparticles: An Eco- Friendly Approach. Book: Advances in Drug Research and Developments, First Edition, Chapter 1 Prime Publication, May 2025, 1-15.
6. **Khayati Moudgil\***, The role of Artificial Intelligence In Advancing Sustainable Urban Health in Mauritius, VVI Journal, Volume 13 Issue 7, July-2025, Pg 28-40, Scopus indexed-Q4, IF- 0.11



#### ABSTRACT

India is the largest producer of medicinal herbs and is called the botanical garden of the world. In the last few years, there has been an exponential growth in the field of herbal medicine, and these drugs are gaining popularity both in developing and developed countries because of their natural origin and low side effects. Many traditional medicines in use are derived from medicinal plants, minerals, and organic matter. Numerous medicinal plants, traditionally used for over 1000 years, hailed (reborn), are present in herbal.

ScienceDirect: Pharmaceutical Science  
UDC: 615.2  
DOI: 10.15587/2519-4852.2025.324900

#### EXPLORING THE GAPS AND GAINS: A COMPREHENSIVE STUDY ON KNOWLEDGE, ATTITUDE, PRACTICES, AND PRESCRIBING TRENDS RELATED TO ANAEMIA AMONG IN-PATIENTS

Devaki Kondaveeti, Jeevan Kumar Balvel, Supriya Rayana, Sravani Thommandra, Rohit Chandra, Goutham Yerrakula, Sindura Gollamudi, Bhanu Nirmal Koganti, Sai Tejaswi Pennepalli, Sneetha Yanda, Srikanth Mahasamudram Sreehari, Pujitha Chatragudula

Anaemia refers to the common blood disorder that affects around one-third of the world's population. Ignorance risk is raised due to a lack of knowledge about anaemia.

**The aim of the study:** The aim of the study is to examine patient knowledge, attitude, practice, and prescription trends regarding anaemia among patients. Also, to identify a correlation between haemoglobin levels and KAP score among patients.

**Materials and methods:** A prospective observational study was carried out in 133 in-patients admitted to SJMS Hospital, General Medicine department diagnosed with anaemia for 6 months. Patient data were gathered through a review of their medical case records to evaluate prescribing patterns, while a structured and validated questionnaire was used to conduct face-to-face interviews with the patients, aiming to assess their knowledge, attitudes, and practices regarding anaemia.

**Results:** Males comprised 38 (29%) and females 95 (71%) for microcytic hypochromic anaemia. Tablets, Ferrous fumarate with ascorbic acid and by Elavital were prescribed at times. Vitamin and folic acid (71 prescriptions), KAP scores were linked to haemoglobin. 18% levels were inversely connected with patients' knowledge scores ( $p < 0.05$ ). Highly conclusive, patients' attitude assessments and 18% levels were positively correlated ( $p < 0.05$ ). Practice score and 18% levels correlated positively ( $p < 0.05$ ).

**Conclusions:** According to this study, anaemic individuals' medicine prescription behaviours should be monitored. Anaemia awareness should be enhanced.

**Keywords:** anaemia, attitude, haemoglobin, knowledge, practice, prescribing pattern

#### Key words:

Kondaveeti, D., Balvel, J. K., Rayana, S., Thommandra, S., Koganti, B. N., Pennepalli, S. T., Yanda, S., Chandra, R., Yerrakula, G. (2025). Exploring the gaps and gains: a comprehensive study on knowledge, attitude, practices, and prescribing trends related to anaemia among in-patients. ScienceDirect: Pharmaceutical Science, 1 (54), 34-41. <https://doi.org/10.15587/2519-4852.2025.324900>

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<https://vvijournal.com/>

© 2025 VVI JOURNAL / Volume 13, Issue 7 July 2025 / ISSN: 2219-1219

#### The Role Of Artificial Intelligence In Advancing Sustainable Urban Health In Mauritius

Khayati Moudgil\*

\*Faculty of Health Sciences, School of Pharmacy, JSS Academy of Higher Education and Research, Mauritius

#### Corresponding author:

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Assistant Professor,  
Faculty of Health Sciences, School of Pharmacy,  
JSS Academy of Higher Education and Research, Mauritius

