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## Bioorganic & Medicinal Chemistry Letters

Volume 21, Issue 8, 15 April 2011, Pages 2533-2536

# Synthesis and SAR of novel benzoxaboroles as a new class of $\beta$ -lactamase inhibitors

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<https://doi.org/10.1016/j.bmcl.2011.02.024>

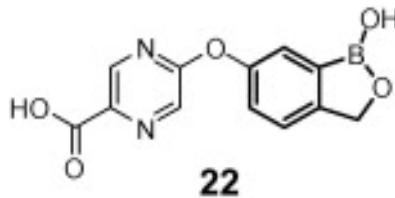
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### Abstract

A new class of benzoxaborole  $\beta$ -lactamase inhibitors were designed and synthesized. 6-Aryloxy benzoxaborole **22** inhibited AmpC P99 and CMY-2 with  $K_i$  values in the low nanomolar range. Compound **22** restored antibacterial activity of ceftazidime against *Enterobacter cloacae* P99 expressing AmpC, a class C  $\beta$ -lactamase enzyme. The SAR around the arylbenzoxaboroles, which included the influence of linker and substitutions was also established.

### Graphical abstract

A new class of benzoxaborole  $\beta$ -lactamase inhibitors is described. 6-Aryloxy benzoxaborole, **22**, inhibited AmpC P99 and CMY-2 with  $K_i$  values in the low nanomolar range. Compound **22** restored antibacterial activity of ceftazidime against *Enterobacter cloacae* P99 expressing AmpC.



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## Keywords

$\beta$ -lactamase inhibitors; Benzoxaborole; Antibacterial

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