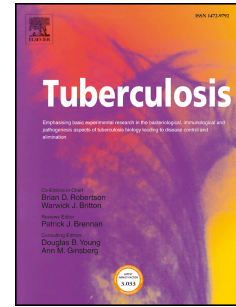


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1 Ionophore A23187 Shows Anti-tuberculosis Activity and 2 Synergy with Tebipenem

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15 Abstract

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

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