MUC7 12-mer-D isomer: novel and promising antimicrobial agent

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Technology description

This invention encompasses isomeric peptide derivatives of a naturally occurring protein found within the human body. These isomeric derivatives have been shown to possess potent antifungal activity comparable to that of currently used antifungal agents but with far less toxicity. The microbes used within those studies include but are not limited to C. albicans, C.glabrata, and C. krusei. These derivatives have been optimized for both size and charge and were specifically designed to resist the action of proteolytic enzymes thereby enhancing their stability.
This problem is even more pronounced when taking into consideration the growing number of immunocompromised patients, such as organ transplant and cancer patients, as well as those afflicted with HIV/AIDS. In these patients, opportunistic fungal infections such as oral candidiasis are quite common. Unfortunately, the combination of prolonged treatment regimens with the limited number of available effective antifungal agents has resulted in the emergence of drugresistant pathogenic fungal strains, constituting a serious threat to public health.

Application area

* Therapeutic agent for the treatment of fungal infections
* Component of artificial saliva for immunocompromised patients and/or those suffering from salivary dysfunction
* Topical antimicrobial
* Oral rinse
* Disinfectant/antiseptic for use in food or surface preparation
* Preservative to control food spoilage.

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