

Fight back against MRSA to be started with a sniff

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An innovative anti-bacterial spray that will kill MRSA is being developed by Norwich Research Park scientists thanks to funding from the University of East Anglia.

The nasal spray, which can be used to decolonise patients prior to major surgery, promises to speed recovery time and reduce the number of repeat operations.

Procarta Biosystems developed the novel type of antibiotic specifically to treat MRSA and is now working in collaboration with UEA's Norwich Medical School to adapt this for use as a nasal spray.

For many people the [bacterium *Staphylococcus aureus*](#) (*S. aureus*) lives naturally and harmlessly in the front part of their noses and is not considered a significant threat. It is when the drug-resistant strains (MRSA) colonise the nose that there is a marked chance that someone undergoing surgery will develop an infection.

MRSA infections after major surgery, such as knee or hip replacements, are particularly serious as the patient is weakened, making recovery from the infection more challenging than usual. When the infection surrounds the replaced joint the remedy can sometimes only be to repeat the operation and put in a new device, dramatically increasing costs.

Procarta has discovered how to turn off essential genes in bacteria thus preventing the growth of the pathogen and spread of the infection.

Prof Alastair Watson from UEA's Norwich School of Medicine said: "Procarta has added an important new weapon to our armoury. This collaboration is a good example of how the public and private sector can work together, hopefully, to bring much needed new drugs to the clinic."

Dr Michael McArthur, chief scientific officer at Procarta Biosystems, said: "What we can offer is a novel approach in the fight against [antibiotic resistant bacteria](#). Targeting gene expression is a new concept and so far no [bacterial strains](#) resistant to this approach have been identified. This means that the therapy is not only effective against drug-[resistant strains](#) but, with judicious use, may also suppress the rise of future resistances."

Provided by University of East Anglia

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