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The world is running out of antibiotics: WHO confirms

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A report, Antibacterial agents in clinical development which is an analysis of the antibacterial clinical development pipeline, including tuberculosis, launched today by WHO shows a serious lack of new antibiotics under development to combat the growing threat of antimicrobial resistance.

Most of the drugs currently in the clinical pipeline are modifications of existing classes of antibiotics and are only short-term solutions. The report found very few potential treatment options for those antibiotic-resistant infections identified by WHO as posing the greatest threat to health, including drug-resistant tuberculosis which kills around 250 000 people each year.

Dr Tedros Adhanom Ghebreyesus, Director-General of WHO said, "Antimicrobial resistance is a global health emergency that will seriously jeopardize progress in modern medicine. There is an urgent need for more investment in research and development for antibiotic-resistant infections including TB, otherwise we will be forced back to a time when people feared common infections and risked their lives from minor surgery."

In addition to multidrug-resistant tuberculosis, WHO has identified 12 classes of priority pathogens – some of them causing common infections such as pneumonia or urinary tract infections – that are increasingly resistant to existing antibiotics and urgently in need of new treatments.

The report identifies 51 new antibiotics and biologicals in clinical development to treat priority antibiotic-resistant pathogens, as well as tuberculosis and the sometimes deadly diarrhoeal infection Clostridium difficile.

Among all these candidate medicines, however, only 8 are classed by WHO as innovative treatments that will add value to the current antibiotic treatment arsenal.

There is a serious lack of treatment options for multidrug- and extensively drug-resistant M. tuberculosis and gram-negative pathogens, including Acinetobacter and Enterobacteriaceae (such as Klebsiella and E.coli) which can cause severe and often deadly infections that pose a particular threat in hospitals and nursing homes.

There are also very few oral antibiotics in the pipeline, yet these are essential formulations for treating infections outside hospitals or in resource-limited settings.

Dr Suzanne Hill, Director of the Department of Essential Medicines at WHO said, "Pharmaceutical companies and researchers must urgently focus on new antibiotics against certain types of extremely serious infections that can kill patients in a matter of days because we have no line of defence."

To counter this threat, WHO and the Drugs for Neglected Diseases Initiative (DNDi) set up the Global Antibiotic Research and Development Partnership (known as GARDP).

On 4 September 2017, Germany, Luxembourg, the Netherlands, South Africa, Switzerland and the United Kingdom of Great Britain and Northern Ireland and the Wellcome Trust pledged more than €56 million for this work.

Dr Mario Raviglione, Director of the WHO Global Tuberculosis Programme said, "Research for tuberculosis is seriously underfunded, with only two new antibiotics for treatment of drug-resistant tuberculosis having reached the market in over 70 years. If we are to end tuberculosis, more than US$ 800 million per year is urgently needed to fund research for new anti-tuberculosis medicines."