

Common antidepressants can increase antibiotic resistance: Australian study

01 February 2023 | News

It is estimated 1.27 million people die every year from infections which do not respond to medication



Researchers at the University of Queensland (UQ) in Australia have found that a range of commonly prescribed antidepressants can increase bacteria's resistance to antibiotic medications.

A study led by Professor Jianhua Guo from UQ's Australian Centre for Water and Environmental Biotechnology focused on prescription drugs used to treat depressive disorders, anxiety disorders, and other psychological conditions.

More than 42 million prescriptions were dispensed for antidepressant medications in Australia in 2021 and the study investigated bacterial exposure to five of the most common drugs - sertraline (Zoloft), escitalopram (Lexapro), bupropion (Wellbutrin), duloxetine (Cymbalta) and agomelatine (Valdoxan).

"Sertraline, duloxetine and fluoxetine had the strongest impact on bacterial resistance to antibiotics among the drugs we tested. Our study showed a marked increase in antibiotic resistance from those three, even at very low doses", said the researchers.

Notably, the antibiotic resistance appears to be antidepressant-dependent, which may be due to oxidative stress in bacteria posed by antidepressants. Further studies need to evaluate the potential effects on the microbiomes of people given antidepressants and assess their risk gastrointestinal disturbances or diseases, according to the study.