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PERSPECTIVE

Strategy of Antimicrobial Resistance for Drug Diseases

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Description

Antimicrobial Resistance (AMR) is a condition in which bacteria, viruses, fungi, and parasites evolve over time and cease to respond as antibiotics. To make infections more difficult to cure and raising the risk of disease transmission, life-threatening sickness and death. That indicates that the germs survive and develop. The healthcare, veterinary, and agricultural sectors, as well as individuals at every stage of life, might be impacted by antimicrobial resistance. This makes it one of the most important public health issues in the entire planet. Cell wall synthesis, protein synthesis, ribonucleic acid synthesis, Deoxyribonucleic Acid (DNA) synthesis, and intermediate metabolism are the five bacterial targets that have been used in the creation of antimicrobial medicines. Antimicrobial resistance is which restricts antibiotic therapy and makes it challenging to treat illnesses brought on by multiresistant bacteria and also directly tied to the rise in mortality.

As medication resistance increases globally, making diseases difficult to cure and lead to death, antibiotics are becoming less effective. There is an immediate need for new antibiotics. Antimicrobial resistance requires a multifaceted approach including the biomedical innovation, improved surveillance of antibiotic consumption and antimicrobial-resistance rates, prevention of health-care-associated infections and transmission of Multidrug Resistant (MDR) bacteria and environmental dissemination, rapid microbiological diagnosis and curtailed clinical and veterinary misuse.

The main causes of the spread of antibiotic resistance species that are included by globalisation, excessive antibiotic usage in aquaculture and animal husbandry. There is a use of several broad-spectrum drugs and poor antimicrobial resistance. There are likely to be fewer antimicrobial medicines available to treat illnesses brought on by these bacteria as antibiotic-resistant pathogens become more prevalent. This requires exploring for alternate means of containing antibiotic-resistant infections, and several research organisations across the globe are already actively exploring for fresh approaches. To identify the most prevalent bacteria those are resistant to antibiotics and outline other approaches that have been suggested to manage them.

Antimicrobial resistance for Drug-resistant

- Drug-resistant is the main infections that raise morbidity, death, and healthcare expenses are *Staphylococci, Enterococci, and Streptococci.*
- The primary cause of the spread of antibiotic-resistant genes in some food animals is the crazed use of antibiotics as growth boosters.
- To treat diseases that are resistant to antibiotics, researchers should look at other treatments such stem cell-AMPs, CRISPR-Cas, Probiotics, Nanobiotics, etc.

Drug resistance in Mycobacterium tuberculosis

Drug resistance in tuberculosis is still a result of human activity. It develops as a result of man-made phenomenon. The tuberculosis's spontaneous gene alterations are to make the bacterium resistant to the most widely used anti-TB medications. The initial cause of this is identified as non-compliance with the prescribed treatment plans.

Drug resistance in viruses

Antiviral medication resistance is a major problem in populations of immune compromised patients because persistent viral replication and extended drug exposure select resistant types of viruses. The majority of antivirals, including antiretroviral medications and have acquired resistance.

Drug resistance in malaria parasites

The emergence of drug-resistant of the largest threats to controlling malaria is the evolution of drug-resistant parasites, which increases malaria morbidity and death.

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