# **Daily News Juice**

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# 1. Nafithromycin: Country's First Indigenous Antibiotic

### Introduction



Antimicrobial resistance has long been a growing global concern, with pharmaceutical companies striving to develop new medicines to combat it worldwide. Despite years of challenges and relentless effort, a breakthrough has finally emerged. After three decades of research and hard work, India has led the way with the creation of Nafithromycin, the country's first indigenous Macrolide antibiotic. This remarkable achievement marks a pivotal moment in the fight against antimicrobial resistance, showcasing India's growing capabilities in pharmaceutical innovation.

## India's Fight Against Antimicrobial Resistance

Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi and parasites no longer respond to antimicrobial medicines. As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective and infections become difficult or impossible to treat, increasing the risk of disease spread, severe illness, disability and death. Antimicrobial resistance (AMR) has become a major global health issue, with around 6 lakh lives lost in India each year due to resistant infections. However, India is making significant strides in addressing AMR, particularly through the development of new drugs.

Nafithromycin, developed with ₹8 crore in funding under the Biotechnology Industry Research Assistance Council (BIRAC) Biotech Industry Program for Phase 3 clinical trials, is a key milestone in this effort. Since India carries a large share of the global pneumonia burden, introducing Nafithromycin is especially important, as there have been no new antibiotics in recent years. Nafithromycin offers improved patient compliance and is a vital step in combating AMR.

## Nafithromycin: Milestone for Public Health

Nafithromycin, was officially launched on November 20, 2024, by Union Minister Dr. Jitendra Singh. Developed by Wockhardt with support from the Biotechnology Industry Research Assistance Council (BIRAC), Nafithromycin, marketed as "Miqnaf," targets Community-Acquired Bacterial Pneumonia (CABP) caused by drug-resistant bacteria, which disproportionately affects vulnerable populations such as children, the elderly, and those with compromised immune systems.



This groundbreaking antibiotic is ten times more effective than treatments like current azithromycin and offers a threedav treatment regimen, significantly shortening the recovery time while improving patient outcomes. Nafithromycin is designed to treat both typical and atypical drug-resistant bacteria, making it a crucial tool in addressing the global health crisis of AMR (Anti-microbial Resistance). It boasts superior safety, minimal side effects, and no significant drug interactions.

Nafithromycin's development

marks a historic milestone as the first new antibiotic in its class to be introduced globally in over 30 years. The drug, which has undergone extensive clinical trials across the U.S., Europe, and India, has been developed with an investment of ₹500 crores and is now awaiting final approval from the Central Drugs Standard Control Organization (CDSCO).

This innovation exemplifies the power of public-private collaboration and underscores India's growing capabilities in biotechnology. Nafithromycin's successful introduction represents a major leap in the fight against AMR, offering hope for treating multi-drug-resistant infections and saving lives worldwide.

# **Government's Other Initiatives to Combat AMR**

Other than developing Nafithromycin, the Government of India has taken significant steps to combat Antimicrobial Resistance (AMR) through a series of strategic initiatives aimed at surveillance, awareness, and collaboration. These efforts focus on enhancing AMR containment, improving infection control, and fostering national and international partnerships.

**1. Surveillance and Reporting:** National surveillance networks, including laboratories across the country, have been established to generate annual AMR surveillance reports, with data submitted to the Global AMR Surveillance System (GLASS).

**2. Awareness and Training:** Awareness materials on the judicious use of antimicrobials, hand hygiene, and infection prevention have been developed and shared with stakeholders. National Guidelines on infection prevention have been launched, and a "train-the-trainer" program has been conducted across all states and UTs, with ongoing cascading of training at the state level.

**3. Judicious Use of Antimicrobials:** To promote responsible usage, surveillance of antimicrobial use has been initiated at tertiary care hospitals.

**4. National Action Plan on AMR (NAP-AMR):** Launched in 2017, the NAP-AMR aligns with the Global Action Plan on AMR. The plan has been implemented across multiple ministries and was initially set for five years.

**5. NAP-AMR 2.0 Development:** National consultations were held in 2022 across sectors (human health, research, environment, animal husbandry) to develop NAP-AMR 2.0, which includes SWOT analysis and recommendations for AMR research policies.

**6. Red Line Awareness Campaign:** The Ministry of Health and Family Welfare (MoHFW) launched the Red Line campaign to raise awareness about the dangers of using antibiotics without a prescription. The campaign advises the public not to use antibiotics marked with a red vertical line unless prescribed by a doctor.

**7. ICMR Guidelines:** The Indian Council of Medical Research (ICMR) has issued treatment guidelines to regulate the use of antibiotics, especially for common conditions like viral bronchitis and low-grade fever. These guidelines aim to prevent unnecessary antibiotic use.

**8. Regulation of Antibiotics under Schedule H and H1:** Antibiotics are listed under Schedule H and H1 of the Drugs Rules, 1945, ensuring they are only available with a prescription from a registered medical practitioner. Drugs under Schedule H1 are also subject to strict record-keeping, with supply records maintained for three years.

**9. CDSCO Notification for High-End Antibiotics:** The Central Drugs Standard Control Organisation (CDSCO) has included 24 high-end antimicrobials under Schedule H1, mandating strict regulation and oversight to prevent misuse.

Relevance: GS Prelims; Science & Technology Source: PIB

2. Why does RBI want a hedge against dollar reliance, but not push for de-dollarisation?

# Introduction

Reserve Bank of India (RBI) Governor Shaktikanta Das said recently that India is not pursuing "de-dollarisation", and that recent measures promoting transactions in domestic currencies are intended to de-risk Indian trade.

