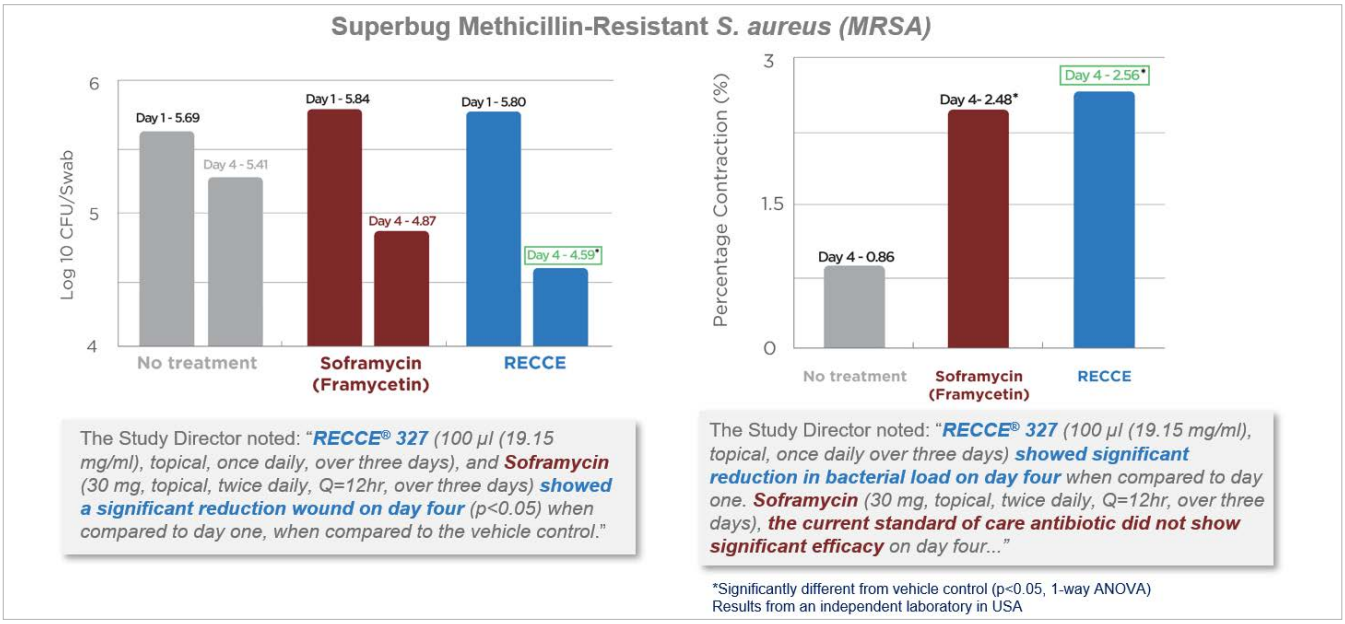

Superbug methicillin-resistant Staphylococcus aureus

the most common bacterial infections in humans, by demonstrating repeated efficacy at a range of dosing levels on topical skin conditions.

Recent in vivo model studies have shown RECCE 327's range of efficacy against both gram-negative and gram-positive bacteria including their superbug forms. This includes Neisseria gonorrhoeae, a bacterium listed as a priority pathogen on the World Health Organization's list of antibiotic-resistant bacteria that pose the greatest threat to human health. RECCE 327 showed dose-dependent antibacterial activity against Neisseria gonorrhoeae, which has been known to have developed resistance to all but one class of antibiotics.

Data from the company's recent study, along with other previous studies, continues to highlight the potential of RECCE 327 as a broad-spectrum antibiotic, and, most critically, to continue working against antibiotic-resistant bacteria or superbugs, even with repeated use. Data suggests that RECCE 327 is more effective against a wider range of bacteria and may come without the toxicity concerns associated with current antibiotics.

In response to the outbreak of COVID-19, with no proven vaccine or therapeutics currently available, Recce Pharmaceuticals has expanded its infectious disease research to better understand how its synthetic anti-infectives may be effective in treating viruses, as well as the common subsequent bacterial co-infections.

RECCE 327 was recently accepted in to the SARS-CoV-2 Antiviral Screening Program, a fee-for-service research program being conducted at the Doherty Institute (a joint venture partnership between the University of Melbourne and The Royal Melbourne Hospital) and CSIRO's Australian Centre for Disease Preparedness (ACDP). RECCE 327 was given the priority 1 status to evaluate its efficacy against COVID-19. Priority 1 is defined as 'highest or strong likelihood of antiviral or antiseptic efficacy – Compounds in this grouping will be eligible for stage one laboratory screening trials.'

On an international front, RECCE 327 and RECCE 529 are being researched by Path BioAnalytics with a leading university in the United States in an ex vivo respiratory organoid model system for its potential effectiveness against COVID-19. RECCE 529 is a new synthetic polymer formulation, built upon the company's anti-infective expertise.

Setting the stage for clinical study success

Looking ahead, Recce has its upcoming first-in-human Phase I clinical study to evaluate the safety, tolerability, pharmacokinetic and pharmacodynamic properties of RECCE 327 in 40 healthy subjects.

Parallel to the Phase I clinical trial, under the Therapeutic Goods Administration (TGA) Special Access Scheme (SAS), Category A, Recce is permitted to supply RECCE 327 to Australian medical practitioners in defined circumstances.

Without effective antibiotics to treat bacterial infections, lifesaving medical procedures, such as surgeries, may become risky to perform because of the potential of difficult-to-treat surgical site infections. Wholly owned and manufactured in Australia, Recce's anti-infective pipeline has the potential to address the increasing global threat posed by antibiotic resistance and emerging viral pathogens.