



Methods of Treating Fungal Infections

Unmet Need: Fungal infections affect a large portion of the global and US population, ranging from skin infections to severe systemic conditions. The prevalence of these infections, including infections having both fungal and bacterial components, is currently on the rise due to overuse of antibiotics, immunosuppressive therapies as well as due to the growing segment of the aging populations. This market is currently about \$15B/year and is expected to grow to \$22B by 2028. New treatment options are critical to address this growing public health issue.

Solution: The US Navy, through the Naval Medical Research Unit – San Antonio (NAMRU-SA), has been at the forefront of developing therapies to address fungal infections. These therapies are based on the peptides BmKn2, dBmKn2, Kn2-7 and dKn2-7 extracted from venom of the scorpion, which were found to be effective in treating both planktonic and biofilm fungal infections, particular for *C. albicans*. They were also found to be combinable with other therapeutic agents, e.g. antibiotics, so that they can be used in combined treatments to treat complex infections that include both fungal and bacterial infections agents, such as *C. albicans* and *S. aureus*.

Stage of Development: The technology is in the early stages of development.

IP or IP Status: This research has produced a robust set of therapeutics and methodologies. These technologies are embodied in multiple patents, including US Patent 10,946,065 ([US Patent 10,946,065](#)), US Patent 10,548,948 ([US Patent 10,548,948](#)), and US Patent 11,524,051 ([US Patent 11,524,051](#)).

- **Command:** NAMRU-SA
- **Category:** Therapeutics
- **License Status:** Available for exclusive or non-exclusive licensing and collaborations
- **Date Published:** March 15, 2024
- **Date Updated:** April 1, 2024
- **Invention No.:** 105743US04
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