Search and rescue: tackling antibiotic resistance with chemistry

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Stellingen

behorende bij het proefschrift

Search and Rescue: Tackling antibiotic resistance with chemistry

1. Rescuing a well-established class of antibiotics may be of more immediate use than developing an entirely new class of antibiotics - Chapter 2

2. Developing therapeutics against essential systems in the outer membrane may be the best way to target gram-negative antibiotics – Chapter 3

3. Essential bacterial enzymes which are not exploited by current antibiotic therapeutics should be the focus of inhibitor development – Chapter 4 and 5

4. The use of reliable activity function assays is vital in the development process for potential inhibitors – Chapter 2 and 4

5. Chemistry is an underutilised tool in the field of antibiotics research.

6. The war against pathogenic bacteria will never cease, the long-term aim should be to stop the decimation of commensal bacteria as collateral damage.

7. It is important to test both enzyme target activity and MIC while developing new antimicrobials to tune inhibition and bacterial invasion.

8. With most of the so-called ‘low hanging fruit’ of natural antibiotics having already been discovered, it would be a mistake to rely on the same discovery pathway which has been utilised for the past 100 years.

9. Innovation is at the heart of science; micro-organisms must be the greatest scientists of all.

10. Antibiotics play a crucial role in the livelihood of society; without such we face a return to the dark ages.

11. More effort should be made to communicate the dangers of antibiotic resistance to the general populace, producing a campaign not unlike that for cancer research.

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