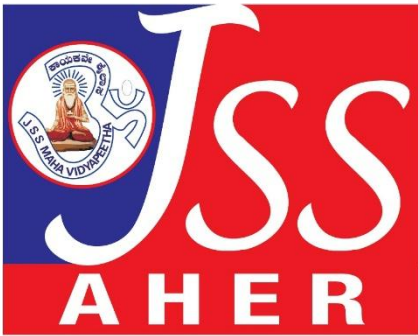




**JSS
ACADEMY
OF HIGHER
EDUCATION
AND RESEARCH
MAURITIUS**

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



**JSS Health & Education
Newsletter
Issue XVII
May - August 2026**

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 areas 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 started the Doctor of Philosophy in Health Sciences, Life Sciences and Management Studies in 2024 and Bachelor of Medicine, Bachelor of Surgery (MBBS) in 2026. It reflects the institution's commitment to producing skilled, ethical, and globally competent medical professionals.

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. The Times Higher Education Impact ranking 2024, JSS AHER, Mysuru has been ranked 1st in the World for SDG 3 - Good Health & Well-being. Carrying the legacy of JSS AHER 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 JSSAHERM started its Newsletter "Health & Education" in the year 2021 (Triannual issues) with the aim to cover general information related to health care, life sciences & 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

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अनुराग श्रीवास्तव
भारतीय उच्चायुक्त
मारीशस



Anurag Srivastava
High Commissioner of India
Mauritius

Message of High Commissioner of India



It gives me great pleasure to contribute this foreword to the seventeenth edition of the Health and Education Newsletter of the JSS Academy of Higher Education and Research in Mauritius (JSSAHERM).

JSSAHERM has established itself as an important centre of higher education in Mauritius, bringing together students and faculty from diverse backgrounds and creating an environment conducive to academic excellence, innovation and the exchange of ideas. The growing presence of international students on the campus is a reflection of Mauritius' emergence as an increasingly attractive destination for higher education.

The range of programmes offered by the Academy – including MBBS, B Pharmacy, Doctor of Pharmacy, BSc Biotechnology, MBA, Foundation, Immunization and PhD programmes – reflects its commitment to developing skilled human resources across disciplines of importance to the health, education and knowledge sectors. The full accreditation of the B Pharm programme by the Accreditation Council for Pharmacy Education (ACPE) underscores the Academy's commitment to maintaining high academic and professional standards.

It is also encouraging to note the Academy's recent Memorandum of Understanding with the Rajiv Gandhi Science Centre. Partnerships of this nature can contribute meaningfully to strengthening scientific research, innovation and public engagement with science.

This newsletter is a useful initiative which contributes to a vibrant intellectual environment and fosters a sense of community within the academic fraternity.

I commend the leadership, faculty, students and editorial team of JSSAHERM for their continued efforts in promoting excellence in education, research and innovation. I am confident that the Academy will continue to make a meaningful contribution to Mauritius' higher education landscape.

I extend my good wishes to JSSAHERM for its continued growth and success.

Anurag Srivastava
(Anurag Srivastava)

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Message from Chairman

Pharmacy Council of Mauritius

It is my privilege to send the message on the Occasion of the World Pharmacists Day.

This year, the International Pharmaceutical Federation has chosen a theme that speaks directly to all of us in this room: “Empowering Pharmacists for Healthier Futures.” Three words carry the weight of this theme — empower, pharmacist, future. And I want to spend a few minutes on why each of them matters, especially to you, our pharmacy students.

To empower means to equip someone with the tools, the trust, and the responsibility to act. For too long, in too many places, the pharmacist has been seen only as the last link in a supply chain — someone who hands over a box of medicine. But we know better. We are often the first point of contact for a patient. We are the ones who catch the drug interaction before it becomes a hospital admission. We are the ones a mother trusts at nine at night when her child has a fever and the clinic is closed.

Empowering pharmacists means giving us the education, the digital tools, the regulatory frameworks, and the professional recognition to practise at the full scope of our training — in prevention, in chronic disease management, in vaccination, in patient counselling.

To you, the students: you are entering the profession at a remarkable moment. Healthcare everywhere is shifting from treating sickness to preventing it, and pharmacists — because we are accessible, trusted, and scientifically trained — are being asked to lead that shift. That is an extraordinary responsibility, and an extraordinary opportunity.

I want to leave you with three commitments to carry forward. First, master your science — the trust placed in you begins with your competence. Second, never lose sight of the patient in front of you; behind every prescription is a person. And third, engage with your profession — through your Pharmacy Council, through continuing education, through mentorship — because a profession is only as strong as the people who show up for it.

Best wishes,

Mr Nitin Kumar BUSGUTH
MPharm Dip Management CH
Chairman Pharmacy Council Mauritius
Managing Director
Pharma Concepts Ltd



The Science of "Popcorn Brain": Why Your Mind Jumps from Thought to Thought

The rapid evolution of our modern digital ecosystem means that human attention is continuously splintered by push notifications, rapid-fire video streams, and highly optimized algorithmic feeds. This ambient environment has fostered a cognitive phenomenon colloquially recognized as "popcorn brain." First introduced in 2011 by David Levy, a researcher at the University of Washington's Information School, the phrase captures how a mind accustomed to intense online multitasking and non-stop digital inputs struggles to function in the slower pace of the physical world (Marcy, 2014). Instead of maintaining focus on a single task, the brain jumps erratically from one unrelated stimulus to another, mirroring the unpredictable popping of kernels in a microwave.

Fundamentally, this condition manifests as a stark decrease in attention duration, an obsessive drive to multitask, and a continuous pursuit of brief bursts of instant validation (Nair, 2024). Swiping through brief video clips or repeatedly updating social media feeds presents the brain with a relentless stream of novel inputs. From a neurobiological perspective, this loop triggers micro-releases of dopamine, the neurochemical driving reward and motivation pathways. Over extended periods, the brain adapts to this conditioning, routinely seeking out these effortless, high-frequency biological rewards. This neurochemical shift forces significant trade-offs in terms of mental depth and comprehension. Habitually scanning high-velocity digital data erodes the fundamental ability to engage in prolonged analytical or abstract thought (Nair, 2024). Consequently, many individuals find it incredibly difficult to read long-form print or track complex narratives without experiencing a compulsive urge to look at a smartphone. Additionally, working memory needs a baseline of uninterrupted time to consolidate new data into permanent storage. The non-stop consumption of fragmented text and media constantly interrupts this delicate transfer process, leading to shallow learning and frequent memory lapses (Nair, 2024).

Because web platforms update instantly, daily life can begin to feel sluggish and uninteresting by comparison. This causes an artificial acceleration of expectations where the focus needed for human dialogue, university lectures, or career duties becomes incredibly difficult to sustain (Marcy, 2014). This scattering of attention damages more than just academic or workplace productivity; it actively degrades emotional and social health. The chronic fear of missing out (FOMO) combines with the constant interruption of notifications to induce persistent low-level anxiety and emotional fatigue (Nair, 2024). Moreover, experts studying digital interactions note that heavy multitaskers struggle to filter out ambient, irrelevant noise, creating a fragmented mental state that can diminish interpersonal empathy and undermine real-time social connection (Marcy, 2014).

Fortunately, the inherent neuroplasticity that permits the brain to adapt to fast-paced technology also allows it to recover its capacity for deep focus. Counteracting popcorn brain relies on setting deliberate behavioural boundaries, such as implementing tech-free periods in the morning or before sleeping to lower nervous system arousal.

Furthermore, practicing intentional monotasking—such as reading a physical book, preparing food without digital distractions, or walking without audio—coerces the mind to settle into a singular, ongoing experience. Daily mindfulness routines can further train individuals to recognize when their thoughts are drifting and gently anchor them back to the present. Ultimately, popcorn brain is not a permanent cognitive injury, but an adaptive reaction to modern overstimulation that can be undone by consciously reshaping our relationship with screens.

References

1. Marcy, J. B. (2014). It's a Jungle Out There: The Biology of Facilitation. *Jungle Journal Article*, 1–25.
2. Nair, M. R. (2024). Unveiling the influence of popcorn brain on youth: A comprehensive examination. *Gap Bodhi Taru*, 1–5.

Dr Khayati Moudgil

Editor (Main)



Beyond Pregnancy: Exploring the Possible Link Between Preeclampsia

While preeclampsia is primarily known as a serious pregnancy complication, recent studies suggest its effects may extend far beyond pregnancy itself. Researchers have begun examining whether women with a history of preeclampsia may experience changes in their long-term risk of diseases such as ovarian cancer, opening new discussions in women's health research. Preeclampsia is a pregnancy-related hypertensive disorder that usually develops after the 20th week of gestation. It is commonly characterized by high blood pressure, proteinuria, and signs of organ dysfunction. Despite advances in obstetric care, preeclampsia remains one of the leading causes of maternal and fetal morbidity worldwide.[1] Although delivery often resolves the condition, studies now indicate that its effects may persist long after pregnancy has ended. Beyond its well-established association with cardiovascular disease and kidney disorders, preeclampsia has increasingly been investigated for its possible relationship with cancer development.[2] However, findings from different studies remain inconsistent.

One of the most notable investigations, conducted through the Jerusalem Perinatal Study, followed more than 41,000 women over several decades.[3] The study reported that women with a history of preeclampsia had an overall increased cancer risk, particularly for ovarian cancer. The study demonstrated more than a twofold increase in ovarian cancer incidence among women who had experienced preeclampsia.[3] Increased risks for breast cancer and certain epithelial tumors were also observed. Yet not all studies support this association. A large Nordic cohort study published in 2025, involving more than 3.4 million women from Sweden and Finland, reported almost the opposite trend.[4] The Nordic cohort study found that women with preeclampsia had reduced risks of several cancers, including breast, cervical, and lung cancer. Interestingly, the same study identified an increased risk of endometrial cancer, while no significant association with ovarian cancer was observed.[4] The findings are still inconsistent, and the relationship between preeclampsia and cancer is far from straightforward. Scientists believe that genetic background, ethnicity, hormonal influences, and immune responses may all contribute to these differences across populations. [3, 4] One proposed explanation involves changes in the immune system during pregnancy. Preeclampsia is associated with exaggerated inflammatory responses and abnormal regulation of angiogenic factors.[5] Since tumor growth and metastasis also depend heavily on angiogenesis, researchers suspect that the biological pathways involved in preeclampsia may overlap with those involved in cancer progression.[5] Particular attention has been directed toward biomarkers such as soluble fms-like tyrosine kinase-1 (sFlt-1) and placental growth factor (PlGF), both of which play important roles in the pathophysiology of preeclampsia.[5] Alterations in these markers may not only contribute to placental dysfunction but may also provide insight into mechanisms involved in tumor development.

A clinical case published in 2020 further illustrated the complexity of this relationship.[5] A pregnant woman initially presented with severe hypertension, proteinuria, and elevated liver enzymes, symptoms highly suggestive of severe preeclampsia. However, further investigation revealed unexpectedly normal angiogenic marker ratios, prompting physicians to search for alternative diagnoses. Following delivery, the patient was diagnosed with advanced high-grade serous ovarian carcinoma.[5] The case demonstrated how ovarian cancer can occasionally mimic preeclampsia during pregnancy, emphasizing the importance of careful clinical evaluation.

Although research in this field continues to evolve, pregnancy complications such as preeclampsia may offer valuable insight into long-term maternal health. Whether preeclampsia ultimately increases or decreases cancer, risk remains uncertain, but current evidence highlights a complex relationship between reproductive health, immunity, and oncogenesis. A deeper understanding of these connections could eventually contribute to earlier detection strategies, improved cancer screening, and more personalized healthcare for women worldwide.

References

1. American College of Obstetricians and Gynecologists. *Gestational Hypertension and Preeclampsia: ACOG Practice Bulletin Summary, Number 222*. Obstet Gynecol. 2020;135:1492–1495.
2. Vesterlund G, Mao X, Gissler M, et al. *Cancer risk after preeclampsia: a cohort study in two Nordic populations*. BJC Reports. 2025;3:47.
3. Friedlander Y, Paltiel O, Tiram E, et al. *Association between preeclampsia and cancer incidence: The Jerusalem Perinatal Study*. Cohort Study, Israel.
4. Vesterlund G, Mao X, Heinonen S, et al. *Association of preeclampsia with subsequent cancer risk in Sweden and Finland*. BJC Reports. 2025.
5. Luzarraga Aznar A, Delgado-Morell A, Rovira Negre R, et al. *Ovarian cancer as imitator of severe pre-eclampsia: role of angiogenic factors*. Ultrasound Obstet Gynecol. 2020.

