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VIVEKANANDHA PHARMACY COLLEGE FOR WOMEN

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PHARMA BEACON - VPCW EDITION



EXPERT DESK

NATUROPATHY IS A WAY OF LIFE



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Naturopathy is a distinct type of primary care medicine that combines traditional healing practices with modern scientific advancements and current research.

Naturopathy is a type of health care that focuses on non-invasive treatments and changes to daily habits. It's a holistic, natural approach to health that utilizes diet, lifestyle, and therapies such as hydrotherapy, mud baths, acupuncture, chromotherapy, and massage. It focuses on self-healing through principles like the body's innate ability to heal itself.

Naturopathy believes that the body has an inherent ability to heal itself, aided by natural methods. It strives to use the least invasive methods necessary to treat your disease and symptoms. Treatment often involves lifestyle and behavioural changes, like:

- Getting physically active.
- Focusing on healthy eating habits.
- Drinking enough water.
- Exposing your self to sunlight.
- Getting proper sleep.
- Managing stress.

Naturopathic doctors take care of your over all health and well-being. They prevent, diagnose and treat illnesses, diseases and other health conditions.

The main features of Naturopathy are:

- ❖ All diseases, their causes and treatment are one. Except for traumatic and environmental conditions.
- ❖ The Naturopathy treats the body as a whole.
- ❖ According to Naturopathy, "Food is only the Medicine", no external medications are used.
- ❖ Fasting is an important treatment modality for health preservation. In fasting, mental preparedness is an essential pre-condition. Prolonged fasting should be done only under the supervision of a competent Naturopathy.
- ❖ primary cause of disease is the accumulation of morbid matter.
- ❖ Nature is the greatest healer.

Reference:

1.Ministry of AYUSH, Government of India.(n.d.).Guidelines and principles of naturopathy. National Institute of Naturopathy, Pune.

MONTHLY DRUG SAFETY ALERT

The preliminary analysis of Adverse Drug Reactions (ADRs) from the PvPI data base 2025, revealed that the following suspected drugs areas associated with the ADRs as given below.

S.no	Suspected drugs	Indications	Adverse drug Reactions
1	Sulfamethoxazole + Trimethoprim	For the treatment of Urinary Tract infection; Respiratory tract infection including Bronchitis, Pneumonia, infections in Cystic Fibrosis, Melioidosis, Listeriosis, Brucellosis, Granuloma Inguinale, Otitis Media, Skin infection, Pneumocystis Carini, Pneumonia.	Leukopenia
2.	Beta-blockers (Propranolol, Metoprolol, Atenolol, Carvedilol)	<p>Propranolol</p> <p>For the treatment of cardiac arrhythmias, tachycardia, hyper trophic obstructive cardiac myopathy, pheochromocytoma, thrombosis, management of angina, essential and renal hypertension, prophylaxis of migraine.</p> <p>Metoprolol</p> <p>For the treatment of supra ventricular arrhythmia, angina pectoris, hypertension, myocardial infarction, migraine prophylaxis, hyper thyroidism, heart failure.</p> <p>Atenolol</p> <p>For the treatment of hypertension, angina pectoris, cardiac arrhythmia.</p> <p>Carvedilol</p> <p>To reduce cardiovascular mortality in clinically stable patients, who have survived the acute phase of a myocardial infarction and have a left ventricular ejection fraction of 40% (with or without symptomatic heart failure).</p> <p>For the treatment of left ventricular dysfunction following myocardial infarction in clinically stable patients</p>	Psoriasis & Erectile Dysfunction (Reversible)

S.no	Suspected drugs	Indications	Adverse drug reactions
3.	Metoclopramide	To restore normal coordination including heart burn, dyspepsia, nausea and vomiting associated with as reflux esophagitis, gastritis, duodenitis and hiatus hernia.	Tachycardia
4.	Tranexamic Acid	For the treatment of abnormal Bleeding in which local hyperfibrinolysis is considered to be involved (pulmonary, hemorrhage, epistaxis, renal bleeding abnormal bleeding during or after prostate surgery). Hemorrhage or risk of hemorrhage in increased fibrinolysis of hereditary angioneurotic oedema. For the treatment of excessive bleeding in patients with hemophilia during & following tooth extraction. For the treatment of menorrhagia.	Nasal Congestion

Healthcare Professionals, Patients/Consumers are advised to closely monitor the possibility of the above ADRs associated with the use of above suspected drugs. If, such reactions are encountered, please report to the nearby ADR monitoring centre (SVMCH&RI, Tiruchengode) or send mail to our ADR Monitoring Centre (svcpvmchamc@gmail.com) or NCC-PvPI, IPC by filling Suspected Adverse Drug Reactions Reporting Form / Medicines Side Effect Reporting Form for Consumer, through Android Mobile App "ADRPvPI" and PvPI Helpline No. 1800 - 180-3024.

