### Indigenous Antibiotic Nafithromycin

#### Source: PIB

Recently, India launched **Nafithromycin**, India's first **indigenous antibiotic** aimed at tackling **Antimicrobial Resistance (AMR)**.

- Nafithromycin was developed with support from the <u>Biotechnology Industry Research</u> <u>Assistance Council (BIRAC)</u> and brought to market by Wockhardt under the brand name Miqnaf.
  - Nafithromycin is the **first new antibiotic** in its class in over 30 years, marking a breakthrough in the fight against AMR.
- It is designed to treat <u>Community-Acquired Bacterial Pneumonia (CABP)</u>, caused by drug-resistant bacteria like *Streptococcus pneumoniae*.
- The launch coincides with World AMR Awareness Week (18-24 November) 2024 with the theme 'Preventing Antimicrobial Resistance Together'.

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# ANTIMICROBIAL RESISTANCE

Drishti IAS

The ability of microorganisms to resist the effects of antimicrobial drugs

# CAUSES OF **^**AMR

- Poor infection control/sanitation
- Antibiotic overuse
- Genetic mutations of microbe
- Lack of investment in R&D of new antimicrobial drugs

Microbes that develop AMR are called 'Superbugs'

# **IMPACTS OF AMR**

- ↑ Risk of spreading infections
- Makes infections harder to treat; prolonged illness
- ↑ Healthcare costs

#### **EXAMPLE**

- Carbapenem antibiotics stop responding due to AMR in K. pneumoniae
- AMR Mycobacterium tuberculosis causing
- Rifampicin-Resistant TB (RR-TB)

Drug-resistant HIV (HIVDR) making antiretroviral (ARV) drugs ineffective

Read More: Antimicrobial Resistance

## **RECOGNITION BY WHO**

Identified AMR as one of the top 10 threats to global health Launched GLASS (Global Antimicrobial Resistanceand Use Surveillance System) in 2015

#### INDIA'S INITIATIVES AGAINST AMR

Surveillance of AMR in microbes causing TB, Vector Borne diseases, AIDS etc. National Action Plan on AMR (2017) with One Health approach Antibiotic Stewardship Program by ICMR

New Delhi metallo-β-lactamase-1 (NDM-1) is a bacterial enzyme, emerged from India, that renders all current β-lactam antibiotics inactive

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