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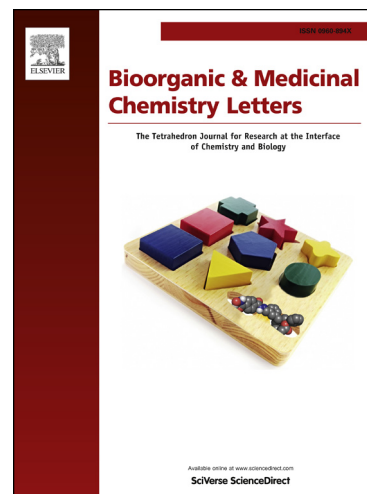
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Synthesis and evaluation of novel azoles as potent antifungal agents

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Abstract: Using a rational approach to the design of antifungal agents, a series of azole agents with 1,3,4-oxadiazole side chains were designed and synthesised. The results of preliminary *in vitro* antifungal tests with eight human pathogenic compounds showed that all of the title compounds exhibited excellent activities against all of the tested fungi except *Aspergillus fumigatus*. Compounds **11e** and **11f** were found to be the most effective, with a minimum inhibitory concentration of 0.0039 µg/mL, followed by voriconazole, which has a MIC of 0.0625 µg/mL. The 1,3,4-oxadiazole side chain is not the major contributor but plays a role in eliciting the observed antifungal activity.

Fungal infections, which are an increasing healthcare concern worldwide, are associated with significant costs, morbidity, and mortality.¹⁻³ Although the number and types of antifungal drugs have markedly increased, only a few of the identified drugs can be used in the clinic.⁴ The commonly used antifungal agents are azoles, polyenes, and echinocandins.^{3,5} Among these antifungal drugs, the gold standard for

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