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BPharm (Cohort 4)



Closing the Gap: The Case for Veterinary Pharmacy in Mauritius

Mauritius stands at a pivotal moment for strengthening its One Health strategy, yet one crucial element is missing: the formal integration of veterinary pharmacy. As the island's livestock and companion-animal sectors expand, the absence of pharmacists trained in veterinary therapeutics presents a growing challenge to animal welfare, food safety, and public health.

The One Health framework recognizes that human, animal, and environmental health are interconnected, demanding coordinated responses to zoonotic diseases and antimicrobial resistance (AMR) [1]. Veterinary pharmacists—professionals who combine pharmaceutical science with animal health expertise—play a vital role in preventing medication errors, ensuring prudent antibiotic use, and overseeing vaccine distribution [2]. Their skills are particularly relevant to Mauritius, where poultry production and pet ownership continue to rise, and where AMR is an emerging threat to both animals and humans [3].

Despite a well-developed human health infrastructure, Mauritius lacks a structured pathway for pharmacists to acquire veterinary specialization. Currently, veterinary services are overseen by the Veterinary Council, while pharmacists are regulated separately by the Pharmacy Council, creating professional silos. International experience shows that bridging these silos is both feasible and impactful. In the United Kingdom and the United States, for example, pharmacists can pursue postgraduate certificates or residencies in veterinary pharmacy, enabling them to work alongside veterinarians in antimicrobial stewardship programs and vaccine logistics [4].

The benefits of veterinary pharmacists extend beyond dispensing medicines. They are key partners in disease-control programs, therapeutic drug monitoring, and food-animal pharmacovigilance. By ensuring correct drug selection and withdrawal periods, they reduce the risk of drug residues in meat and dairy products, thus safeguarding export standards and public confidence in the food chain [5]. Their participation also strengthens preparedness for zoonotic outbreaks, where expertise in both pharmaceutical supply chains and species-specific dosing is essential.

A practical roadmap for Mauritius could include three steps. First, establish targeted postgraduate training in veterinary pharmacology for registered pharmacists, using blended or distance-learning models to overcome local faculty shortages. Second, develop regulatory

recognition that allows certified pharmacists to contribute directly to veterinary services, including livestock health programs and community animal-care initiatives. Third, create interdisciplinary partnerships with regional centres of excellence—such as South African veterinary schools and Indian pharmacy faculties—to share curricula, training opportunities, and research capacity.

This initiative aligns with global strategies to combat AMR and improve food security. The World Health Organization's action plan on AMR explicitly calls for multisectoral engagement, including pharmaceutical expertise in animal health. Integrating veterinary pharmacists into Mauritius's health system would directly support these international commitments while addressing domestic needs for safer, more efficient animal care.

In conclusion, establishing veterinary pharmacy in Mauritius is more than an academic goal; it is an urgent public-health measure. Empowering pharmacists to contribute their expertise to animal health will close a critical gap, reinforce AMR containment, and strengthen the One Health framework for the nation's future. We urge policymakers, professional councils, and academic institutions to collaborate in creating accredited training and regulatory pathways that allow pharmacists to serve as veterinary pharmacy specialists.

References

1. World Health Organization. One Health approach: connecting human, animal and environmental health. Geneva: WHO; 2022.
2. Anderson B, Smith J, Taylor M. The role and education of the veterinary pharmacist. Am J Health Syst Pharm.2009;66(12):1101–6.
3. Food and Agriculture Organization of the United Nations. Livestock sector brief: Mauritius. Rome: FAO; 2023.
4. Lloyd DH, Page SW. Practical use of veterinary pharmacists in antimicrobial stewardship. Vet Rec.2018;182(18):516–20.
5. Stafford EG. Veterinary pharmacy: ensuring animal health through vaccines and therapeutics. J Am Pharm Assoc.2020;60(6):e84–e87.

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BPharm (Cohort 5)





Women in STEM

Women have historically faced systemic barriers in science and technology, yet their resilience and brilliance have shaped every major era of scientific advancement [1]. This paper explores the journey of women in STEM through historical pioneers, contemporary achievements, digital platforms, institutional recognitions, modern voices, gender-based challenges, and global support mechanisms. The narrative interweaves lesser-known and prominent figures, landmark discoveries, and current initiatives shaping a more inclusive scientific community. With a blend of archival insights and recent achievements, the paper aims to shed light on the transformative role women have played and continue to play in scientific progress. The provided file, "Manuscript_anonymous.docx", further documents these structural realities and frameworks within the broader educational landscape.

The scientific landscape has, for centuries, borne the imprint of gender disparity, where the contributions of women—despite being substantial—have often been ignored or underrepresented. While ancient records hint at women's involvement in early knowledge systems, the formal structures of science and technology largely excluded them from academic and professional participation. Women who dared to pursue scientific inquiry often did so in isolation, without institutional backing or recognition. They were barred from universities, excluded from professional societies, and often credited posthumously for their groundbreaking work [2]. This article attempts to unfold the multidimensional narrative of women in science and technology, drawing from authoritative sources to construct a robust framework for understanding the roles, hurdles, and milestones of women in scientific inquiry.

The journey of women in science can be traced back to antiquity, with early mathematicians and astronomers overcoming strict gender norms to lay foundational paradigms. During the Scientific Revolution and subsequent centuries, women contributed significantly to biology, computing, and physics, yet their intellectual labor was frequently undervalued or credited to male collaborators [3]. Figures such as Ada Lovelace paved the way for modern computer programming, while others had to publish under pseudonyms or work within informal networks as assistants to male relatives to pursue their research. In the Global South, pioneering female scientists also made historic strides in botany and cytogenetics, though their contributions remained underrecognized in Western-centric historical narratives. These figures established crucial scientific foundations while simultaneously confronting structural exclusion from formal academies. The 21st century has witnessed a measurable surge in the visibility, leadership, and participation of women across diverse domains, including space science, neuroscience, and quantum computing [4]. Modern frameworks are increasingly integrating sex and gender analyses into engineering and biotechnology research to improve design outcomes [5].





Furthermore, digital and physical platforms have emerged as essential mechanisms to counter isolation, dismantle professional barriers, and address industry misinformation. Global initiatives and specialized networks, such as the Women in Data Science (WiDS) conferences, foster localized mentorship, offer strategic career development, and normalize the presence of female leadership in artificial intelligence and corporate innovation agendas.

Formal institutional validation remains vital to preserving the legacy of female scientists and correcting historical oversights [6]. Major scientific bodies, museums, and cultural institutions are increasingly curating specialized exhibitions and establishing named fellowships to honor overlooked historical figures. Simultaneously, regional policies and national charters now require institutions to publicly report gender equity statistics, embedding transparency directly into academic culture. By implementing objective, double-blind peer reviews and creating dedicated research grants, academic communities are actively working to reshape funding distribution, protect institutional memory, and inspire future generations of innovators.

Today's emerging female innovators are driving the ethical, sustainable, and intersectional dimensions of science, addressing critical crises such as water contamination, epidemiology, and climate change. However, severe disparities persist, particularly in physics, engineering, and computer science, where the gender gap widens significantly at senior executive and academic levels [3]. Barriers such as implicit bias, unequal pay, limited access to childcare, and the "leaky pipeline" phenomenon continue to push qualified women out of STEM careers. Addressing these deeply entrenched hurdles requires an intersectional approach that considers the unique obstacles faced by minority and marginalized researchers, ensuring that structural, rather than merely symbolic, change is achieved.

Achieving sustainable gender parity requires robust, interconnected support systems operating at both grassroots and international levels. Global charters, such as the Athena SWAN framework, alongside targeted regional scholarship schemes, actively promote female participation and equity audits within leading research universities. Post-pandemic recovery strategies have further emphasized the integration of flexible academic timelines, digital lab access, and e-mentorship networks to reach women in rural or infrastructure-limited regions. Ultimately, empowering women in STEM is not simply a matter of correcting historical exclusion; it is an economic and scientific necessity that expands research creativity, fosters diverse outcomes, and drives global innovation.

References

1. Women in Science. Women in Science – Britannica [Internet]. 2024 [cited 2025 Jul 9]. Available from: <https://www.britannica.com/topic/Women-in-Science>
2. Creese MRS. Ladies in the laboratory? American and British women in science, 1800–1900. Lanham (MD): Scarecrow Press; 2004.
3. Technology Networks. Women in science: Motivation, challenges, and advice [Internet]. 2024 [cited 2025 Jul 9]. Available from: <https://www.technologynetworks.com/tn/articles/women-in-science-motivation-challenges-and-advice-349245>
4. Frontiers. Championing change: Women in science 2024 year in review [Internet]. 2024 [cited 2025 Jul 9]. Available from: <https://www.frontiersin.org/reports/2024-women-in-science-review>
5. Schiebinger L, Klinge I, Sánchez de Madariaga I, Schraudner M, Stefanick M. Gendered innovations 2: How inclusive analysis contributes to research and innovation. Luxembourg: European Commission; 2020.
6. The Guardian. Royal Society honours pioneering scientists who were first female members [Internet]. 2024 [cited 2025 Jul 9]. Available from: <https://www.theguardian.com/science/2024/royal-society-honours-women>

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BPharm (Cohort 5)





Canavan Disease

Introduction and Etiology

Canavan disease, also designated as aspartoacylase (ASPA) deficiency or Van Bogaert–Bertrand syndrome, is a rare autosomal recessive neurological disorder categorized under the leukodystrophies [1,2]. First identified by Dr Myrtelle May Canavan and subsequently classified by Ludo van Bogaert and Ivan Bertrand, the disease occurs globally but exhibits an elevated carrier frequency among individuals of Ashkenazi Jewish descent [1,2].

Pathophysiologically, the condition is driven by loss-of-function mutations in the *ASPA* gene, which encodes the enzyme aspartoacylase [2,3]. Under normal metabolic conditions, neuronal mitochondria synthesize N-acetylaspartic acid (NAA) from acetyl-CoA and L-aspartate [3]. NAA is subsequently transported to oligodendrocytes, where ASPA hydrolyzes it into acetate and L-aspartate; the liberated acetate serves as a critical substrate for myelin lipid synthesis [2,3]. Mutations in *ASPA* disrupt this catalytic pathway, leading to toxic intracellular accumulation of NAA within the central nervous system (CNS), failure of normal myelination, progressive demyelination, and characteristic spongy degeneration of subcortical cerebral white matter [1–3].

Clinical Spectrum and Classification

The clinical manifestations of Canavan disease span two primary phenotypes:

- **Infantile (Typical) Form:** Characterized by symptom onset between 3 to 6 months of age [1,2]. Cardinal features include severe axial hypotonia (“floppy infant”), loss of head control, and progressive macrocephaly [1,4]. As neurodegeneration advances, affected infants exhibit profound developmental delays, pharmacoresistant seizures, optic atrophy, nystagmus, spasticity, and severe dysphagia [1,2,4].
- **Juvenile (Atypical) Form:** Displays onset during early childhood or adolescence [1,4]. Manifestations are comparatively milder and include cerebellar ataxia, balance and gait disturbances, and mild-to-moderate speech and motor deficits, with macrocephaly present in a subset of patients [2,4].

Diagnostic Pathways

Definitive diagnosis integrates biochemical, radiological, and molecular assays:

- **Urine Organic Acid Analysis:** Gas chromatography–mass spectrometry (GC-MS) demonstrates markedly elevated urinary NAA excretion [1,2].
- **Neuroimaging:** Magnetic resonance imaging (MRI) reveals diffuse, symmetric subcortical white matter hyperintensities, while proton magnetic resonance spectroscopy (¹H-MRS) shows prominent elevations of the NAA resonance peak within the cerebral parenchyma [1,4].
- **Molecular Genetic Testing:** Direct sequencing and deletion/duplication testing identify biallelic pathogenic variants in the *ASPA* gene to confirm diagnosis [2,5].
- **Prenatal and Enzymatic Testing:** Prenatal assessment can be performed via amniocentesis (measuring elevated NAA in amniotic fluid at 16–18 weeks) or chorionic villus sampling (CVS at 10–12 weeks) [1,2]. Cultured skin fibroblast assays demonstrating absent or deficient ASPA enzymatic activity provide auxiliary confirmation [2].

Therapeutic Management and Gene Therapy Advances

Currently, standard care remains supportive and focused on symptom mitigation [1,4]. Management includes gastrostomy tube (G-tube) placement for dysphagia and nutritional maintenance, antiepileptic pharmacotherapy (e.g., levetiracetam, phenobarbital) for seizure control, physical and occupational therapy to manage spasticity, and comprehensive genetic counseling for affected pedigrees [1,4,6].

Investigational gene replacement therapies represent the most promising disease-modifying avenue [5–7]. Active Phase 1/2 clinical trials (such as NCT04833907 sponsored by Myrtelle) are evaluating targeted adeno-associated viral (AAV) vector constructs, specifically rAAV-Olig001-ASPA [5,6]. Administered via direct neurosurgical delivery, this vector targets brain parenchymal cells—primarily oligodendrocytes—to deliver a functional ASPA transgene, aiming to restore local enzymatic activity, lower neurotoxic NAA levels, and promote functional remyelination within the CNS [5–7].