#### Abstract

This study focuses on investigating and critically analysing the ways AI could support sustainable urban health practices in alignment with the SDGs in Mauritius. Secondary data are used in this exploratory study from policy documents, academic literature and health frameworks from 2020 to 2025. According to the findings, AI may improve medical services, help find diseases earlier and contribute to a better use of resources in Mauritius, for issues like non-communicable diseases and growing elderly numbers. The study points out major areas where there is good alignment with SDG 3 (Health), SDG 9 (Innovation), SDG 11 (Sustainable Cities) and SDG 16 (Institutions). However, the AI implementation is still difficult due to poor digital infrastructure, various incompatible data and not enough experienced workers. The report recommends that blended government programs, AI skill development efforts and better management of data could allow AI to be used effectively in the Mauritian health field.

Keywords:



#### ABSTRACT

Across the world, mountain regions are known for their high levels of biodiversity, and this includes a diverse range of plant species. Many of these plants produce edible fruits, berries, nuts, and other food items. Among the 36 global biodiversity hotspots, the Himalayas represent the 4th position, thus have global significance and receive special attention toward biodiversity conservation and management. Indigenous native fruit crops contribute only 6-15% of the total crop responding Indian area, with high productivity 11-147 ton/ha. Wild edible berries in the Himalayan region serve as valuable bio-resources and are often harvested.

Pharmazie 184 (2025) 184066



#### Exploring indigenous South African plants as alternative treatments for dermatophytosis: Focusing on the antifungal properties and mechanism of action of Scaevola lancea

Muruna Madzinga<sup>1</sup>, Mamolole Botshoko L. Malefo<sup>2</sup>, Chris van der Merwe<sup>3</sup>, Mureo Nono De Canha<sup>4</sup>, Ashish Wadhvani<sup>5</sup>, Namrita Lall<sup>6</sup>, Quentin Kritzinger<sup>7</sup>

<sup>1</sup>Department of Plant and Soil Science, University of Pretoria, Private Bag 600, South Africa

<sup>2</sup>Department of Pharmaceutical Botany, JSS College of Pharmacy, JSS Academy of Higher Education and Research, Ooty 688001, India

<sup>3</sup>Faculty of Health Sciences, School of Pharmacy, JSS Academy of Higher Education and Research, Mysore 570009, Karnataka

#### ARTICLE INFO

Keywords:  
Antifungal  
Chromomycin  
Dermatophytosis  
Microscopy  
Scaevola  
Scaevola lancea  
Stability

#### ABSTRACT

Nature's medicinal plants are reported to have activity against dermatophytes, however, there are limited studies providing insights into their mechanism of action, which may be hindering their clinical use. This study aimed to investigate the antifungal activity and toxicity of three South African plants traditionally used to treat skin infections caused by dermatophytes and to investigate the mechanism of action of the most active plant extract. Scaevola lancea showed the highest antifungal activity against Microsporum canis (MIC 5.126 mg/mL). Chromomycin and S. lancea showed no toxic effects on HEp-2 cells while S. lancea exhibited moderate cytotoxicity. The most active combination of S. lancea combined with MIC showed to be non-toxic, inactive Scaevola and S. lancea were non-toxic at 500 µg/mL. The ethyl acetate partition of S. lancea demonstrated a two-fold increase in activity against Microsporum canis while Scaevola lancea (SLS) exhibited a four-fold increase in activity against T. mentagrophytes. Two compounds in SLS were identified as chromomycin and gentian violet, with chromomycin showing the best activity against T. mentagrophytes. Fluorescence microscopy showed alterations of hyphal surfaces in the form of shrinkage and killing of the plasma membrane (24-48 h) and leakage and leakage of cytoplasmic material (72 h). The MIC of Scaevola lancea showed significant regression ( $p < 0.05$ ) of the MIC zone of MIC zone treated with S. lancea (0.322 mg/mL) after 2 and 7 days. The findings not only support traditional usage of S. lancea but also provide targets of S. lancea's anti-dermatophytic activity.

