TECHNOLOGY

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Novel anti-fungal azole derivatives with reduced cardiotoxicity

Technology ID# 910.3

Background

Fungal infections (mycoses) are a common and serious health problem affecting a wide range of today's global population. Azole anti-fungal drugs are typically prescribed for the treatment of fungal infections. However, the prescription of azole anti-fungal drugs for systemic mycoses is limited by their cardiotoxicity and the increased prevalence of therapeutic resistant organisms. Novel anti-fungal azole derivatives with reduced cardiotoxicity are necessary to improve the efficacy and outcome of systemic fungal infection treatment.

Researchers at the University of Calgary have developed an array of novel modified azole derivatives displaying reduced cardiotoxicity *in vitro.* Moreover, these novel therapeutic agents exhibit comparable (or greater) anti-fungal activity compared to common anti-fungal agents, such as miconazole.

Areas of Application

- Treatment of systemic fungal infections
- Use in novel anti-fungal topical formulations

Competitive Advantages

- Compounds display reduced cardiotoxicity *in vitro*
- Lead compounds display comparable (or greater) anti-fungal activity compared to common azole anti-fungal agents
- Compounds do not exhibit off-target interactions with cardiac currents

Stage of Development

- Biological activity and therapeutic ratio have been determined *in vitro*
- Modeling studies indicate diminished cardiotoxicity profiles
- Lead compounds are currently being evaluated in animal models

Intellectual Property Status

- US Provisional Patent Application pending