REFERENCE

1. Home - Indian Pharmacopoeia Commission. [online] Available at: <https://www.ipc.gov.in>.

By
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Assistant Professor, Department of Pharmacy Practice, VPCW.

Aztreonam – Avibactam: A Break through in Combating MBL-Mediated Resistance

Anti microbial resistance (AMR) has become one of the most serious global health threats. Among resistant pathogens, bacteria producing **metallo- β -lactamases (MBLs)**—such as NDM, VIM, and IMP—are particularly difficult to treat because they inactivate most β -lactam antibiotics, including carbapenems. Aztreonam–Avibactam is a novel combination developed to address this challenge. This article explains the drug in a way that helps pharmacy students understand its importance, mechanism, and clinical relevance.

Why Was Aztreonam–Avibactam Developed?

Most antibiotics used for severe Gram-negative infections fail against MBL-producing organisms. Although **Aztreonam** is naturally stable against MBLs, it is easily broken down by other enzyme such as Extended spectrum beta-lactamases (ESBLs), AmpC, KPC, and OXA-48. In real-world infections, many bacteria produce **both** MBLs and serine β -lactamases together. This means Aztreonam alone cannot survive.

To overcome this, scientists combined Aztreonam with **Avibactam**, a powerful β -lactamase inhibitor. Avibactam protects Aztreonam from serine enzymes, allowing it to act effectively even in bacteria that have multiple resistance mechanisms.

Components of the Combination

1. Aztreonam

Aztreonam is a monobactam antibiotic active only against Gram-negative bacteria and naturally stable against metallo- β -lactamases (MBLs). However, it becomes ineffective when bacteria produce other β -lactamases like ESBL, AmpC, or KPC.

2. Avibactam

Avibactam is a non- β -lactam β -lactamase inhibitor that blocks Extended spectrum beta-lactamases (ESBL), AmpC, KPC, and OXA-48 enzymes. It protects Aztreonam from serine β -lactamases, allowing the combination to work against resistant pathogens.

Together, they create a combination that uniquely targets **MBL + other β -lactamase co-producers**, making it highly valuable in hospitals.

How Does the Combination Work?

Think of the bacteria as having **two shields**:

1. **Shield 1: MBL enzymes** → break most β -lactams but NOT Aztreonam
2. **Shield 2: Serine β -lactamases** → break Aztreonam

Step-by-step:

1. Avibactam binds to serine β -lactamases → disabling them
2. Aztreonam remains stable against MBLs
3. The combination by passes *both* resistance mechanisms
4. Aztreonam is now free to bind to PBP and inhibit cell wall synthesis

This makes the combination one of the most promising treatments for complicated, resistant infections.

Spectrum of Activity Active

Against:

MBL-producing Enterobacteriales (NDM, VIM, IMP), Carbapenem-resistant Enterobacteriales (CRE), ESBL and AmpC producers and OXA-48 producers, Some MDR *Pseudomonas aeruginosa*

Clinical Indications

Aztreonam - Avibactam is used or being studied for:

Complicated urinary tract infections (cUTI), Complicated intra-abdominal infections (cIAI), Hospital-acquired pneumonia (HAP), Ventilator-associated pneumonia (VAP), Bloodstream infections due to MBL producers, Treatment of severe MDR/XDR Gram-negative infections with limited therapeutic options

These infections are common in critical care and high-risk hospital settings.

Side Effects & Monitoring

Nausea, Diarrhea, Elevated liver enzymes, Headache, Hypersensitivity reactions

Monitoring Parameters

Renal function (for dose adjustment), Liver enzymes, Signs of allergy, Culture and sensitivity results

Reference:

U.S. Food and Drug Administration. (2025). *Emblaveo (aztreonam and avibactam) for injection Full prescribing information* [PDF].

https://www.accessdata.fda.gov/drugsatfda_docs/label/2025/217906Orig1s000lbl.pdf



By

Dr. S. RAJALAKSHMI, Pharm.D.,

Assistant Professor,

Department of Pharmacy Practice, VPCW.

