

ABSTRACT

Invasive fungal infections (IFIs), mostly caused by *Aspergillus* or *Candida* species, represent a severe global threat. IFIs are serious diseases of great concern especially in immunocompromised patients, annually leading to more than 1.7 million deaths.¹ Despite its seriousness, there is insufficient amount of available antifungal therapeutics. Current antifungal treatments rely mainly on azole drugs which often suffer from increased toxicity, low bioavailability and drug resistance, among others.² Therefore, we aim to develop novel antifungals in the form of azole prodrugs which would selectively target specific fungal enzymes and would ideally avoid undesired off-target effects.

Our designed prodrugs contain selected azoles, modified by the attachment of a self-immolative (SI) linker to a specific carbohydrate through a glycosidic bond. Such glycosidic bond should undergo cleavage by extracellular fungal glycosidases, resulting in release of the azole drug directly at the site of fungal infection.

Keywords: *azole, antifungal, prodrug, targeted delivery*