NOVEL ANTIMICROBIAL PEPTIDE

BACKGROUND
It is widely publicised that there is an urgent need for new antibiotics to help the fight against rising antibiotic resistance in bacteria. These views are strongly supported by many scientific reports of multi- or pan-resistant bacteria and commentaries describing a return to the pre-antibiotic era. The British Society for Antimicrobial Chemotherapy has an on-going initiative to raise the profile of this issue, which has been declared by the WHO as one of the greatest current threats to public health. Rising resistance to current antibiotics, coupled with a lack of alternative therapies in the development pipeline, mean that the spectre of untreatable infections is a reality of the near future.

THE TECHNOLOGY
Discovered and developed by microbiologists at the University of Manchester Epidermicin NI01 is an exciting and novel antimicrobial peptide. The new antibiotic was isolated from a bacterial culture and is part of a group of molecules known as ‘host defence peptides’. It has potent activity against MRSA and other gram positive bacteria including vancomycin resistant enterococci (VRE). Epidermicin is stable across a large range of pH and temperature changes. It is highly active against problematic staphylococcal biofilms. The peptide is rapidly biocidal but non-lytic. Epidermicin can be extracted from its native source or manufactured synthetically. Our studies have shown no difference in potency with the two manufacturing methods.

APPLICATIONS
We are currently focusing on developing Epidermicin NI01 as a topical anti-infective for the treatment of drug resistant Staph aureus infections as a primary application. Other applications include treatment of VRE infections, drug/ device combinations (e.g. catheter coatings, bone cement, wound dressings) or incorporated in oral hygiene products.

KEY BENEFITS
- Biofilm prevention and destruction
- Low toxicity
- Low likelihood of emerging resistance
- Multiple applications

OPPORTUNITY
We are seeking licensees or co-development partners to progress one or more applications of the technology.

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