

TCS/19/33 - Investigating a novel class of Gram-negative antibiotic suitable for clinical use

We are all at risk from bacterial infections that have become resistant to current antibiotics. We are at the cusp of returning to untreatable bacterial infections, similar to the situation before antibiotics were first discovered. Of particular concern are infections caused by Multi drug-resistant (MDR) Gram-negative bacterial pathogens. Academia is particularly important in addressing this issue because of the low interest of the international pharmaceutical industry. The University of Strathclyde has invented a family of novel chemical and formed a partnership with the SME MGB Biopharma to develop them as antibiotics. This partnership has already been successful in taking one compound, known as MGB-BP-3 to a phase 2a clinical trial for *Clostridium difficile* associated infections, to which the elderly and immune-compromised are particularly vulnerable. In this project we will extend our success to develop urgently needed development candidates for the treatment of infections caused by MDR Gram-negative bacteria, such as *E. coli*, *K. pneumoniae* and *A. baumannii*, by taking advantage of recent understanding of how our S-MGB' s can accumulate in, and therefore kill, Gram-negative cells.