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TEIXOBACTIN: A NEW HOPE FOR THE WAR AGAINST BACTERIA

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Abstract

After the discovery of the penicillin the world is introduced to the era of antibiotics and many microbial infections have been cured, but there occurs a large gap between the discovery of the new class of antibiotics and due to that in the last twenty years bacterial pathogens are the main causes of death. The difficulty in discovering new compounds and the continued growth of antibiotic resistance have led to a scene where bacterial pathogens can cause serious complications to anyone who needs treatments for other ailments or needs surgery. Group researchers developed a new assay apparatus named the Isolation chip which allows for the isolated cultivation of up to 50% of environmental bacteria. Classical methods only allow for the cultivation of less than 1% of bacterial species, as such the I-chip opens up a vast repertoire of new species potentially harboring useful new compounds. Recently newly described bacterium, *Eleftheria terrae*, has been isolated and found to harbor a potent antibacterial compound, Teixobactin. It shows a bactericidal activity against a wide variety of Gram positive organisms including Methicillin & Vancomycin resistant *Staphylococcus aureus*. Although it needs to be thoroughly studied and much development needs to take place before Teixobactin or a derivative enters clinical trials. It may be the first of a new wave of antibiotic compounds made possible by the advent of the I-chip.

Keywords: antibiotics; Teixobactin; resistance; I-chip.

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