References

1. Cleveland Clinic. Canavan disease: causes, symptoms, diagnosis & treatment [Internet]. Cleveland (OH): Cleveland Clinic; 2023 [cited 2026 Aug 24]. Available from: <https://my.clevelandclinic.org/health/diseases/6013-canavan-disease>
2. National Organization for Rare Disorders (NORD). Canavan disease [Internet]. Danbury (CT): NORD; 2022 [cited 2026 Aug 24]. Available from: <https://rarediseases.org/rare-diseases/canavan-disease/>
3. Biocrates Life Sciences AG. N-acetyl-aspartic acid (NAA): biological role and biomarker utility [Internet]. Innsbruck: Biocrates; 2023 [cited 2026 Aug 24]. Available from: <https://biocrates.com/n-acetyl-aspartic-acid/>
4. Alex The Leukodystrophy Charity. Canavan disease [Internet]. London: Alex TLC; 2024 [cited 2026 Aug 24]. Available from: <https://alextlc.org/condition/canavan-disease/>
5. National Library of Medicine (US). Gene therapy clinical trial for Canavan disease (NCT04833907) [Internet]. Bethesda (MD): ClinicalTrials.gov; 2024 [cited 2026 Aug 24]. Available from: <https://clinicaltrials.gov/study/NCT04833907>
6. Myrtelle Inc. Pioneering gene therapies for neurodegenerative conditions: Canavan disease program [Internet]. 2024 [cited 2026 Aug 24]. Available from: <https://canavantreatment.com/>
7. National Center for Biotechnology Information. Recent advances and clinical landscapes in ASPA deficiency and leukodystrophy therapeutics. PMCID: PMC11806932 [Internet]. Bethesda (MD): National Institutes of Health; 2024 [cited 2026 Aug 24]. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC11806932/>

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BPharm (Cohort 6)





The Blood-Brain Barrier: The Brain's Silent Guardian and the Challenge for Modern Medicine

Imagine a biological security system so selective that it blocks approximately 98% of small-molecule drugs from entering one of the body's most vital organs, the brain. This remarkable physiological defense system, known as the blood-brain barrier (BBB), shields neural tissue every second of every day. Yet, while it effectively isolates the central nervous system from harmful blood-borne substances, it simultaneously constructs one of modern medicine's greatest hurdles: how can clinicians treat cerebral diseases when life-saving therapeutic agents cannot reach their anatomical target?

Why the Central Nervous System Requires Specialized Protection

Unlike many peripheral organs, neurons within the brain possess a highly limited capacity for regeneration and repair following severe injury. Furthermore, the brain is a soft, highly metabolic organ that orchestrates all systemic bodily functions. Evolutionarily, the body protects this delicate system mechanically via the cranium and shock-absorbing cerebrospinal fluid (CSF). Physiologically, however, it relies on a specialized cellular filter to obstruct harmful pathogens, circulating toxins and fluctuating systemic biochemicals that could disrupt neural homeostasis [1].

The Blood-Brain Barrier – Nature's Security System

The blood-brain barrier (BBB) is a specialized functional interface lining the cerebral microvasculature. Unlike peripheral capillaries, cerebral endothelial cells are continuous and sealed by an intricate network of tight junctions. This unique architecture eliminates open paracellular pathways, forcing molecules to cross via transcellular routes.

Consequently, only small and highly lipid-soluble substances can readily cross the lipid bilayer via passive diffusion. This category includes common neuroactive substances like caffeine and alcohol, as well as general anaesthetics. Furthermore, specific classes of central nervous system (CNS) medications are structurally optimized to cross this barrier, including antidepressants, anxiolytics, antipsychotics, sedative-hypnotics and common analgesics like acetaminophen.

Conversely, essential polar nutrients such as glucose and amino acids cannot diffuse freely and must rely on specific carrier-mediated transport systems to enter the brain. Meanwhile, circulating pathogens, large hydrophilic toxins and most foreign xenobiotics are effectively excluded [2].



A Protector and an Obstacle

The evolutionary success of the blood-brain barrier lies in its dual nature, serving simultaneously as an indispensable shield and a critical therapeutic bottleneck. On one hand, its primary physiological role is protective; by establishing a strict boundary, it defends the highly sensitive cerebral microenvironment from circulating pathogens, blood-borne toxins, and systemic inflammation that could trigger catastrophic neural damage.

Yet, this absolute security system behaves as a clinical obstacle, creating an ironic paradox in modern pharmacology.

The very mechanisms designed to keep the brain safe indiscriminately reject the vast majority of medical interventions. As the barrier excludes large hydrophilic compounds and most newly developed central nervous system drugs, treating devastating disorders such as glioblastomas, Alzheimer's disease and Parkinson's disease, remains one of the most punishing challenges in contemporary medicine [3].

The Pharmaceutical Imperative: Why the BBB Matters for Pharmacy

For pharmacists and drug developers, the blood-brain barrier dictates the rules of central nervous system pharmacology, shaping how medicines are designed, delivered and clinically managed:

- **Designing Barrier-Crossing Medicines:** Medicinal chemistry relies on structural optimization to help molecules pass through endothelial cells. Pharmacists analyze molecular weight, hydrogen bonds and lipid solubility to engineer drugs that mimic natural nutrients and hijack transport pathways to enter the brain.
- **Developing Innovative Drug Delivery Systems:** When a drug cannot cross on its own, pharmaceutical technology builds specialized vehicles like polymeric nanoparticles or liposomes. These carriers are coated with targeting molecules that trick endothelial cells into pulling them across the barrier.
- **The Pharmacist's Clinical Role:** As these advanced nanomedicines enter clinical settings, pharmacists act as vital stewards. They manage complex drug-drug interactions at the brain capillary level, optimize targeted drug delivery protocols, and monitor patients closely for potential neurotoxicity [4].

Conclusion

The blood-brain barrier stands as one of nature's most fascinating mechanism, silently protecting the brain from external threats while maintaining its delicate internal equilibrium. Although this impenetrable safeguard presents a monumental challenge for treating complex neurological disorders, rapid advances in pharmaceutical science and biotechnology are steadily bringing us closer to overcoming the obstacle. By mastering the secrets of this cellular gatekeeper, modern medicine is poised to transform the future of central nervous system therapeutics.

References:

1. Cleveland Clinic. Blood-Brain Barrier (BBB): What It Is and Function. Cleveland Clinic Health Library. Updated April 17, 2023. Accessed July 2026.
2. Daneman R, Prat A. The blood-brain barrier. *Cold Spring Harbor Perspectives in Biology*. 2015;7(1):a020412. doi:10.1101/cshperspect.a020412.
3. Pardridge WM. The blood-brain barrier: bottleneck in brain drug development. *NeuroRx*. 2005;2(1):3-14. doi:10.1602/neurorx.2.1.3.
4. Banks WA. From blood-brain barrier to blood-brain interfaces: New opportunities for CNS drug delivery. *Nature Reviews Drug Discovery*. 2016;15(4):275-292. doi:10.1038/nrd.2015.21.

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BPharm (Cohort 7)



Decoding Protein Synthesis

How Cellular Machinery Becomes a Pharmacist's Target

Introduction

Cells are constantly synthesizing proteins. These macromolecules execute virtually every functional job within biological systems, from shaping physical structures like the cell membrane and cytoskeleton to acting as catalytic enzymes that drive essential metabolic pathways. For a pharmacy student, protein synthesis is far more than an academic concept; it represents a fundamental roadmap for drug design. By understanding the precise mechanics of how a cell copies and translates genetic codes, researchers can identify specific molecular vulnerabilities to halt pathogens or treat systemic diseases [1].

Transcription: Targeting the Copy Machine

The process begins in the nucleus with transcription. Because a cell's genomic DNA is too massive and chemically delicate to leave the protective confines of the nuclear membrane, the cell must generate a temporary, single-stranded copy of the required gene, known as messenger RNA (mRNA).

An enzyme called RNA polymerase binds to a promoter region on the DNA, unwinds the double helix, and reads the template sequence to synthesize this complementary mRNA strand. While artificial DNA replication in a laboratory setting requires short primer sequences to initiate synthesis, natural cellular transcription is efficient enough to initiate mRNA production completely from scratch.

The Pharmacy Connection

This transcriptional phase is a major therapeutic target in infectious disease. For instance, in the treatment of tuberculosis, the drug Rifampicin serves as a vital clinical tool. Rifampicin works by binding directly to bacterial RNA polymerase. This physical block prevents the bacterium from transcribing the genes necessary for its survival, while human RNA polymerase remains entirely unaffected due to structural differences between prokaryotic and eukaryotic enzymes [2].

Translation: Disrupting the Ribosomal Assembly Line

Once the mRNA transcript is processed, it exits the nucleus and enters the cytoplasm, where translation takes place. During this phase, the ribosome reads the mRNA strand like a tape to assemble the polypeptide.

The genetic instructions are read in successive groups of three nucleotides, known as codons. Transfer RNA (tRNA) molecules act as physical translators, carrying a specific amino acid on one end and matching the mRNA codon with a complementary three-nucleotide anticodon on the other.

The ribosomal machinery runs this translation line using strict molecular punctuation:

The Start Signal: Assembly begins exclusively at the universal start codon, AUG, which recruits the initial amino acid, methionine.

Elongation: The ribosome moves along the mRNA strand, linking amino acids together into a growing peptide chain.

The Stop Signals: Translation continues until the ribosome encounters one of three specific stop signals: UAA, UAG, or UGA. Because no tRNA molecules match these stop sequences, the assembly ceases, and the newly formed polypeptide chain detaches. This chain then folds into a complex, three-dimensional structure to become a fully functional protein.

The Therapeutic Target: Ribosomal Subunits

In pharmacology, bacterial ribosomes are incredibly valuable targets. Because bacterial ribosomes (composed of 30S and 50S subunits) are structurally distinct from eukaryotic human ribosomes (40S and 60S), it is possible to deploy drugs that selectively shut down bacterial translation without damaging human cells [3].

Antibiotic Class	Specific Ribosomal Target	Mechanism of Action
Tetracyclines	30S Ribosomal Subunit	Blocks the tRNA from binding to the ribosomal A-site, stopping translation.
Macrolides (e.g., Erythromycin)	50S Ribosomal Subunit	Binds to the 50S subunit and prevents the physical translocation of the machinery along the mRNA, halting the growing amino acid chain.

The Future: mRNA as a Therapeutic Tool

Modern pharmacy has progressed past simply blocking protein synthesis to actively utilizing the pathway for therapeutic benefit. The development of mRNA vaccine technology is a prime example of this paradigm shift. Rather than introducing a weakened pathogen to stimulate an immune response, these therapeutics deliver synthetic mRNA sequences directly into host tissues. The recipient's cellular ribosomes read these codons, translate them, and express a harmless viral protein that trains the immune system to recognize the actual pathogen.

Ultimately, decoding transcription and translation bridges the gap between basic cellular biology and life-saving molecular medicine.

References

1. Hall, J. E., & Hall, M. E. (2026). Guyton and Hall textbook of medical physiology (15th ed.). Elsevier.
2. Ritter, J. M., Flower, R., Henderson, G., Loke, Y. K., MacEwan, D., & Rang, H. P. (2020). Rang & Dale's Pharmacology (9th ed.). Elsevier.
3. Tortora, G. J., & Derrickson, B. (2023). Principles of anatomy and physiology (16th ed.). John Wiley & Sons.

