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Press Release

Researchers at JMI discover a formulation that can kill antibiotic-resistant bacteria effectively

Researchers at the Department of Biosciences, Jamia Millia Islamia (JMI) have tested a formulation combining silver nanoparticles with Ampicillin, one of the early antibiotics, that can kill antibiotic-resistant bacteria, a major threat to public health, effectively.

The formulation was tested on six different strains of bacteria – both sensitive and resistance to antibiotic – and investigated that it was effective in killing bacteria at a much lower concentration than Ampicillin and nanoparticles.

The finding by research team, headed by Prof. Meryam Sardar and included Nafeesa Khatoon, Hammad Alam, Afreen Khan and Khalid Raza, has shown that it is more effective in resisting bacteria as it kills it at lower dose and the bacteria are not showing resistance to the formulation. Scientific Reports is an online open access, scientific mega journal published by Nature Research,

While testing, the researchers exposed the formulation to bacteria repeatedly and found that bacteria showed no resistance even after 15 cycles of exposure. It is more effective in killing the bacteria.

Talking about the finding, Prof. Sardar said that the result would be extended to more clinically pathogenic resistant strains.

Also, she said, that modification of silver nano-particles and other non-toxic nano-materials with different kinds of drugs would be standardized and their antimicrobial activity will be studied with super-bugs which are resistant to most antibiotics.

The research has been published in famous science journal Springer Nature Scientific Report.

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