Prime Publication

Advances in Drug Research and Developments

#### Chapter One

#### Green Synthesis of Nanoparticles: An Eco-Friendly Approach

Sai Varshini Magham<sup>1</sup>, Misbah Dhuny<sup>2</sup>, Salvi Wahidna<sup>3</sup>, Ashish Wadhvani<sup>4,5</sup>, Praveen Mohadeb<sup>6</sup>

<sup>1</sup>Department of Pharmacology, Vignana Pharmacy College, Vellore, India; <sup>2</sup>Department of Pharmacy, JSS Academy of Higher Education and Research, Mysore, India; <sup>3</sup>Department of Pharmacy, JSS Academy of Higher Education and Research, Mysore, India; <sup>4</sup>Department of Pharmacy, JSS Academy of Higher Education and Research, Mysore, India; <sup>5</sup>Department of Pharmacy, JSS Academy of Higher Education and Research, Mysore, India; <sup>6</sup>Department of Pharmacy, JSS Academy of Higher Education and Research, Mysore, India

<sup>7</sup>Department of Pharmaceutical Biotechnology, JSS College of Pharmacy, JSS Academy of Higher Education and Research, Ooty, The Nilgiris, Tamil Nadu, India

Corresponding Author: Ashish Wadhvani

#### Abstract

The green synthesis of nanoparticles has emerged as a sustainable and eco-friendly alternative to conventional physical and chemical methods, which often involve toxic reagents and high energy consumption. This review explores various biological approaches for synthesizing nanoparticles using plant extracts, microorganisms, and biopolymers, emphasizing their environmental benefits, cost-effectiveness, and biocompatibility. The green synthesis process not only reduces hazardous byproducts but also enables the controlled formation of nanoparticles with desirable size, shape, and stability. Key mechanisms involved in biosynthesis, including the role of phytochemicals, enzymes, and microbial metabolites in reducing and stabilizing agents, are discussed. Additionally, the review highlights the diverse applications of green-synthesized nanoparticles in medicine, agriculture, water purification, and environmental remediation. The antimicrobial, catalytic, and biomedical properties of these nanoparticles make them promising candidates for various industrial and therapeutic applications. Despite significant progress, challenges such as scalability, reproducibility, and long-term stability need to be addressed for broader commercial applications. Future perspectives focus on optimizing green synthesis methods through advanced characterization techniques and exploring novel biological sources to enhance efficiency and sustainability. This chapter aims to provide comprehensive insights into the current trends and future potential of green nanoparticle synthesis as an environmentally benign approach.

Keywords: Green synthesis, nanoparticles, plants.

## STUDENT AND FACULTY ACHIEVEMENTS:

### Selection as Abstract Reviewer

Dr Khayati Moudgil has been selected as an abstract reviewer for the Community Pharmacy Section of the 83<sup>rd</sup> FIP World Congress of Pharmacy and Pharmaceutical Sciences, to be held in Copenhagen, Denmark, 31 August-3 September 2025. There were 29 reviewers across the globe and it was a great opportunity and an excellent experience for her to represent JSSAHERM globally. The review process was done to select the potential papers for the FIP.

### A Journey of Discipline and Dedication

Balancing university life and a competitive sport like karate is not easy—but it is possible. I, Kissoon Shameemah Bint Imte haz, a 3<sup>rd</sup> year pharmacy student at JSS AHER, has been practicing karate since the age of 7. I began my journey in WKO Shinkyokushin karate over 13 years ago and have never looked back. Today, I am proud to be a black belt first dan, a title I earned at the age of 18 after years of hard training, dedication and personal growth.

**Karate has not only shaped my physical skills and helped me on the tatami but also taught me the values of discipline, respect, time management and importance of routine that have supported me in my academic life as a pharmacy student.**

Attending university from 9 a.m. to 4 p.m and then head straight to karate training from 6 p.m. to 8 p.m, three times a week. Even with a packed schedule, I manage to keep up with lectures, take notes, revise consistently and prepare for exams—all while maintaining my training routine.

Competing at both national and regional levels, I've experienced both victory and defeat. Winning competitions has been motivating, but I've learned just as much from the losses. Every setback is an opportunity to grow, learn, and come back stronger. **The mat teaches resilience, just as much as the pharmacy lab teaches precision and care.**

Being pharmacy student has never stopped me from showing up to training or stepping into the ring. I believe that with discipline and a well-structured schedule, anything is possible. My goal is to compete at international level, and every training session brings me closer to that dream.





