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SMT 19969: A selective agent for *Clostridium difficile* infection

CDI is a leading cause of nosocomial diarrhea and new agents that address both initial infection and reduce rates of recurrent disease are needed. SMT19969 is a selective antimicrobial that is currently undergoing Phase 2 PoC clinical trials for the specific treatment of CDI. The compound has been shown to have highly selective activity against *C. difficile* but with little or no activity against other organisms including Gram negative and Gram positive anaerobes indigenous to the normal GI microbiota. SMT19969 was superior to vancomycin in the hamster model of CDI with 80-100% survival recorded by day 28 compared to 0-10% survival in the vancomycin arm. In a first in human Phase 1 clinical trial oral administration of SMT19969 was shown to be safe and well tolerated. Plasma levels of SMT19969 were typically at or just above the limit of detection confirming restriction of the drug to the site of infection. Furthermore, faecal samples following multiple oral dosing were analysed for changes in bacterial populations and it was shown that there were no significant changes in gut flora bacteria except for total *clostridia* which were significantly reduced during the course of dosing. These data demonstrate that SMT 19969 is a potent, bactericidal and selective inhibitor of *C. difficile*. Phase-1 results show that SMT 19969 is safe and well tolerated with repeat administration resulting in minimal impact on gut flora. These data support continued clinical development of SMT19969 as a potential therapy for CDI that may reduce rates of recurrent disease.

Biography

Richard completed his PhD from Reading University before undertaking Postdoctoral studies and taking up a stipendiary lectureship at St Catherine's College, Oxford University. He is currently working as a CSO – Antimicrobials at Summit Therapeutics, a UK based biotech company focused on the development of agents in areas of high unmet medical need.

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