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BPharm (Cohort 7)



FDA APPROVED DRUGS

S.NO	Drug	Indication	Date of Approval
1.	Veppanu (vepdegestrant) ORAL FILM COATED TABLET	To treat estrogen receptor-positive, human epidermal growth factor receptor 2-negative, ESR1-mutated advanced or metastatic breast cancer with disease progression following at least one line of endocrine therapy	5/1/2026
2.	Beqalzi (sonrotoclax) ORAL FILM COATED TABLET	To treat adults with relapsed or refractory mantle cell lymphoma after at least two lines of systemic therapy, including a Bruton's tyrosine kinase inhibitor	5/13/2026
3.	Baxfendy (baxdrostat) ORAL FILM COATED TABLET	To treat hypertension in combination with other antihypertensive drugs	5/15/2026
4.	Hepcludex (bulevirtide-gmod) LYOPHILIZED POWDER FOR SUBCUTANEOUS INJECTION	To treat chronic hepatitis delta virus infection in adults without cirrhosis or with compensated cirrhosis	5/22/2026
5.	Decnupaz (pivekimab sunirine-pvzy) LYOPHILIZED POWDER FOR SOLUTION FOR IV INFUSION	To treat adults with blastic plasmacytoid dendritic cell neoplasm	5/27/2026
6.	Zaynich (cefepime and zidebactam) STERILE DRY POWDER FOR	To treat complicated urinary tract infections, including pyelonephritis, caused by designated susceptible microorganisms caused by designated susceptible microorganisms	5/29/2026

	INJECTION OR IV INFUSION		
7.	Xocova (ensitrelvir) ORAL UNCOATED TABLET	To use as post-exposure prophylaxis of coronavirus disease 2019 (COVID-19) following contact with an individual who has COVID-19	5/29/2026
8.	Cypsedo (cipepofol) INJECTABLE IMULSION FOR IV ADMINISTRATION	To induce general anesthesia in adults undergoing surgery	5/29/2026
9.	Ambelvist (gadoquatrane) INJECTABLE SOLUTION FOR IV ADMINISTRATION	To detect and visualize lesions with abnormal vascularity, in conjunction with MRI	6/12/2026
10.	Utebzi (tebipenem pivoxil) ORAL FILM COATED TABLET	To treat complicated urinary tract infections, including pyelonephritis, caused by several susceptible microorganisms in adults who have limited or no alternative oral treatment options	6/17/2026
11.	Lumvoa (veligrotug) IV INFUSION	To treat thyroid eye disease	6/26/2026
12.	Trutakna (atacept) SUBCUTANEOUS INJECTION	To reduce proteinuria in adults with primary immunoglobulin A nephropathy at risk for disease progression	7/7/2026

13.	Revtorpyk (gedatolisib) LYOPHILIZED POWDER FOR IV INFUSION	In combination with fulvestran, to treat hormone receptor-positive, human epidermal growth factor receptor 2-negative, locally advanced or metastatic breast cancer without a PIK3CA mutation detected following progression on or after treatment with at least one line of endocrine therapy in the metastatic setting	7/14/2026
14.	Lipfendra (enlicitide decanoate) ORAL FILM COATED TABLET	To reduce low-density lipoprotein cholesterol	7/15/2026
15.	Jideytro (zidesamtinib) ORALFILM COATED TABLET	To treat adults with locally advanced or metastatic ROS1-positive non-small cell lung cancer after receiving a ROS1 kinase inhibitor	7/22/2026
16.	Lytenava (bevacizumab-vikg) INTRAVITREAL INJECTION	To treat patients with neovascular (wet) age-related macular degeneration	7/24/2026
17.	Simtriyo (centanafadine) EXTENDED-RELEASE ORAL CAPSULE	To treat attention-deficit hyperactivity disorder	7/24/2026
18.	Orzeyful (oveporexton) ORAL TABLET	To treat narcolepsy type 1	8/5/2026
19.	Tudriqev (vusolimogene oderparepvec) SUSPENSION FOR INTRATUMOR INJECTION	A genetically modified oncolytic viral therapy for use in combination with nivolumab for the treatment of advanced cutaneous melanoma.	8/6/2026

20.	Zenbexus (iberdomide) Capsules	A cereblon-modulating protein degrader used in combination with daratumumab and hyaluronidase-fihj and dexamethasone for the treatment of multiple myeloma.	8/13/2026
21.	Tauklarity (florquinitalu F 18) INJECTION	A radioactive diagnostic drug indicated for positron emission tomography (PET) of the brain in adults with cognitive impairment who are being evaluated for Alzheimer's disease to identify patients with tau neurofibrillary tangle pathology.	14/8/2026
22.	mFLUSIVA (influenza vaccine, mRNA) INJECTION	An mRNA-based flu vaccine for for the prevention of influenza disease.	5/8/2026
23.	Gwyn Lo (ethinyl estradiol and norelgestromin) Transdermal system	A once-weekly, estrogen/progestin combination hormonal contraceptive patch for the prevention of pregnancy.	28/7/2026

REFERENCES:

1. US Food and Drug Administration. Novel drug approvals for 2026 [Internet]. Silver Spring (MD): FDA; 2026 [cited 2026 Aug 24]. Available from: <https://www.fda.gov/drugs/novel-drug-approvals-fda/novel-drug-approvals-2026>
2. Drugs.com. FDA new drug approvals [Internet]. Auckland: Drugs.com; 2026 [cited 2026 Aug 24]. Available from: <https://www.drugs.com/newdrugs.html>
3. National Library of Medicine (US). DailyMed [Internet]. Bethesda (MD): National Institutes of Health, National Library of Medicine; 2026 [cited 2026 Aug 24]. Available from: <https://dailymed.nlm.nih.gov/dailymed/>

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BPharm (Cohort 5)



Drug Profile: Bone glue/ Bone-02 A

surgical bioadhesive

Product name: Bone-02 OR Bone glue

Type: Biomimetic bone adhesive (bioadhesive/bone glue) classified as an orthopedic medical device/biomaterial, not a conventional systemic drug.

Developer: Developed by researchers at Zhejiang University's Sir Run Run Shaw Hospital, led by Dr. Lin Xianfeng.

Class: Biomimetic bioadhesive (oyster-protein-inspired composite)

Dosage form / administration: Supplied as an injectable adhesive, delivered directly into the fracture site via syringe through a small 2–3 cm incision. It sets within 2–3 minutes and can bond fragments even in blood-rich, wet surgical environments a condition that has historically challenged conventional bone adhesives.

how does it work?

The adhesive is a **dual-biomimetic hydrogel** made from a network of organic and inorganic components: caffeic acid-grafted collagen (CAC), aminated laponite (ALAP) and tetra-PEG-SC (a chemically activated polyethylene glycol). This combination gives the material dramatic mechanical strength, withstanding up to 98 % compression and 600 % tensile deformation, allowing it to hold bone fragments in place even in a blood-rich surgical field.

Indication: Repair of bone fractures particularly complex or comminuted fractures where fragments need to be joined without conventional metal plates or screws.

Clinical purpose: Comminuted fractures are notoriously difficult to fix because of the many small fragments and high risk of non-union or mal-union. Traditional metal plates and screws have limitations, especially in small or irregular fragments. A strong adhesive that both stabilises and encourages bone regrowth could reduce surgical complexity, recovery time and long-term complications.

Traditional fracture fixation relies on metal plates, screws, or pins, which require open surgery, carry infection risk, and often need a second surgery for hardware removal later. Bone-02 is designed to eliminate these steps by chemically bonding bone fragments directly, reducing surgical trauma and recovery time.

Mechanism of action: Inspired by the way oysters firmly adhere to wet, turbulent surfaces using proteins that harden quickly and bond tightly even underwater, Lin's team engineered Bone-02 to chemically latch onto the bone's hydroxyapatite matrix. Its formula combines calcium compounds with specialized proteins to create a bond that is strong, flexible, and biologically safe.

Clinical experience so far: Used in over 150 patients to date, with reports of full healing without complications or need for secondary procedures. In one documented case, a wrist fracture treated through a 3 cm incision healed fully within three months of follow-up, with no complications.

Advantages:

- Reduced surgical time due to rapid bonding of fragments.
- Lower infection risk compared to traditional metal implants in early testing.
- Eliminates the need for a second surgery to remove hardware.

Side effects and Interactions: -

There are no clinically reported side effects, contraindications, and interactions of this Bone glue.

References:

1. Zurowska A. Chinese scientists develop “bone glue” for shattered fractures. *EMJ Rheumatol*. 2025 Oct 28. Available from
2. Fatima M, Aslam HG, Sajid H, Mahato RK. Bone-O2 bio-adhesive: redefining the future of fracture fixation. *Ann Med Surg (Lond)*. 2026;88(2):2226-2227. doi:10.1097/MS9.0000000000004766.
3. MedBound Times — "China's Bone-O2: Oyster-Inspired Glue Heals Broken Bones in Minutes

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BPharm (Cohort 3)



Events' Corner

1. Guest Lecture - Pharmacovigilance and Drug Safety

On 9th of April, the JSS Academy of Higher Education and Research Mauritius organised a guest lecture on Pharmacovigilance and Drug Safety for MBBS and B Pharm students. The session was delivered by the Acting Director of Pharmaceutical Services at the Ministry of Health and Wellness, Mrs Waheeda Gopee who provided valuable insights of the importance of drug safety monitoring in the Health Sector.

The lecture highlighted the role of Pharmacovigilance in detecting assessing and preventing adverse drug reactions (ADRs) to ensure patient safety. During the session, the speaker explained that safety of medicines continues to be monitored even after it reaches the market, helping to identify rare side effects that may not have been detected during clinical trials. The session gave students a practical understanding of Pharmacovigilance and highlighted the pivotal role that future Doctors and Pharmacists will have in promoting the safe and responsible use of medicines.



Guest Lecture on Healthy Living through Exercise and Yoga

On the occasion of World Health Day 2026 themed “Together for Health. Stand with Science”, JSS Academy of Higher Education and Research, Mauritius organized an enlightening guest lecture on “Healthy Living through Exercise and Yoga” on 9th April 2026.

The session was conducted by Ms. Tanya Gupta, Teacher of Indian Yoga at IGCIC, who shared valuable insights on the importance of maintaining physical, mental, and emotional well-being through regular exercise and yoga practices. She emphasized how a healthy lifestyle can prevent various diseases, reduce stress, improve flexibility, and enhance overall quality of life. Through practical examples and interactive discussions, she highlighted simple yet effective ways to incorporate exercise and yoga into daily routines. The lecture encouraged participants to adopt healthy habits and develop a balanced approach to life. Students actively participated throughout the session, asking thoughtful questions and sharing their experiences related to fitness and wellness. The engaging nature of the lecture created a lively atmosphere and fostered meaningful discussions on health awareness and self-care.

Ms. Gupta's motivating presentation inspired attendees to recognize the significance of regular physical activity and mindfulness in achieving long-term health. The session received an overwhelmingly positive response from the audience and proved to be both educational and inspiring, making it a memorable contribution to the World Health Day celebrations at the institution.



2. JSS Academy Sports Day 2026: A Celebration of Unity, Talent, and Determination

Annual Sports Day 2026 was a remarkable celebration of athleticism, teamwork, and school spirit at JSSAHERM. Over the course of several days, students enthusiastically participated in a variety of sporting events, demonstrating determination, dedication, and a passion for excellence. The event provided an opportunity for students from different programs to come together, compete, and support one another in a positive and encouraging environment. The celebration began with an inspiring opening ceremony, marked by enthusiasm, pride, and a strong sense of togetherness. The presence of the university leadership, faculty members, organizers, and students added great value to the occasion and encouraged all participants to give their best.

Following the opening formalities and the athletes' oath, the energy of the crowd rose as students prepared to represent their teams with confidence and respect. Cheers, encouragement, and friendly rivalry filled the atmosphere, setting the perfect tone for the days of competition ahead.

The first phase of the event featured a wide range of indoor and outdoor games, allowing students to showcase not only physical strength, but also strategy, concentration, and teamwork.

- Indoor events such as chess, carrom, dominoes, and table tennis highlighted patience, focus, precision, and tactical thinking.
- Outdoor events including football, basketball, volleyball, cricket, dodgeball, tug of war, and pétanque brought excitement, determination, and strong team spirit to the field.
- Badminton matches, played in different categories, displayed agility, coordination, and impressive sportsmanship among the participants.

The final day was filled with anticipation and excitement, as students gathered to witness the most decisive matches and celebrate the achievements of all participants. The atmosphere was lively, with supporters cheering passionately for their friends and teams.

One of the most memorable highlights was the football match which attracted a loud and enthusiastic crowd. The match displayed teamwork, determination, and tactical skill from

both sides, making it one of the most exciting moments of the event. The tug of war event also captured everyone's attention, as strength, coordination, and unity were tested in front of a cheering audience. Every pull reflected the power of teamwork and the importance of collective effort. As the final whistle blew and applause echoed across the grounds, it became clear that Sports Day was not only about winning trophies. It was about building confidence, strengthening bonds, and creating memories that will remain part of university life.

“Sportsmanship is not only about victory—it is about respect, discipline, and giving your best with pride.”