### 🏆 Some of My Achievements in Karate:

- 🏆 Promoted to Black Belt First Dan – Age 18
- 🥇 Gold Medal – Andrey Materov Memorial knockdown Tournament 2025
- 🥇 Gold Medal – National Kata Tournament 2024
- 🥈 Silver Medal – Andrey Materov Memorial knockdown Tournament 2023
- 🥉 Bronze Medal – 24<sup>th</sup> National Knockdown Tournament 2023



### Written by:

Ms Kissoon Shameemah Bint Imtehaz,  
3rd Year, BPharm Student



L'express du jeudi 24 avril 2023 • www.lexpress.mu • PAGE 24

actualité

## JOURNÉE MONDIALE DE LA SANTÉ

# Les cours menant au «Bachelor of Medecine» et Surgery bientôt dispensés par la JSS Academy

**LE** Bachelor of Medecine et le Bachelor of Surgery, soit les MBBS Courses, seront bientôt dispensés par la JSS Academy. L'annonce a été faite par le ministre de la Santé, Anil Bachoo, lors d'une série d'activités organisées par le JSS Academy of Higher Education and Research (JSSAHERM) à Bonne-Terre, lundi 7 avril, en marge des célébrations de la Journée mondiale de la santé.

Lors de son discours, Anil Bachoo n'a pas manqué de saluer la contribution du JSS Academy dans le secteur de la santé à Maurice et a ainsi annoncé que son ministère approuvait entièrement la demande de l'académie pour le démarrage des cours MBBS à compter du mois d'août.

### Redorer le blason de la santé publique

Il a également profité de l'occasion pour réitérer son engagement envers le secteur de la santé et a évoqué la préparation d'un nouveau plan stratégique, qui aura pour but de redorer le blason de la santé publique avec de nouvelles mesures pour améliorer la qualité des services fournis, une révision des conditions de travail des employés du secteur, ainsi que la formation et le recrutement de nouveaux membres du personnel.

Pour conclure, le ministre Bachoo a insisté auprès de toutes les parties concernées pour qu'elles œuvrent collectivement et veillent au bien-être du secteur car il y va du droit fondamental de chaque individu de bénéficier des services de santé publique. La population n'étant pas en reste, Anil Bachoo a également lancé un appel à chaque citoyen pour qu'il apporte sa pierre à l'édifice car il y va de la responsabilité de tous, dit-il, d'agir et d'investir pour un meilleur système et de meilleurs services.

Plusieurs autres personnalités étaient aussi présentes à cet événement, qui avait pour thème «Healthy beginnings, Hopeful futures».

Santana PONCENEAU



## UPCOMING EVENTS



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# WORLD PHARMACISTS DAY 2025

**"Think Health, Think Pharmacist"**

**25<sup>th</sup> September 2025**  
**02:30 PM – 03:30 PM**  
Chief Guest  
**Dr the Hon**  
**Arvin BOOLELL, GOSK**  
Minister of Agro-Industry,  
Food Security, Blue  
Economy and Fisheries  
Republic of Mauritius

**19<sup>th</sup> September 2025**  
**Preceptors Workshop**

**For Invited Guests Only**

**20<sup>th</sup> & 26<sup>th</sup> Sep 2025**  
**ONLINE CPD** for 2 Credit Points approved by  
Pharmacy Council of Mauritius

**20<sup>th</sup> Sep at 09:30 AM**  
Evolving Role of Clinical Pharmacists in  
Healthcare and Emerging Opportunities  
in Medical Affairs  
**Dr Renita Castelino**  
Disease Area Specialist and Former Fellow in Oncotherapeutics  
Bristol-Myers Squibb Pvt. Ltd , Mumbai, **India**

**26<sup>th</sup> Sep at 03:00 PM**  
Clinical Pharmacists at the Forefront:  
Transforming the Healthcare System  
**Dr Shloka Suresh Sahetya**  
Pharmacist  
Loisaida Drugs and Surgical, New York, **USA**

**Click the link to register:**  
[https://us06web.zoom.us/webinar/register/WN\\_L4Xjd5nRKCt6Glrhrrabw](https://us06web.zoom.us/webinar/register/WN_L4Xjd5nRKCt6Glrhrrabw)

**27<sup>th</sup> Sep 2025**  
**10:30 AM – 03:00 PM**  
**Free Health Check-up and  
Blood Donation Camp**

- Complete Blood Count (CBC)
- Body Fat
- Ear Check-up – Hearing test
- Eye Check-up
- Blood Glucose Level
- Blood Pressure
- Body Mass Index (BMI)
- Patient Guidance
- Distribution of Pamphlets etc.

