

Resistance guided discovery of novel antibiotics.

The discovery of novel antibiotic scaffolds is essential to combat the growing threat of antibiotic resistance. Natural products from bacteria, fungi, and plants represent a reservoir of novel chemistry, and have historically been the primary starting point for antibiotic development, however selecting targets with promising antibiotic potential is difficult. Resistance guided drug discovery exploits the mechanism of self-resistance in antibiotic producing bacteria to prioritise molecules based on their mechanism of action. Through high throughput genome mining, a novel mechanism of self-resistance was used to discover several potential new antibiotics against an important and validated target.