“The memories created with friends are the moments that make university life truly meaningful”

Celebrating Our Champions

In recognition of outstanding performance, commitment, and team spirit, the following students and teams were awarded:

EVENT	WINNERS
Tug of War	Kushmita, Rookaya Waseem, Mohammad, Haadiyah, Vaibhava, Raees, Milan, Nikhil, Narmeen
Pétanque	Shama'h and Anasheed
Table Tennis (Double)	Manthan and Adithi
Carrom	Hitesh and Saiyethi
Domino	Choony and Anasheed
Football	Deepak, Manthan, Yuvraj, Farhaan, Hitesh, Mohammad, Anasheed
Basketball	Jeyvin, Arshaad, Alisha, Githika, Saniya
Dodgeball	Haadiyah, Bilal, Venkatesh, Rookaya, Hayfaah
Volleyball	Waseem, Saniya, Githika, Manthan, Krishna
Cricket	Manthan, Hitesh, Amogh, Deepak, Gurumallesha, Pushkar, Rakesh, Joshua, Yuvraj, Mohammad, Abhay
Badminton (Boys' Singles)	Manthan
Badminton (Girls' Singles)	Vainika
Badminton (Boys' Doubles)	Manthan and Hitesh
Badminton (Girls' Doubles)	Vainika and Saarah
Badminton (Mixed Doubles)	Manthan and Vainika
Chess	Venkatesh

The JSS Academy Sports Day 2026 will be remembered not only for its competitive spirit, but also for the laughter, friendships, and bonds it strengthened. It served as a reminder that medals may fade, but memories and shared experiences remain forever. To every athlete, organizer, volunteer, faculty member, and cheering friend—thank you for making this event a success. Your energy, commitment, and support made Sports Day truly special. Here's to the memories, the friendships, and the magic of Sports Day. Until the next edition—game on!



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Mr. Arshaad Gendoo
Mr. Jeyvin Vencatasamy
Mr. Hitesh Kumar
Mr. Khodabocus Ismail

3. National Science Week (NSW) 2026

Following the beautiful event which highlighted the milestone of signing a Memorandum of Understanding (MoU) with Rajiv Gandhi Science Centre (RGSC), JSS Academy of Higher Education and Research, took part in the National Science Week 2026 which was launched to promote STEM education and innovation.

The theme was “STEM: Exploring, Innovating and Inspiring” and JSS AHERM with a group of faculty and students of BPharm, Biotech and MBBS students, took part in showcasing the various portraits of the fascinating modules that are conducted during the course of the years, of the various programs. Along with other institutions, the aim of the showcasing was the show the practical applications of science and technology across various sectors, specifically targeting the youngsters, below 18, consisting of college students and even primary school students, to motivate them to opt for the scientific field.

The Science Week took place from the 01st of June till the 05th of June and it was open to the public. On the first day, the Minister of Tertiary Education, Science and Research, Dr. Kaviraj Sharma Sukon during his speech, emphasized on the importance of science and technology in national development, highlighting the need to reverse the declining number of students opting for science-related subjects. He highlighted that STEM plays a crucial role in shaping the future of Mauritius, fostering innovation and preparing younger generations to face future scientific and technological challenges.



Image source: GIS

4. World Environment Day 2026

The Faculty of Life Sciences at JSS Academy of Higher Education and Research in Mauritius celebrated World Environment Day 2026 with a two-day program on June 4th and 5th. The event focused on raising awareness about the environment, promoting sustainable practices, and inspiring collective action to protect our planet.

The first day included an environmental photography exhibition and competition. Participants showcased their creativity and perspectives on nature and conservation. The event began with a welcome speech from Prof. (Dr.) Jaishree Vajjanathappa, Head of the Faculty of Life Sciences. She emphasized the need to build environmental awareness among students and the community. Prof. (Dr.) Praveen Mohadeb, CEO and Vice-Chancellor of JSSAHER Mauritius, shared his vision for promoting sustainability through meaningful initiatives and active involvement. Hon. Kaviraj Rookny, a Member of Parliament, served as the Chief Guest and inspired attendees with his speech. He urged participants to take responsibility for protecting the environment and to adopt sustainable practices in their daily lives. As a gesture of gratitude, Hon. Kaviraj Rookny and Ms. Marie Christel Legrand, Deputy Mayor of the Municipal Council of Vacoas-Phoenix, were presented with tokens of appreciation for gracing the occasion. The winners of the photography competition were acknowledged for their creativity and their efforts in spreading awareness through their work. The program concluded with a thank-you speech from Mr. Naveen K. P., Registrar of JSSAHER Mauritius, followed by refreshments and discussions among attendees.

The second day featured a Beach Clean-Up Drive at Flic en Flac (Débarcadère) Beach. Students, faculty members, and staff joined forces to help preserve the coastal beauty of Mauritius by collecting and sorting waste along the shore. This initiative not only cleaned the beach but also highlighted the importance of responsible waste management and the role each person can play in protecting the environment. The enthusiasm and teamwork shown by all the volunteers truly reflected the spirit of World Environment Day. This hands-on activity strengthened the connection between the institution and the community. It also encouraged participants to continue making environmentally responsible choices.

This two-day celebration effectively blended awareness with action, leaving participants with a renewed commitment to sustainability and environmental conservation. Through such initiatives, JSSAHER Mauritius fosters a culture of caring for nature and inspires efforts to build a cleaner and greener future.

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

Faculty of Life Sciences

WORLD ENVIRONMENT DAY 2026
Theme: *Climate action*
4th & 5th JUNE 2026

Inspired by Nature, For Climate, For Our Future.
THEME: CLIMATE ACTION
World Environment Day, celebrated every year on 5th June, is the United Nations principal platform for encouraging awareness and action for the protection of our environment. The 2026 theme inspires us to drive solutions from nature and act together for climate resilience and a better future for generations to come.

Small actions today, a better tomorrow!

OUR COMMITMENT
Together, let us strengthen our commitment to protecting the environment and creating a healthier planet for generations to come.

DAY 1: 4th JUNE 2026
Venue: Room 2.3, 2nd Floor Conference Hall

TIME	ACTIVITY	NAMES
2:00 PM	Exhibition and Evaluation of Photographs	By Chief guest and team
2:15 PM	Welcome address	Prof (Dr.) Jaishree Vajjanathappa, Head, Faculty of Life Sciences & Faculty of Management Studies, JSSAHERM
2:20 PM	Opening Remarks	Prof (Dr.) Praveen Mohadeb, CEO & Vice-Chancellor, JSSAHERM
2:30 PM	Chief Guest Address	Hon. Kaviraj Rookny, Member of Parliament
2:40 PM	Distribution of Certificates for the winners in Photography competition	By Chief Guest and others
2:50 PM	Vote of thanks	Mr. Naveen K.P., Registrar, JSSAHERM
3:00 PM	Refreshment	

DAY 2: 5th JUNE 2026
Venue: Flic en Flac (Débarcadère) Beach

TIME	ACTIVITY	NAMES
08:00 am	Team arrival & setup	Staff/Students
09:30 am	Volunteer registration	Participants/Students
10:00 am	Safety briefing	Dr. Jaishree Vajjanathappa
10:10 am	Clean-up and Waste sorting begins	JSSAHERM team
12:20 pm	Group photo of activity	JSSAHERM team
12:25 pm	Lunch	JSSAHERM team

Together for Nature, Together for Our Future.

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BSc Biotechnology (Cohort 1)

5. A two-day international conference on 'Lifestyle Diseases in the Developing World

A two-day international conference on 'Lifestyle Diseases in the Developing World: Perspectives, Current Status and Future Challenges' was organized by JSSAHERM and NAM S&T Centre, New Delhi between 14 -15 May 2026 at Royal Green Wellness Resort, Mauritius.

The Welcome Remarks were delivered by Prof. (Dr.) Ashish D. Wadhwani, Head, Faculty of Health Sciences and Dean, School of Pharmacy, JSSAHER, Mauritius. He extended a warm welcome to all dignitaries, invited speakers, delegates and participants. Dr. Wadhwani outlined the scope and objectives of the conference, emphasizing the urgent need for a multidisciplinary and collaborative approach to combat the increasing prevalence of Lifestyle related Diseases. He acknowledged the valuable partnership with the NAM S&T Centre in advancing shared goals related to science, technology, healthcare and sustainable development. He also expressed his gratitude to the sponsors and supporting organizations whose contributions made this conference possible. The Opening Remarks were delivered by Dr. Amitava Bandopadhyay, Director General, Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), New Delhi, India. He stressed the importance of international scientific collaborations, equitable partnerships and capacity building among member countries. Dr. Bandopadhyay highlighted the NAM S&T Centre's 3 continued commitment to supporting member countries to align their healthcare models with global development goals through effective South-South cooperation. He expressed his sincere gratitude to Dr. The Honourable Kaviraj Sharma SUKON, Minister of Tertiary Education, Science and Research, Govt. of Mauritius; and President, NAM S&T Centre Governing Council, for graciously accepting the invitation to attend the Inaugural Session as the Chief Guest, despite his demanding schedule. He appreciated the exemplary leadership of Prof. (Dr.) Praveen Mohadeb Chief Executive Officer and Vice-Chancellor, JSSAHERM in the successful organization of the conference and conveyed his thanks to the entire JSSAHERM team, particularly Prof. (Dr.) Ashish D. Wadhwani and Mr. Naveen K.P. (Registrar, JSSAHERM), for their dedicated efforts in hosting the Conference. He also took the opportunity to thank Dr. H. Basavanagowdappa, Vice Chancellor, JSSAHER, Mysuru for sparing his valuable time to deliver the Prologue Address during the Inaugural Session. Prof. (Dr.) Praveen Mohadeb then addressed the gathering during his Opening Remarks. He welcomed the dignitaries, invited guests, speakers and participants, and provided an overview of JSSAHERM's vision, achievements and contributions to higher education and healthcare in Mauritius. Emphasizing the importance of the conference theme, he noted that addressing lifestyle diseases requires collective action that extends beyond healthcare providers to include policymakers, educators, researchers, industry stakeholders and communities. He highlighted the need to create supportive environment that promote healthy lifestyles, strengthen preventive healthcare measures, and enhance public awareness to effectively tackle the growing burden of NCDs in developing nations. The conference was officially inaugurated by the Chief Guest, Dr. The Honourable Kaviraj Sharma SUKON, Minister of Tertiary Education, Science and Research, Republic of Mauritius. In his Inaugural Address, he warmly welcomed the participants, speakers, researchers and delegates from across the developing world, and expressed his appreciation for the organizers in selecting Mauritius as the venue for this important International Conference. Referring to the increasing prevalence of diabetes and other lifestyle-related diseases, the Minister emphasized the need for multidisciplinary research and collaborative efforts. He noted that addressing the growing burden of NCDs requires a comprehensive approach that integrates technological innovation, public awareness and preventive healthcare. He observed that health and education are intrinsically linked, noting that a healthy population forms the foundation for sustainable and economic

development. He underscored the critical role of academic and research institutions in generating evidence-based solutions and validating interventions to reduce lifestyle-related health risks. He further highlighted the financial implications that chronic diseases impose on national healthcare systems, emphasizing the need for preventive strategies and long-term policy planning. Following his address, he officially released the LSD-2026 Conference Booklet (e-Abstract Booklet Ceremony). He then formally declared the conference open and conveyed his best wishes for fruitful deliberations and successful outcomes from the conference. A formal Vote of Thanks was delivered by Mr. Naveen K.P., Registrar, JSSAHERM. He extended special appreciation to Dr. The Honourable Kaviraj Sharma SUKON for his gracious presence and inspiring address; Prof. (Dr.) Praveen Mohadeb for his leadership and support; and Dr. Amitava Bandopadhyay for this valuable collaboration and his contributions. He also acknowledged the efforts of the organizing committee, faculty members, staff, students, sponsors and volunteers, whose dedication contributed significantly to the successful conduct of the conference. This was followed by an official group photograph and networking tea break, providing an opportunity for attendees to interact, exchange ideas and establish professional connections. 4 The Inaugural Session concluded with Prologue Address, delivered online by Dr. H. Basavanagowdappa, Vice Chancellor, JSSAHER, Mysuru. In his address, Dr. Basavanagowdappa described lifestyle diseases as the “new pandemic” of the modern era, highlighting their rapid rise across both developed and developing nations. He emphasized that the objective of healthcare should not merely be to increase life expectancy but to ensure healthier, more productive and meaningful lives.



6. His Holiness Sri Sri Sugunendra Theertha Swamiji Visits Mauritius to Promote Global Harmony and Value-Based Education

His Holiness Sri Sri Sugunendra Theertha Swamiji, the 30th Pontiff of Sri Puthige Matha, Udupi, Karnataka, India, and International Co-President of Religions for Peace, undertook an official visit to Mauritius from 21 to 25 June 2026 to promote global harmony, interfaith cooperation, and value-based education.

Key Engagements

2026 International Council Meeting

His Holiness participated in the 2026 International Council Meeting: *Forging Pathways for Shared Sacred Flourishing*, held from 23 to 25 June 2026. The meeting was hosted in partnership with the Religions for Peace Council of Religions, Mauritius, bringing together faith leaders and stakeholders committed to advancing peace, mutual respect, and sustainable development through interfaith collaboration.

Diplomatic Meetings

During his visit, His Holiness paid a courtesy call on the President of the Republic of Mauritius, His Excellency Mr. Dharambeer Gokhool. Their discussions emphasized His Holiness' philosophy that spirituality should guide polity in fostering peace, ethical leadership, and global harmony. The meeting was attended by Dr. Praveen Mohadeb, CEO & Vice Chancellor of JSSAHER, Mauritius, and Mr. Naveen K P, Registrar of JSSAHER Mauritius.