The clarification came days after US President-elect Donald Trump threatened "100 per cent tariffs" against BRICS countries if they sought to reduce reliance on the US dollar in international trade.

Das said that BRICS (Brazil, Russia, India, China, South Africa) nations have discussed the possibility of a shared currency, but reached no decision. RBI decisions such as allowing Vostro accounts and entering local currency trade agreements are aimed at diversifying risk rather than reducing dependence on the dollar.

# What To Know About the US Dollar as the Global Currency



The 1944 Bretton Woods agreement allowed other countries to back their currencies with dollars rather than gold



The dollar rules the foreign exchange market





In the early 1970s, former President Nixon separated the dollar from gold



Nearly 40% of the world's debt is issued in dollars



The relative strength of the U.S. economy supports the value of the dollar



Countries like China and Russia are currently calling for a one-world currency

### Yuan as challenger

A key reason India is not backing de-dollarisation is the rise of the Chinese yuan as a challenger to the US dollar. India has resisted using the yuan for Russian oil imports, even as the acceptance of the currency is growing in Russia. Following the Western sanctions on Russia, including freezing \$300 billion in Russian foreign holdings, the yuan became Russia's most traded currency last year.

### Vary of overdependence

At the same time, India is wary of over-dependence on the dollar. The RBI has increased gold purchases, and has begun moving its gold, held abroad, back into the country.

While this is in part due to increased uncertainties after the war in Ukraine, it is in line with the buying of gold by global central banks fearing secondary sanctions.

### Why are central banks on a gold-buying spree?

Central banks, particularly in emerging market economies, have increased their gold holdings sharply so as to diversify away from a dollar-dominated financial system.

According to JP Morgan, central banks collectively bought a net 1,136 tonnes of gold in 2022, the highest annual demand on record, and another 1,037 tonnes in 2023.

### How does the high cost of holding dollars play out in this scenario?

Depleting dollar reserves amid surging oil prices has recently caused considerable social and political unrest in India's neighbourhood. Sri Lanka, Bangladesh, Nepal, and Pakistan witnessed sharp declines in their dollar reserves following the Ukraine war, which upset their trade relations with India. While India has managed to keep a robust reserve, the surging value of the dollar has become a concern.

To partially de-risk its trade ties, India is pushing for trade with Russia and the UAE in domestic currencies that could help cut reliance on the US dollar. However, the domestic currency trade has not yet picked up as expected because of India's low foothold in goods and services trade internationally.

India's efforts toward internationalising the rupee could get a boost if oil exporters begin accepting rupee payments. But they have remained hesitant due to the high transaction costs. A reason for the rise of the yuan has been its use in purchasing Russian oil. As China and Russia have a bilateral trade balance, both countries have been able to reduce reliance on the US dollar by successfully trading in domestic currency. India has a bilateral trade deficit with most countries except the US.

Relevance: GS Prelims & Mains Paper III; Economics Source: Indian Express

3. With €840 million in funds, more than 2,000 workers, how the historic Notre Dame cathedral was restored

### Overview

Originally built in the 12th century, the cathedral was closed following a devastating fire in April 2019. Over the last five years, it has witnessed a frenzied renovation process that attracted considerable global attention.

### Why was the Notre Dame cathedral restored?

In 1160, Notre Dame was envisioned by Maurice de Sully, the Bishop of Paris, as a grand Gothic cathedral that would accommodate the city's growing population. Construction began three years later and is believed to have been completed by 1260.

It routinely underwent renovations and maintenance work in the following centuries, and was the site of King Napoleon's coronation in 1804. Its architectural beauty aside, it also counts among the enduring symbols of French culture.

On April 15, 2019, a fire broke out in the attic and went undetected until it was too late, allowing the fire to spread across the roof and the spire (the conical structure projecting upwards). Around 600 firefighters battled the blaze for 15 hours. Valuable artefacts like the

round-stained glass windows called les roses, which date back to the Middle Ages, were spared.

However, the set of wooden roof beams called the forest, as well as the spire were destroyed. Moreover, the spread of the fire had engulfed the interiors with a cloud of lead dust, expanding the scope of restorative work needed.

While the investigation into its cause has continued to this day, French authorities uncovered no evidence of arson. It is suspected the fire stemmed from then-ongoing restoration work on the spire. A day later, President Emmanuel Macron inspected the damage and promised to restore the cathedral to its full glory within five years.



# What does the restored cathedral feature?

**Limestone walls cleaned:** The walls of the cathedral, spanning 40,000 square metres of limestone, were thoroughly cleaned and restored, maintaining most of the masonry work according to a BBC report.

Restored wooden roof: Some 1,200 suitable oak trees in France's forests were felled to construct the wooden roof, with carpenters hand-sawing them into shape.

**The restored spire:** The reconstruction of the 96-metre-long spire relied on a massive wooden base and employed Europe's largest crane. The spire is lined with lead like the rest of the roof and features a new gilded rooster, according to BBC. The rooster contains holy relics such as

a thorn from the cathedral's Crown of Thorns, and a parchment with the names of 2,000 people who worked on the renovation.

The Great Organ: Notre Dame houses France's largest musical instrument, The Great Organ, built by Aristide Cavaillé-Coll in 1905. It comprises 8,000 pipes, five keyboards and 109 stops. The entire structure was disassembled and sent to Paris workshops for its restoration. Each part was retuned over several months upon reinstallation. The organ itself now features new electronic controls.

Relevance: GS Prelims Source: Indian Express