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Novel compounds for the treatment of fungal infections

Tech ID: 25146 / UC Case 2015-408-0

BACKGROUND

Treatment of fungal infections remains a medical challenge and better and more efficacious treatments are needed. Antifungal agents provide relief from fungal infections that can potentially infect almost any part of the human body, but, systemic fungal infections can be life threatening. A commonly prescribed antifungal drug for systemic fungal infections is fluconazole. Fluconazole tends to be well tolerated; however there have been reports of various undesirable side effects as well as the emergence of fluconazole resistant fungal strains.

TECHNOLOGY DESCRIPTION

Researchers at the University of California, Irvine, discovered a unique pharmaceutical synergy when fluconazole is co-administered with novel spirocyclic compounds. Specifically, a library of spirocyclic compounds was synthesized and tested for synergy with fluconazole against fluconazole-resistant and susceptible *Candida albicans* strains. Some of the compounds co-administered with fluconazole displayed biological activity in the sub-nanomolar range and low toxicity up to the high micromolar range. Taken together, results from these studies show that the spirocyclic compounds enhance the potency of fluconazole, allowing therapeutic efficacy even at low fluconazole concentrations.

APPLICATION

The composition of matter and method of use described in this invention may be of interest to pharmaceutical and biotechnology companies developing treatments against a wide range of fungal infections. The University of California seeks to develop and commercialize this invention through out-licensing, and/or by collaborating with a company through sponsored research.

ADVANTAGES

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	11,174,267	11/16/2021	2015-408

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OTHER INFORMATION

KEYWORDS

Fluconazole, synergy, antifungal, pharmaceutical, candida, candidiasis, spirocyclic, nanomolar, toxicity

CATEGORIZED AS

- » **Materials & Chemicals**
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- » **Medical**
 - » Disease: Infectious Diseases
 - » New Chemical Entities, Drug Leads
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