His Holiness also met with the High Commissioner of India to Mauritius, His Excellency Mr. Anurag Srivastava.

Interaction with Mallige Kannada Balaga Mauritius

His Holiness met with members of Mallige Kannada Balaga Mauritius, where he addressed the community and encouraged them to preserve their rich cultural heritage while promoting harmony, unity, and service within the multicultural fabric of Mauritius.

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

His Holiness visited the JSSAHERM, where he interacted with students, faculty, and staff. In his interaction, he spoke on the importance of universal brotherhood, compassion, and ethical living, urging the academic community to use knowledge and education as powerful instruments for preserving global peace, harmony, and sustainable development.



MOU - Memorandum of Understanding



1. MedActiv

The MOU establishes a partnership between JSS Academy of Higher Education and Research (Mauritius) Ltd and Medical Trading Company Ltd (MedActiv) to promote cooperation and strengthen pharmacy and related healthcare education. It provides opportunities for student traineeships, internships and placements, particularly for Bachelor and Master of Pharmacy students, while supporting collaboration between academia and the healthcare sector in Mauritius.

- E.** The Parties to this MOU also wish to engage with each other in a program of cooperation to explore potential collaborations such as:
- (a) Conduct of CPD/refresher course for Pharmacists
 - (b) Conduct health promotion and educational programs
 - (c) Promote advancement in the field of pharmacy
 - (d) Sharing intelligence, expertise and experiences
 - (e) Provision of scholarships and bursaries to Students

2. Rajiv Gandhi Science Centre (RGSC)

MoU signed to strengthen public and private collaboration in the field of STEM

A Memorandum of Understanding (MoU) aiming to strengthen public and private collaboration in STEM education was signed between the Rajiv Gandhi Science Centre (RGSC) and the JSS Academy of Higher Education and Research, in presence of the Minister of Tertiary Education, Science and Research, Dr Kaviraj Sukon, at the RGSC in Bell Village.

The MoU aims to enable teachers to adopt engaging science education approaches, enhance public engagement with science and create opportunities for collaborative research and innovation.

Minister Sukon reaffirmed Government's commitment to strengthening STEM education, build meaningful partnerships and develop a conducive research and innovation ecosystem.



Publications, Visits, Achievements and Conferences/Workshop

1. Promoting Blue Economy and Overcoming its Implementation Challenges

Date: 26–27 March 2026

Venue: Conference Hall, Pearle Beach Resorts

The International Workshop on “Promoting Blue Economy and Overcoming its Implementation Challenges” was conducted for two days, bringing together international experts, researchers, policymakers, and practitioners. The workshop aimed to explore sustainable strategies for developing the blue economy while addressing practical implementation barriers, particularly in developing countries.

Prof Jaishree Vaijnathappa, Head, Faculty of Life Sciences and Management Studies attend the workshop.

The two-day workshop provided a comprehensive platform for discussing both theoretical and practical aspects of the blue economy. Day 1 emphasized environmental management and technical solutions, while Day 2 focused on education, policy integration, and international collaboration.

The discussions highlighted that achieving a sustainable blue economy requires coordinated efforts across sectors, strong institutional frameworks, and continuous knowledge exchange.



2. Mauritius Micro-Credentials – Approval & Recognition Framework for Higher Education

Date: Monday, 30 March 2026

Venue: Hennessy Park Hotel, Ebène

A programme on Mauritius Micro-Credentials: Approval & Recognition Framework for Higher Education was held on 30 March 2026 at Hennessy Park Hotel, Ebène. The event brought together key stakeholders from the higher education sector to discuss the development, implementation, and recognition of micro-credentials in Mauritius.

In opening remarks Professor (Dr) R. Mohee, Commissioner, HEC, highlighted the future trends in employability and the strategic role of micro-credentials in enhancing employability and aligning education with industry needs.

The official opening address was given by the Honorable Dr Kaviraj Sharma Sukon, Minister of Tertiary Education, Science and Research, PFHEA, HFCoL. He highlighted the government's commitment to fostering innovation in higher education and promoting flexible learning pathways. The micro-credentials are targeted to skills and competencies, and the delivery is important.

1. AI Automation and Intelligent Systems for Digital Transformation (Naveo)

—Course Structure:

- Day 1: AI and Programming Foundations
- Day 2: Application of AI for Digital Transformation
- Day 3: LLM Engineering and AI Assistants
- Day 4: AI Automation for Engineering and DevOps
- Day 5: AI for IoT Data Quality and Sensor Intelligence
- Day 6: Intelligent Operations and AI-Driven Decision Systems (3hrs)
- Day 7: Capstone Project - Presentation (3 hrs)

—Assessment:

- Formative: Short Quizzes, Coding Tasks, Group Activities
- Summative: Group Project. To design, implement, and deploy an AI Automation workflow and AI agent application
- Examples: Code generation and auto-completion, automated invoice processing and validation, predictive sales analytics, Automated ticket classification, prioritisation and intelligent routing of tickets to the right engineers

KEY SKILLS GAPS IDENTIFIED

Most critical gaps across stakeholders:

- 1. Communication Skills**
Poor verbal, written, and interpersonal communication.
- 2. Practical and Job-Ready Skills**
Strong theoretical knowledge but limited ability to apply it in real-world contexts. Employers report graduates require extensive on-the-job training. Difficulty adapting academic learning to workplace tasks.
- 3. Emotional Intelligence and Professional Behaviour**
Low emotional self-regulation, resilience, and stress management. Unrealistic expectations regarding career progression and work-life balance.

HEC Approval Process

The approval process has the following steps:

- Step 1: Submission of application to the HEC**
• Application should be submitted on application form + Prescribed Fees
- Step 2: Administrative Screening by HEC**
• HEC reviews the application and ensures that application is complete
- Step 3: Decision by the HEC Board**
• The HEC Board may decide to approve/provisionally approve/not approve
- Step 4: Notification of Outcome**
• The HEC is formally informed of the decision of the HEC Board
- Step 5: Validity Period and Renewal**
• Approval is granted for a maximum of 3 years and HECs may apply for renewal or approval

Post-Approval of Micro-Credentials

HEC-approved Micro-Credentials:

- Are listed on a national register
- May proceed to delivery
- Can be NQF level 5 to 9
- Are approved for a defined period (Max. of 3 years)
- Must be delivered as approved

Approval Process Overview

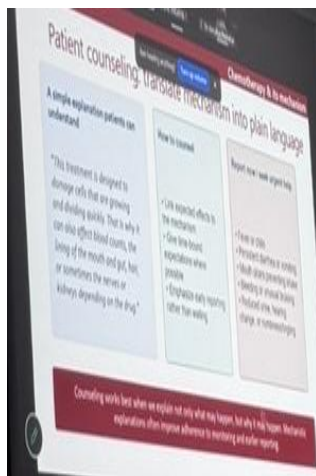
- Approved**
Meets all standards and criteria.
Approval is granted for a maximum of three-year period, and the micro-credential may be delivered and listed on the national register.
- Provisionally Approved**
Meets core standards but requires specific conditions to be addressed.
Approval is granted subject to compliance within a defined timeframe, followed by targeted review.
- Not Approved**
Does not meet required accreditation standards.
Significant redesign is required before a new submission may be considered.

The programme concluded with an interactive discussion on the way forward, focusing on future strategies and collaborative efforts to implement micro-credential frameworks effectively.

3. Continuing Professional Development (CPD)

Dr. Khayati Moudgil and Ms Khushi Beeharry, Final year BPharm student attended the Continuing Medical Education (CME) session organized by Medical Conferencing Services Ltd (MCS) in collaboration with the Medical Update Group. The event was held on Wednesday, April 1, 2026, from 19:00 to 22:30 at the Engineering Lecture Theatre 2, University of Mauritius. Sponsored by Glenmark Pharmaceuticals Ltd, this educational session was officially accredited for 2 CPD points by the Pharmacy Council of Mauritius.

The session featured a comprehensive curriculum presented by clinical pharmacologist Dr. Amullya Pednekar and moderated by Medical Oncologist Dr. Anil Bhushan Mohith. The academic program was divided into two core areas of oncology. The first part focused on understanding cancer biology, specifically examining cellular mutations and the precise pharmacological mechanisms of action behind chemotherapy. The second portion of the seminar provided a detailed introduction to modern oncology therapies. The session covered advanced clinical treatment modalities, including targeted therapies, immunotherapy, and the application of antibody-drug conjugates.



4. World Intellectual Property (IP) Day 2026

Prof Dr Ashish Wadhwani participated in the workshop on 8th June 2026 organized by the Mauritius Research and Innovation Council to commemorate World Intellectual Property Day 2026. The event was held under the theme “Driving Innovation and Growth in Sports”, bringing



together policymakers, researchers, innovators, entrepreneurs, sports professionals, and academic representatives to discuss the growing significance of intellectual property in fostering innovation within the sports sector.

The workshop highlighted the crucial role of intellectual property rights in protecting creativity, encouraging technological advancement, strengthening brand identity, and creating economic opportunities in sports. It provided a valuable platform for knowledge sharing and networking among stakeholders involved in research, innovation, and sports development.

The workshop was officially inaugurated by the Honourable Dr Kaviraj Sharma Sukon, Minister of Tertiary Education, Science and Research. In his keynote address, the Minister emphasized the importance of intellectual property as a strategic tool for safeguarding creativity, supporting innovation, and driving economic growth. The Minister further encouraged researchers, innovators, and academic institutions to increase their engagement in research activities, patent filing, technology transfer, and scientific publications.



The workshop provided valuable insights that are highly relevant to JSS Academy of Higher

Education and Research, Mauritius. Key takeaways include:

- Promoting awareness of intellectual property among students, faculty, and researchers.
- Encouraging patent filing and protection of innovative healthcare and pharmaceutical research outcomes.
- Integrating intellectual property education into research and academic programmes.
- Fostering collaborations with MRIC and other national innovation agencies to support research and innovation projects.

5. Advancing Pharmacy Practice Through Science: A Dynamic Lecture on GLP-1 and Dual GLP-1/GIP Agonists

As part of a Continuous Professional Development programme, Ms Manisha Ramprasad, had the privilege of delivering a lecture to an audience of pharmacists. The lecture happened at the seat of Premium Care clinic on Saturday 20th June 2026. The topic was on the evolving landscape of GLP-1 receptor agonists and dual GLP-1/GIP agonists. The session focused on the scientific engineering behind these innovative therapies, their mechanisms of action, and their transformative role in the management of Type 2 diabetes and obesity. The lecture explored how advances in peptide engineering have enabled the development of molecules with enhanced efficacy, prolonged duration of action, and improved patient outcomes. Attention was given to the physiological effects of GLP-1 and GIP, and how dual agonism has opened new avenues for glycaemic control and weight management.



To ensure an evidence-based discussion, I reviewed key findings from landmark clinical studies, including the STEP and SELECT trials, highlighting their impact on current clinical practice and future therapeutic directions. The presentation remained factual, balanced, and scientifically rigorous, allowing participants to critically evaluate the available evidence without bias. One of the most rewarding aspects of the event was the enthusiastic engagement from my fellow pharmacists. The session received generous appreciation and applause, with many attendees commenting on its dynamic and interactive nature. Rather than a conventional slide-reading presentation, the lecture encouraged discussion, critical thinking, and active participation, keeping the audience engaged throughout.

The experience reinforced the importance of translating complex scientific concepts into practical clinical knowledge, empowering pharmacists to remain at the forefront of patient care in an era of rapidly advancing therapeutics.

6. Reimagining the Future: UoM Hosts High-Level Executive Dialogue on Artificial Intelligence - 29 July 2026

The University of Mauritius was honoured to host a high-level Executive Dialogue on "AI for Growth: Reimagining Skills, Higher Education and Workforce Transformation" yesterday afternoon in LT2.

Facilitated by the Boston Consulting Group (BCG), whose team is currently supporting strategic discussions on Mauritius' Vision 2050, the dialogue brought together leaders from the higher education sector to explore the transformative role of Artificial Intelligence (AI) in shaping the future of skills, teaching and learning, research, innovation and workforce development.

The discussions highlighted the pivotal role of higher education institutions in preparing graduates for an AI-driven economy while supporting the implementation of the National Strategy for Higher Education, Science and Research 2025–2035.

The University was privileged to welcome Dr the Hon. Kaviraj Sharma Sukon, Minister of Tertiary Education, Science and Research, whose presence reaffirmed the Government's commitment to advancing higher education and harnessing the potential of AI as a catalyst for sustainable development. Prof Dr Praveen Mohadeb, CEO & VC participated in this dialogues.

