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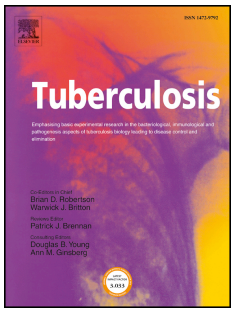

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Ionophore A23187 Shows Anti-tuberculosis Activity and Synergy with Tebipenem

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Abstract

The objective of this study was to find molecules with anti-mycobacterial activity from a natural compounds library, investigate their mechanisms of resistance, and assess their synergy with antibiotics. We screened a library of 2,582 natural compounds with *Mycobacterium aurum* with the aim of identifying molecules with anti-mycobacterial activity. The hits with the lowest MICs in *M. aurum* were also tested for their antimicrobial activity in other mycobacterial species including *M. tuberculosis* complex strains. The chequerboard titration assay was chosen for determining drug interactions *in vitro*. Spontaneous resistant mutants were isolated and their whole genome sequences compared to wild type and resistant mutants to identify resistance mechanisms. We found that ionophores show anti-mycobacterial