Do you know about this?

"The Hidden Pharmacist"

I am inside your gut,
yet I influence your drugs.
I activate some, deactivate others—
sometimes I even cause toxicity.
Who am I?

(Gut Microbiome / Intestinal bacteria)

"The Two Silent Clinicians"

One listens; one measures.
Together we diagnose fever and function.
Without either of us,
even the best medicine may
fail. Who are we?

(Stethoscope & Thermometer)



By
Dr. NEENA ELSA VARGHESE, Pharm.D.,
Assistant Professor,
Department of Pharmacy Practice, VPCW.

STUDENT OUTREACH ACTIVITIES



D.Pharm Get together (Batch 2023 - 2025) at VPCW Seminar Hall on 01.09.2025



Onam Celebration (Prakambanam) at RTT campus sankagiri on 02.09.2025

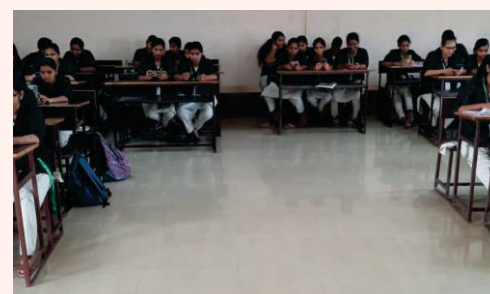
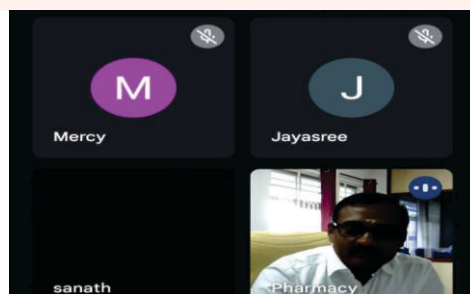


Vth sem B.Pharm. Students and Staff attended a Two days National Conference on "Artificial Intelligence and Machine Learning: A Game Changer in Health care" organized by Vellalar College of Pharmacy, Thindal on 03.09.2025 & 04.09.2025.



Teachers day celebration at Vivekanandha Auditorium, Tiruchengode on 06.09.2025.

STUDENT OUTREACH ACTIVITIES



Department of Pharmacy Practice organized a National Pharmacovigilance Week Celebration on 19.09.2025 at VPCW Seminar Hall.



World Pharmacist Day Celebration at VPCW Idea Lab on 25.09.2025.

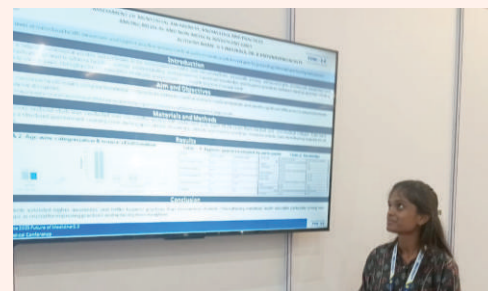


Ayudha Pooja Celebration and Day scholar Day Celebration at RTT Campus, Sankagiri on 29.09.2025



Department of Pharmaceutics organized a Guest Lecture on "cGMP Compliance in Modern Pharmaceutical Industries and Opportunities for Pharmacy Students" at VPCW Seminar Hall on 10.10.2025.

STUDENT OUTREACH ACTIVITIES



Pharm D students and staff Attended and Presented a Research Paper in “Excel and Educate 2025 International Medical Conference-Future of Medicine 2.0” organized by Tamilnadu Dr.M.G.R Medical University and Department of Health and Family Welfare held at Trade Centre Chennai on 15.10.2025 to 18.10.2025.



VIIIth Sem B.Pharm Students Attended an International Conclave 2025 at The Erode College of Pharmacy on 30.10.2025



Department Of Pharmacology organized a Cyber Security Awareness Programme on 03.11.2025 at VPCW Seminar Hall.



Department of Pharmacology organized a Mental Health Awareness Programme on 04.11.2025 at VPCW Seminar Hall

STUDENT OUTREACH ACTIVITIES



IIIrd Sem B.Pharm Student Ms. G. Anshuga achieved a “Lincoln Book of Records” in Bharathanatyam (Navarasam) at Texvalley Erode on 02.11.2025



Inauguration Ceremony for B.Pharm, PharmD, D.Pharm 2025 Batch at Srinivasa Mahal on 05.11.2025.