The event concluded with an engaging question-and-answer session, providing participants with the opportunity to exchange perspectives on the opportunities, challenges and practical approaches to integrating AI across higher education.

By fostering strategic dialogue and collaboration among key stakeholders, the UoM continues to play a leading role in shaping the future of higher education, driving innovation and supporting national development in an increasingly AI-powered world.



7. Guest of Honour at Graduate Reception - Deekshanta 2026

JSS College of Pharmacy, Ooty, India successfully organised "A Double Celebration" on Aug 1, 2026, bringing together two significant milestones in the institution's academic journey - The "Graduate Reception" (Deekshanta 2026) for the outgoing batch of 2025-26 and "Freshers' Day" for the incoming batch of 2026-27. 191 graduates received their Graduate Citations (32 Pharm.D, 60 M.Pharm, 85 B.Pharm, and 14 D.Pharm). Presence of over 450 parents, who joined in celebrating the achievements of their wards.

Tmt. Brinda, IPS, Superintendent of Police, The Nilgiris; Dr. R. Sudeendra Bhat, CoE, JSS AHER, Mysuru; Mr. Shanmugam, Chairman, United Educational Institutions, Coimbatore; Prof Ashish Wadhwani and Dr. Khayati Moudgil, JSS School of Pharmacy, JSSAHER, Mauritius graced the occasion. The occasion beautifully symbolised the transition of one generation to the next.

As one group prepares to step beyond the gates of JSSCP, Ooty and embark on their professional journey, another enters with dreams, aspirations, and excitement. One group carries forward the knowledge, values, and experiences gained here, while the other begins the rewarding journey of discovering them.



7. International Antiviral Research Conference AVRS 2026

Prof Dr Ashish Wadhwani was invited as a Chief Guest and Dr Khayati Moudgil as Guest Speakers at Second International Antiviral Research Conference, Chennai, India held between 7th – 8th August 2026 at Hindustan Arts and Science University, Chennai. Dr Wadhwani delivered a Key Note address on Transforming Patient Care through Artificial Intelligence and Dr Moudgil delivered a talk on Adverse Events Following Immunization (AEFI) & The Essential Role of the Clinical Pharmacist in Vaccine Safety and Patient Vigilance.



8. Visit the Central Supplies Division (CSD)

As part of their academic curriculum, final-year B Pharm students, accompanied by faculty member Dr Khayati Moudgil, visited the Central Supplies Division (CSD) Warehouse in Mauritius on 21st August 2026, to bridge theoretical knowledge with practical pharmaceutical operations. The educational visit offered students valuable, hands-on insights into public sector medicine procurement, inventory control, and distribution logistics across regional healthcare facilities. Ms Nazeera, Principal Pharmacist and Mr Mohabeer, Manager provided the valuable insights about the stringent regulatory protocols, secure storage standards, and documentation procedures mandated for the handling of dangerous drugs and controlled substances, providing essential exposure to good distribution practices and national healthcare supply chain management.



9. My Academic Journey in Pharmacy - Dulmeer Bibi Shabnoor Fatimah

I'm Dulmeer Bibi Shabnoor Fatimah, and I'm currently in my third year of the Bachelor of Pharmacy program at JSSAHER Mauritius.

My academic journey really took shape during my time at Dr Maurice Curé State College. In 2022, I was honoured to be ranked among the top 500 students nationwide in the Higher School Certificate exams. Being named a laureate in September 2023 after securing an additional scholarship wasn't just a personal milestone for me-it marked the beginning of my journey toward studying pharmacy in Mauritius.

Why Pharmacy? Honestly, I've always been drawn to healthcare, particularly the scientific aspects that operate behind the scenes. Having enjoyed Chemistry during my college years, I was naturally inclined toward a science-based career. The critical role pharmacists play in patient safety inspired me to choose a path where I can integrate scientific understanding with direct contributions to patient care.

The last two years have been rigorous but rewarding. Gaining hands-on experience in the laboratory and diving into subjects like Pharmacology, Pharmaceuticals, and Pharmacognosy has significantly deepened my understanding of the human body and the development of medicines. Beyond academics, university life has been a crash course in discipline and time management. Balancing coursework, practical sessions, and exams hasn't always been easy, but it has definitely kept me focused and motivated.

Looking ahead, I'm excited to continue building my knowledge and skills. My ultimate goal is simple: to apply my scientific knowledge in a meaningful way and become a competent, reliable professional who supports individuals in managing their health safely and effectively.

Written by:

Ms Dulmeer Bibi Shabnoor Fatimah,

BPharm (Cohort 5)



10. International Conference attended by the Staff

During the International Conference on Science, Technology, Engineering, Management, Education Law and Medical Sciences - 2026 (STEMEM-2K26), held on March 28–29, 2026, Dr Khayati Moudgil delivered a formal oral presentation titled "An Epidemiological Assessment of Bone Disorders in Mauritius". This prestigious interdisciplinary event was organized through a collaborative international framework featuring prominent academic institutions, including Thammasat University (Rangsit Campus, Thailand), Bharathi Vidyapeeth's College of Pharmacy (Kolhapur), Avinash College of Arts & Science (Kannur, Kerala), Slamraj University, and Jehanabad College.



11. Educational Webinar

Dr. Khayati Moudgil successfully completed an educational webinar titled "Effective Journal Selection: Finding the Best Home for Your Manuscript" on April 29, 2026. This professional development session was hosted by LetPub Learning Nexus, a division of Accdon LLC.

The webinar provided strategic insights into the academic publishing landscape, focusing on methods for identifying and selecting optimal journals for research manuscripts. The training emphasized aligning research content with journal scopes to improve publication success and navigating the complexities of journal metrics.



12. Participation in Conference

Dr. Khayati Moudgil participated in the Cardiovascular, Renal, Metabolic, Liver and Obesity (CaReMeLO) Online Conference. Held on 8-9 May 2026, the event focused on empowering healthcare professionals and family physicians within the CaReMeLO management framework. This educational gathering was conducted both online and in Munich, Germany.

The conference was officially accredited by the European Accreditation Council for Continuing Medical Education (UEMS/EACCME). Upon completion of the sessions, Dr. Moudgil received 9.5 European CME credits.



13. Hands on Pre Conference Oncology Pharmacy Workshop

Dr. Khayati Moudgil successfully completed the Virtual & Hands-On Pre-Conference Oncology Pharmacy Workshop 2026. The training program ran over a multi-week duration, commencing on Friday, March 13th and concluding on Monday, May 11th, 2026.

The specialized workshop was jointly organized by the Faculty of Clinical Pharmacy of the West African Postgraduate College of Pharmacy (WAPCP) and the Oncology Pharmacy Practitioners Association of Nigeria (OPPAN).



14. Certificate of Appreciation

Dr. Khayati Moudgil was awarded a Certificate of Appreciation for her participation and E-Poster Presentation at the International Conference on "Lifestyle Diseases (LSD) in the Developing World: Perspectives, Current Status and Future Challenges" (LSD – 2026). The conference was held from 14th–15th May 2026 at the Royal Green Wellness Resort, Moka, Mauritius. Her presented research was titled "An Epidemiology Study on the Prevalence and Assessment of Bone-Related Disorders in Mauritius." The event was jointly organized by the JSS Academy of Higher Education and Research (JSSAHER), Mauritius, and the NAM S&T Centre, New Delhi, India.



15. Women-only interactive session

Dr. Khayati Moudgil attended an exclusive, women-only interactive session on Thursday, May 21, 2026, at the SABV Tower Conference Hall in Landscape, Mauritius. The evening was dedicated to elevating women's health, self-care, and personal empowerment through meaningful, open dialogue. The highly inspiring event featured insightful guest lectures from two distinguished medical professionals: Dr. Manjula Rao, an Onco Plastic Breast Surgeon from the Apollo Cancer Proton Hospital in India, who spoke passionately on the crucial need for self-care in her address, "Who Takes Care of the Caregiver? Because You Matter Too," and Dr. Shilpa Sinha, a Cosmetic Gynaecologist from Wellkin Hospital in Mauritius, who provided vital guidance on breaking taboos during her presentation, "Vaginal & Cervical Health – Reclaiming Intimate Health & Wellness." The successful event concluded on a high note, leading directly into a warm networking dinner that allowed all the participants to connect, share their personal insights, and build a stronger community of mutual support.



16. Faculty Development Programme

Dr Khayati Moudgil attended and successfully completed a one-week online International Faculty Development Programme (FDP) titled "Artificial Intelligence (AI) in Molecular Design and Genomics: Transforming Patient-Centered Care." The academic programme was held from June 20 to June 26, 2026, and was organized by the Faculty of Pharmaceutical Science (FPS), Assam down town University, in collaboration with the Association of Pharmaceutical Teachers of India (APTI), Assam State Branch.



17. Faculty Development Programme Resource Person

Prof. (Dr.) Ashish Wadhwani served as an invited Key Resource Person for the one-week online International Faculty Development Programme (FDP) titled "Artificial Intelligence (AI) in Molecular Design and Genomics: Transforming Patient-Centered Care." Organized by the Faculty of Pharmaceutical Science (FPS), Assam down town University, in collaboration with the Association of Pharmaceutical Teachers of India (APTI), Assam State Branch, the academic event was conducted from June 20 to June 26, 2026. Prof. Wadhwani contributed advanced insights into the application of artificial intelligence tools in drug discovery, molecular modeling, and genomic mapping. The contributions made during this international FDP supported faculty capacity-building, advanced contemporary curricular perspectives in AI-driven therapeutics, and earned formal recognition from the leadership of Assam down town University and APTI.



18. Participation in Webinar

Dr Khayati Moudgil attended the webinar titled "Risk Communication in Pharmacovigilance: Lessons from Vaccine Safety Communication in a Complex Information Environment" on July 6, 2026. Hosted by the Centre of Excellence for Pharmacovigilance in Southern Africa (CEPSA), the session provided critical educational strategies regarding vaccine safety data deployment and risk communication frameworks within complex healthcare environments.



19. Participation in 5th Edition of the University

Mauritius Doctoral Colloquium,

held from July 8–10, 2026, Dr Khayati Moudgil from the JSS Academy of Higher Education and Research, Mauritius, presented her research paper titled "A Cross-Sectional Study on Prevalence and Assessment of Bone-Disease and its Related Disorders in Republic of Mauritius." Her presentation took place online on Thursday, July 9, 2026, during Track 2.1 under the session theme "Bridging Research and Practice in Health and Medicine."



of

20. AVRS Fellow Award

Dr Khayati Moudgil, conferred with AVRS fellow award, awarded by Antiviral Research Society, India on 7th August 2026 during the International Conference on Antiviral Research held at Chennai.

At the same conference, Prof Dr Ashish Wadhvani was conferred with AVRS Outstanding Pharmaceutical Scientist Award 2026 by AVRS.



21. Guest Lecture

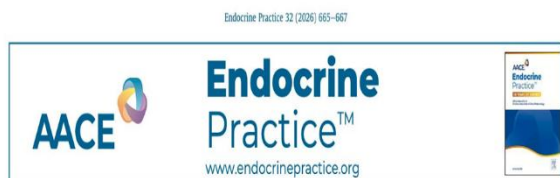
On August 22, 2026, Dr Khayati Moudgil delivered a guest lecture titled "From Signal Detection to Patient Safety: Contemporary Insights, Global Case Studies, and Actionable Frameworks for Pharmacists," organized by the Pharmaceutical Association of Mauritius (PAM). Addressing practicing pharmacists, the session focused on critical pharmacovigilance methodologies, proactive signal detection, and robust risk management strategies to prevent adverse drug events. Through the analysis of global case studies and actionable clinical frameworks, Dr Moudgil highlighted the essential role of pharmacists in strengthening medication safety surveillance and optimizing patient care outcomes across healthcare settings.



