



**PRESS RELEASE**

**11<sup>th</sup> February 2021**

**‘Supercharger’ to revive mainstay antibiotic in global fight against antibiotic resistance**

***Revolutionary new treatment that involves the revitalisation of a well-known antibiotic to enter clinical trials in Australia this year***

SuperTrans Medical (STM), a biopharmaceutical company developing novel antibiotics that target difficult-to-treat, multi-drug resistant bacteria, has published First-In-Class, successful pre-clinical results and announced plans to begin clinical trials in Australia later this year for its lead candidate STM-001.

Offering new hope in the plight against antimicrobial resistance (AMR), STM has applied its patented permeator technology to the widely used antibiotic vancomycin through a process of "intelligent repurposing". The technology, originally developed at Stanford University, attaches easily to the existing antibiotic. The modified antibiotic can effectively penetrate into urgent threat bacterial pathogens allowing a highly effective eradication of superbugs.

“Antibiotic-resistant infections are a serious threat to global health and with only four new classes of antibiotics introduced since the early 1960s, clinicians just don’t have enough to work with. With the highly promising safety and efficacy results we’ve seen with our approach to date, we believe that STM-001, as a repurposed antibiotic could bring a much-needed new option forward to combat these urgent threats,” said Dr Lewis Neville, CEO, SuperTrans Medical.

The lead indication for STM-001 has been confirmed as Urinary Tract Infections (UTIs), following exceptional results in pre-clinical studies and given the urgent need for better antibiotic alternatives for complicated UTIs. Selection for this clinical indication is based on compelling proof-of-concept data in a challenging animal model of *E. coli* infection to be published in the April issue of Antimicrobial Agents and Chemotherapy (AAC). The manuscript can be downloaded here: <https://aac.asm.org/content/early/2021/01/14/AAC.02416-20>.

“UTIs represent one of the most frequent infectious diseases, affecting 150-250 million people each year worldwide. *E. coli* bacteria, the major scourge of UTIs has become increasingly resistant to fluoroquinolone antibiotics and there is therefore an unmet medical need for innovative solutions allowing specific targeting of difficult-to-treat UTIs,” said Dr Neville. “It is estimated that UTIs will cost the Australian healthcare system alone more than



\$1 billion a year within the next decade if nothing is done to stop the rise of antibiotic resistant bacteria<sup>1</sup>.”

He continued, “Our pre-clinical data has already shown STM-001 is effective within a broad therapeutic window and we are now working towards initiating Phase 1 clinical trials in Australia later this year.”

The STM-001 clinical trial in healthy volunteers is expected to commence late in the 2021 calendar year in Australia.

### ***STM’s Permeator Technology***

SuperTrans Medical is developing novel antibiotics through the use of its unique Guanidinium-Rich Molecular Transporter (GR-MoTr) technology. The permeator unit can be easily attached (conjugated) to existing approved antibiotics, resulting in a revitalised drug with superior anti-microbial properties. The permeator component of the antibiotic conjugate exerts a dual role to allow improved docking of the drug at the outer bacterial membrane as well as serving as a molecular "drill" to breach the membrane. Consequently, therapeutic intra-bacterial concentrations are generated which drive a rapid and complete bacterial eradication.

For further information about the technology please visit this link: <https://www.supertrans-medical.com/site/our-technology/our-technology-science>

### **Ends**

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### **About SuperTrans Medical**

SuperTrans Medical Limited (STM) is a biopharmaceutical company developing novel antibiotics that target difficult-to-treat, multi-drug resistant bacteria, also known as superbugs. This is achieved through the intelligent repurposing of existing FDA-approved medicines by conjugation with different structural formats of STM’s permeator technology.

STM is headquartered in Melbourne, Australia with a biotech R&D hub in Israel. You can find out more about STM here: <https://www.supertrans-medical.com>

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<sup>1</sup> OUTBREAK’s One Health antimicrobial resistance economic perspective