Department Of Pharmacology organized a World Diabetes Day at VPCW Seminar Hall on 14.11.2025.



VIIIth Sem B.Pharm Student Ms. V. Namitha Received a Best Presentation Award at JSS College of Pharmacy, Ooty on 15.11.2025.

STUDENT OUTREACH ACTIVITIES



Vth Sem B.Pharm Students and Staff attended a Two days National Conference on “Pharma synergy 2025:Exploring break throughs and Impacts” organized by Sri Shanmuga College of Pharmacy on 20.11.2025 and 21.11.2025.



VIIIth sem B. Pharm Students and Staff attended a One day National workshop on “Pharmacy Students to Industry Professional A Quality Check During Transition” organized by SSM College of Pharmacy on 22.11.2025.



IIIrd Sem B.Pharm Students and Staff went on an recreational Tour to Wonderla (kochi) & Vagamon on 21.11.2025 and 22.11.2025.



Fresher's Day Celebration at Srinivasa Mahal on 10.12.2025.

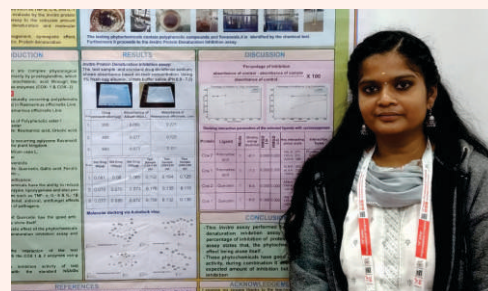
STUDENT OUTREACH ACTIVITIES



Energy Conservation Day 2025 Celebrated at VPCW Idea Lab on 11.12.2025.



Department of Pharmaceutical Chemistry Organized a Guest lecture on "Artificial Intelligence in Pharma and 3DPrinting in Pharmaceutical Sciences with a live Demonstration of semi-solid extrusion(SSE)" at VPCW Seminar hall on 12.12.2025.



B.Pharm, Pharm.D Students & Staffs attended & Presented a Poster & Oral Presentation at Indian Pharmaceutical Congress (IPC) on the Theme AI and Technology in Pharma : Educate, Innovate in drug discovery & Health Care held at Bangalore on 19.12.2025 to 21.12.2025

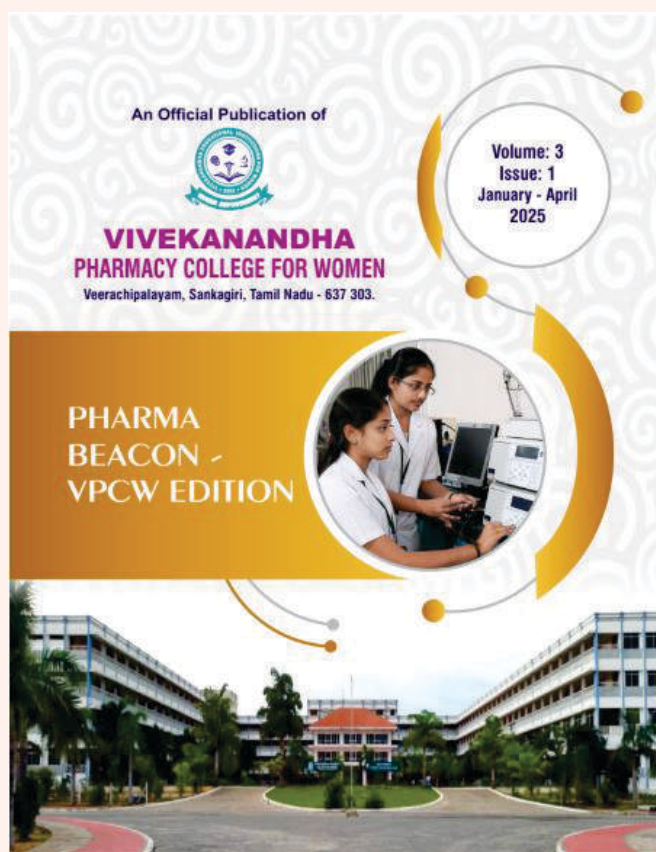


New Year 2026 Celebration at VPCW Seminar Hall on 31.12.2025

PUBLICATIONS (ACADEMIC YEAR 2024-2025)