**Tribeca Mall**

For more information visit [www.jssahe.edu.mu](http://www.jssahe.edu.mu) or call on +230 57130426 / 54896172

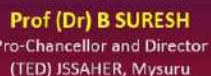




**APPROVED CPD WEBINAR ON**

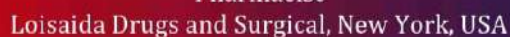
Approved by the Pharmacy Council of Mauritius for TWO (2) CPD Credit Points

**PRAVEEN MOHADEB**  
CEO and Vice-Chancellor,  
JSSAHER, Mauritius



Head , Faculty of Health Sciences  
Dean, School of Pharmacy  
JSSAHER, Mauritius

**Disease Area Specialist and Former Fellow in Oncotherapeutics**  
**Bristol-Myers Squibb Pvt. Ltd , Mumbai, India**



<https://us06web.zoom.us/join/join?from=addon>

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Accreditation Council for Pharmacy Education (ACPE), USA



# FINAL CALL FOR SEPTEMBER 2025 INTAKE

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Web: [www.jssaher.edu.mu](http://www.jssaher.edu.mu)



JSS AHER MAURITIUS



Sub-Saharan Africa University Rankings 2024



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



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**ONLINE**

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- Pharma Entrepreneur

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Web: [www.jssaher.edu.mu](http://www.jssaher.edu.mu)

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**Duration: 1.5 years**

**ADMISSION OPEN FOR JULY 2025**

**APPLY NOW!**



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



# ADMISSION OPEN FOR JULY 2025

## MSc (Microbiology) MSc (Environmental Sciences)

**Transform Your Career With Specialized Knowledge!**

Our MSc programmes designed to meet global challenges like antibiotic resistance, food security, waste water management, climate change and other global issues. These programs prepares graduates for diverse opportunities in research, industry, and academia.

**Why Choose Us?**

- Focus on applied microbiology in health, environment, and biotech sectors
- Opportunities for research in medical, environmental, and industrial microbiology
- Designed for students from Mauritius, Africa, and the Indian Ocean region

**Career Opportunities:**  
Research Scientist, Microbiologist, Food & Beverage Analyst, Quality Controller, Pharmaceutical Microbiologist, Environmental Consultant, and more!

**Duration:**  
Full Time: 1.5 years  
Part Time: 2 years

**Entry Requirements:**  
Recognized BSc degree (minimum second class)

**EMBARK YOUR JOURNEY FOR BRIGHTER TOMORROW**

**For More Information:**  
Tel: +230 4016415 / +230 54896172 Email: [info@jssaher.edu.mu](mailto:info@jssaher.edu.mu) Web: [www.jssaher.edu.mu](http://www.jssaher.edu.mu)



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# MBA Hospital Administration

**Empowering Future Leaders in Healthcare**

**Why Choose MBA (Hospital Administration)?**

A dynamic programme designed for early-career professionals aiming to lead and innovate in the healthcare sector. This course integrates core management education with specialized training in hospital and health services administration.

**Entry Requirements**

- A Recognized Bachelor's Degree

**Career Opportunities**

- Hospital Administrator
- Medical & Health Services Manager
- Healthcare Manager
- Medical Director
- Lab & Health Agency Manager

**For More Information:**  
Tel: +230 4016415 / +230 54896172 Email: [info@jssaher.edu.mu](mailto:info@jssaher.edu.mu) Web: [www.jssaher.edu.mu](http://www.jssaher.edu.mu)

**Programme Duration**  
Full-time: 1.5 years  
Part-time: 2 years (Online)

**Admission Open for July 2025**  
**Shape the Future in Healthcare Management. Enroll Now!**



**For Clarification / Feedback, Write**

To:

The Chief Editor

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