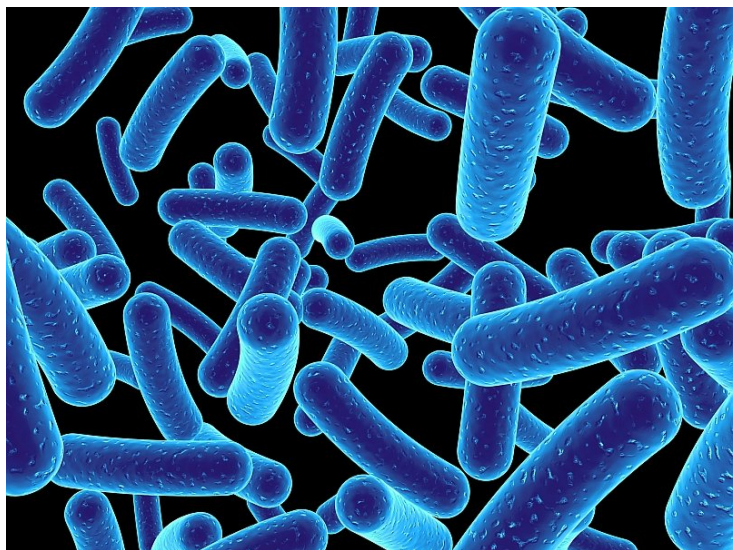


Potential replacement for antibiotics found

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Potential replacement for antibiotics found



Singapore: A team of researchers at Nanyang Technology University, Singapore, have developed a new antimicrobial solution that can attract and kill bacteria. The solution, which has the potential to kill 99 percent of bacteria and fungi that comes in contact with it, is presently being applied in contact lens manufacturing and the development of animal care products.

The technology has the capability to replace antibiotics as the main defense against bacteria. Furthermore, the effect of the new liquid solution is highly selective, killing only bacteria and fungi without damaging human cells.

The solution is a sponge-like polymer carrying a positive charge that works like a magnet, attracting bacteria that carry a negative charge in their cell walls. When drawn into the pores of the coating, the bacteria die due to rupture of their cell walls. It is therefore very difficult for the microbes to develop resistance. The research, which was published in the journal *Advanced Materials*, was led by Associate professor Mary Chan, Nanyang Technology University, Singapore. Ms Chan plans to develop the solution into a replacement to antibiotic, ready for use within the next five years.

Ms Chan said that, "The coating can also be applied on biomedical objects, such as catheters and implants, to prevent bacterial infections, which is a serious cause of concern as many bacteria are now developing resistance to antibiotics—currently our main source of treatment for infections."

"Our long-term goal is to develop this into an ingestible form, so it can effectively treat bacterial infections within the body, such as pneumonia and meningitis, replacing antibiotics as the standard treatment," she said.