Publications

1. Bhumika Toolsee S, Jankee T, **Moudgil K***. Bone Diseases in East Africa: An Overlooked Public Health Challenge. Scopus Indexed [Internet]. 2026 Apr. 15 [cited 2026 May 27];19(2):8693-4. Scopus, Q4, Available from: <https://www.ijpsnonline.com/index.php/ijpsn/article/view/9622>
2. Lakshmi Nagendra, Khushboo Agarwal, Nitin Kapoor, Saptarshi Bhattacharya, **Khayati Moudgil**, et al, Redefining Osteoporosis: A Global Call for Equity, Evidence, and Access- Perspectives from Asia and Africa, Endocrine Practice, Volume 32, Issue 4, P665-667 April 2026, Scopus- Q1
3. JS A, Magar GB, **Moudgil K**, Patil DL, Tajve TP, Waghchaure SR. Burden and clinical impact of chemotherapy-induced adverse drug reactions: A prospective observational study. Journal of Oncology Pharmacy Practice. 2026. Scopus-Q3, IF- 1.2, doi:10.1177/10781552261445811
4. **Moudgil K***. The pharmacist's prescription for bone health is more than just calcium. Pharmacy Times. 2026 May 5. Available from: <https://www.pharmacytimes.com/view/the-pharmacist-s-prescription-for-bone-health-is-more-than-just-calcium>
5. Vasish Madoo, Angeli Tanwee Sophia, Arshad Muhamod Saroar, Shloka Suresh Sahetya, Ebenezer Wiafe, **Khayati Moudgil***, reducing prescription errors in Mauritius: Evidence synthesis and practice implications, Journal of Applied Pharmaceutical Science Vol.16(05), pp 148-153, May 2026. Q2 Scopus.
6. Rajesh Vagiri, Letlhogonolo Makhele, Mabitsela Mahisha, Varsha Bengalee , **Khayati Moudgil**, Frasia Oosthuizen, Wandisile Grootboom, Neelaveni Padayachee (2026). Anxiety, Depression and Their Correlates among Human Nutrition and Dietetics Undergraduates at a Rural South African University. Universal Journal of Public Health, 14(3), 591 - 605. DOI: 10.13189/ujph.2026.140317. Scopus- Q3, IF-0.45

7. Thulluru, A., **Yerrakula, G.**, Mohammed, N., Tadipatri, R. and Srighakollapu, V. (2026). Precision Medicine. In Genomics and Precision Healthcare (eds S.K. Koduru, S.P.N. Bukke, H. Bello, M.M. Mundu and A. Madan). <https://doi.org/10.1002/9781394367559.ch3>
8. Ramparsad C, Waseel IU, Allesai AB, Jayakumar C, Varghese TP, Vagiri R, Rekha MM, **Moudgil K***. The extent of smartphone usage and its assessment concerning postural issues and eye disorders in Mauritius. Int J Drug Deliv Technol. 2026;16(62s):1419-1429. doi:10.25258/ijddt.16.62s.148
9. Khansa Fathima, Mekkanti Manasa Rekha, Jayashree S., Khayati Moudgil (2026) 'Comparative Pan-Cancer analysis Of Driver Gene Mutations, Alternation Patterns And Oncogenic Pathway Associations Across Six Tcga Tumor Types Using Cbioportal', European Journal Of Biomedical And Pharmaceutical Sciences, 13(7), pp. 326–335. Available at: <https://doi.org/10.5281/zenodo.21290421>
10. **Ashish Wadhwani***, Sai Varshini, Praveen Mohadeb, Varsha Bangalee, Generic Medicines and Public Health in the Global South: A Cost Effective Solution to Tackle Healthcare Inequity. Generic Drugs: Science, Technology, Regulatory Frameworks and Socio-Economic Aspects, p.no. 253-266, 2026.



Discussion

Redefining Osteoporosis: A Global Call for Equity, Evidence, and Access- Perspectives from Asia and Africa

Lakshmi Nagendra, DM (Endocrinology), FRCP (Edin) ^{1,*}, Khushboo Agarwal, DM, DNB ², Nitin Kapoor, DM, ABBM, PDF, PhD ^{3,4}, Saptarshi Bhattacharya, DM ⁵, Khayati Moudgil, PharmD, MBA ⁶, A.B.M. Kamrul-Hasan, MD ⁷, Syed Abbas Raza, MD ^{8,9},



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Reducing prescription errors in Mauritius: Evidence synthesis and practice implications

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Prescription errors,
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e-prescriptions.

ABSTRACT

This review examines the prevalence, underlying causes, and clinical implications of prescription errors in Mauritius and outlines evidence-based strategies for their prevention. A critical appraisal of peer-reviewed literature, regional health reports, and international databases—including WHO, NPS, and national health statistics—indicates that prescription errors remain a significant public health concern. Contributing factors encompass human error, ineffective communication, systemic deficiencies, patient-related barriers, and environmental influences. Frequently reported problems include illegible handwriting, ambiguous abbreviations, and the absence of standardized prescribing protocols. Underpinning continues to obscure the true magnitude of the issue, hampering targeted interventions. Among the most commonly implicated therapeutic classes are antidiabetic agents, antihypertensive drugs, and analgesics. Evidence supports several key mitigation strategies: regular continuing professional development programs, the establishment of drug information centers, integration of Pharm-D professionals into prescribing teams, and the adoption of electronic prescribing systems and computerized physician order entry platforms. Addressing prescription errors in Mauritius, therefore, requires a multifaceted framework that combines policy reform, technological innovation, interprofessional collaboration, and a robust culture of reporting and feedback to strengthen medication safety and professional accountability. This review also identifies a critical gap in compiled data from Mauritius, highlighting the absence of national-level prescription error audits. It further recommends establishing a National Drug Safety and Reporting Authority to coordinate e-prescription monitoring and reduce error rates by at least 30% over 5 years.

1. INTRODUCTION

Visiting a medical practitioner typically culminates

traditional handwritten prescriptions remain the dominant format. Handwritten prescriptions offer certain advantages, including the authenticity of the prescriber's handwriting which enhances



News | Articles | May 5, 2026

The Pharmacist's Prescription for Bone Health Is More Than Just Calcium

Author(s) Khayati Moudgil

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0:00 / 5:16

Key Takeaways

- Peak bone mass is largely established by late adolescence; insufficient "bone banking" from high-impact activity and adequate nutrition predisposes to adult fragility and future osteoporosis risk.
- Adult management emphasizes maintenance through balanced remodeling, mitigating "bone thieves" such as smoking and excess alcohol that impair calcium handling and osteoblast function.

SHOW MORE

Bone health is often an overlooked aspect of general wellness, frequently ignored until a fracture occurs or a diagnosis of osteoporosis is delivered in later life. Bone is a living, dynamic tissue that requires constant care from infancy through the senior years. From a pharmaceutical and public health perspective, understanding the physiological demands of our skeleton at different life stages is the first step in preventing disability, mobility loss, and ensuring long-term independence.

RESEARCH PAPER

The Extent of Smartphone Usage and Its Assessment Concerning Postural Issues and Eye Disorders in Mauritius

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ABSTRACT

This research sought to examine the prevalence of smartphone usage and its implications for ophthalmological disorders and postural issues among the population of Mauritius.

Materials and Methods

A cross-sectional observational study was employed, utilizing a quantitative approach for data collection. A total of 296 residents participated by completing a questionnaire administered via Google Forms. Statistical analyses were performed based on the distribution of the collected data. The chi-square test and Pearson's correlation coefficient were computed using IBM SPSS Statistics (version 29.0.2.0).

Results

Out of the 296 participants, the most commonly reported ocular symptoms included watery eyes (26, 8.8%) and asthenopia (11.1%). The predominant posture adopted was upright (38.4%), with neck pain being the most frequently cited discomfort (27.5%). A statistically significant positive correlation was identified between smartphone usage

COMPARATIVE PAN-CANCER ANALYSIS OF DRIVER GENE MUTATIONS, ALTERNATION PATTERNS AND ONCOGENIC PATHWAY ASSOCIATIONS ACROSS SIX TCGA TUMOR TYPES USING CIBOPORTAL

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ABSTRACT

Background: Cancer is a diverse set of diseases with the involvement of multiple genomic abnormalities that lead to the initiation and progression of cancer. Systematic assessment of mutations in driver genes and dysregulated signaling pathways is made feasible by public cancer genomics resources, such as The Cancer Genome Atlas (TCGA) and cBioPortal. In this study, a pan-cancer bioinformatic analysis was conducted to uncover recurrent genomic alterations and some important molecular pathways in selected TCGA cohorts. **Methods:** A retrospective cross-sectional bioinformatic study was conducted using TCGA datasets accessed through cBioPortal. Six cancer types were included: breast invasive carcinoma (BRCA), lung adenocarcinoma (LUAD), lung squamous cell carcinoma (LUSC), colon adenocarcinoma (COAD), prostate adenocarcinoma (PRAD) and skin cutaneous melanoma (SKCM). Driver gene alterations, mutation frequencies, genomic profiles and pathway involvement were evaluated. KEGG pathway enrichment analysis was performed to identify significantly enriched biological pathways. **Results:** TP53 showed the highest alteration frequency (16%), followed by KRAS (15%) and PIK3CA (13%). Recurrent alterations were also identified in KMT2D, BRAF, EGFR, PTEN, APC and NF1. Pathway analysis demonstrated prominent involvement of the RTK-RAS, PI3K-AKT-mTOR, TP53, WNT and cell cycle signaling pathways. KEGG enrichment analysis revealed significant enrichment of the MAPK (adjusted $p = 3.26 \times 10^{-7}$), PI3K-AKT (adjusted $p = 6.40 \times 10^{-7}$), FOXO, PD-L1/PTD-1 checkpoint and apoptosis pathways. **Conclusion:** This study established that recurrent alterations in TP53, KRAS and PIK3CA, together with significant dysregulation of RTK-RAS, PI3K-AKT-mTOR, TP53, WNT and cell cycle pathways, represent key molecular features across multiple cancers.

KEYWORDS: Pan-cancer analysis, TCGA, cBioPortal, Driver gene mutations, TP53, KRAS, PIK3CA, Molecular pathways and Precision medicine.

INTRODUCTION

Cancer is a major global health problem and remains one of the leading causes of disease-related mortality worldwide, contributing to millions of newly diagnosed cases and deaths annually. According to reports published by the World Health Organization, the burden

of cancer continues to rise because of population growth, increasing life expectancy, and exposure to environmental and lifestyle-associated risk factors¹. While significant progress in cancer detection and therapeutic interventions has been made, cancer remains an incredibly complex disease that continues to present

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Anxiety, Depression and Their Correlates among Human Nutrition and Dietetics Undergraduates at a Rural South African University

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Abstract

Globally, university students experience substantial mental health challenges, but the mental health profile of human nutrition and dietetics students at rural South African institutions remains poorly described. This study investigated the prevalence, severity and correlates of anxiety and depressive symptoms in this underserved population. A descriptive cross-sectional survey was conducted with 80 undergraduate students in human nutrition and dietetics at a rural South African university. Data were collected via a structured questionnaire covering demographic, academic, clinical and psychosocial characteristics, alongside the Generalized Anxiety Disorder-7-item scale and the Patient Health Questionnaire-9. Overall, 44.2 % met the GAD-7 threshold for probable anxiety, and 48.4 % met the PHQ-9 threshold for probable depression, while 78.9 % of participants endorsed at least mild symptoms on both measures. Anxiety and depressive symptoms were strongly correlated ($r = 0.765$, large effect). Female students reported higher GAD-7 scores than males (16.5 ± 7.1 , $d =$

0.64 , $p < 0.001$), and younger students (< 21 years) reported higher PHQ-9 scores than older peers (12.2 ± 6.2 , $d = 0.38$, $p < 0.001$). A history of psychiatric illness, chronic conditions, trauma exposure and prior psychological support were associated ($p < 0.05$) with elevated GAD-7 and/or PHQ-9 scores. Nearly half of this rural human nutrition and dietetics cohort met criteria for clinically significant anxiety or depression, with symptoms being more frequently observed among students reporting prior psychiatric history and use of psychological support services, although these associations are cross-sectional and cannot establish directionality. Taken together, the results suggest a need to consider routine mental health screening and tailored, contextually appropriate supports within rural health sciences training environments in South Africa.

Keywords: General Anxiety Disorder; Depression; University Students; South Africa

Generic Medicines and Public Health in the Global South: A Cost-Effective Solution to Tackle Healthcare Inequity

Ashish Wadhvani^{1*}, Sai Varshini Magham², Praveen Mohadeb³ and Varsha Bangale⁴

ABSTRACT: Healthcare inequities remain a critical challenge in the Global South, where access to affordable and effective treatment is often limited by high medication costs. Generic medicines, offering bioequivalent alternatives to branded drugs at significantly lower prices, represent a cost-effective solution to this persistent issue. This paper examines the role of generic medicines in bridging healthcare disparities, analyzing their impact on public health systems in resource-constrained settings. We explore regulatory frameworks, manufacturing dynamics, and market accessibility challenges that influence the adoption and distribution of generics. Case studies highlight how countries like India, Brazil, and South Africa have leveraged generics to improve health outcomes, particularly in managing chronic and communicable diseases such as diabetes, hypertension, and HIV/AIDS. Despite their transformative potential, generic medicines face barriers including patent restrictions, quality perceptions, and inadequate infrastructure for widespread distribution. This book chapter instead of article examines the potential of generic medicines in addressing public health disparities, the barriers to their adoption, and strategies for maximizing their impact.

Keywords: Generic, Global South, ARVs, TRIPS, Intellectual Property.

1. INTRODUCTION

Generic medicines play a transformative role in advancing public health, particularly in resource-limited settings. These medicines are equivalent in

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30th Sep 2026 10:00 AM

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