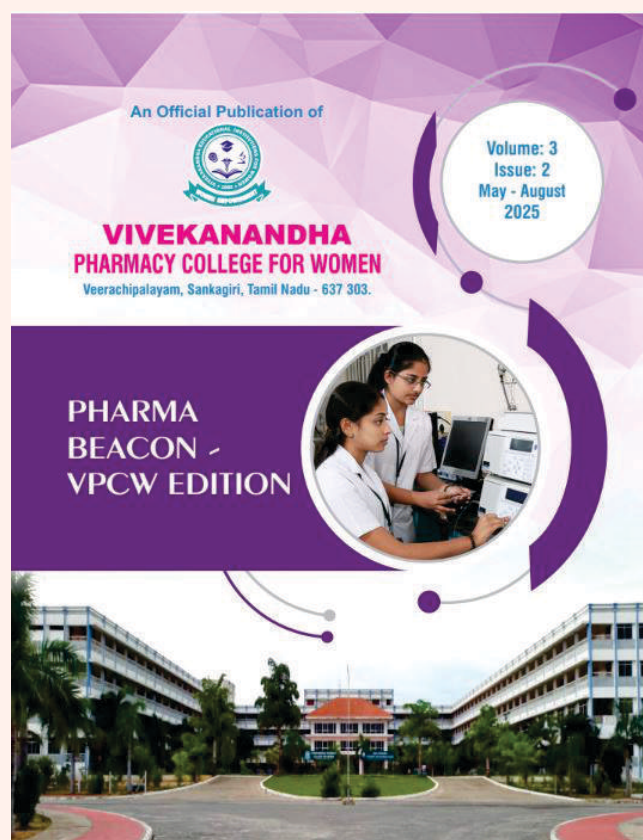
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2. Sharan A, Rubashree KB, Kameswaran R, **Krishnaveni K**. The Impact of Aging on the Cardiovascular System. *International Journal of Biology, Pharmacy and Allied Sciences* 2025; 14(3):1556-1573.
3. **G. Muhubhupathi**, M. Selvakumar, K. Mohanapriya, V. Amoga. Therapeutic potential of oxazolidine derivative:. A critical review of their biological activities.*Asian journal of research in chemistry* 2025;18(2):81-6.
4. Venkateshwaran Krishnaswami, **Selvakumar Muruganantham**, Jacob. Artificial Intelligence in Pharmaceutical Drug Development challenges and the Way Forward.2025;3;1-21.
5. **Dr.Thirumurthy Rajendren**, Ramya Loganathan, Chandana Nagaraju, Sowbagaya lakshmi Ramesh. Comparative In-Vitro Antidiabetic evaluation of Ethanolic and Chloroform Albizia Aamara Leaf Extracts. *International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)*.2025;14(4):853-862.
6. Venkateshwaran Krishnaswami, **Selvakumar Muruganantham**, Jacob. Artificial Intelligence in Pharmaceutical Drug Development-challenges and the Way Forward. *Current Artificial Intelligence*.2025;3:1-21.
7. **Selvakumar M**, Dhanasekar J, Nandhakumaran S, Sudhamani T, Lathamani L. Recent Advances in Differential Diagnostic Strategies for Diabetic and Non-Diabetic Nephropathy. *International Journal of Pharmaceutical Sciences Review and Research*.2025;85(9):1-9.
8. **Selvakumar Muruganantham**, Chitra Karthikeyini Sakthivel, Ramya Ravichandran. Formulation and Evaluation of Quercetin Nanoparticle Loaded Ointment for Diabetic Foot Wound Healing. *Asian Journal of Pharmaceutical Research* 2025;15(4):387-5.
9. **Selvakumar Muruganantham**, Sowbagya Lakshmi Ramesh. Soft mist, dry powder, and smart inhalers: comparative technologies and clinical impact on asthma and COPD management. *The Egyptian Journal of Bronchology*.2025;19(1):1-23.
10. **T. Sudhamani**, L.Lathamani, J. Dhanasekar, M. Selvakumar, S.Nandhakumaran. Formulation of Natural Hair Dye by Using Natural Herbs and Their Characterization. *STM Journals* .2025;12(3):1-15.
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12. **Sudhamani.T** , Mani.Priya.P,Dhanasekar J ,Selvakumar.M , Nandhakumaran.S , Lathamani.L., Thirumurthy.R. Controlled Release Drug Delivery Using 3D Printing Techniques: A Current Scenario in Personalized Medicine. *STM Journals*.2025;12(3):28-43.

PREVIOUS ISSUES



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Issue - 2



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