Treatment of Anthrax

This invention relates to the novel repurposing of pre-approved FDA compounds containing carboxylic acid functional groups to treat anthrax, inhibit anthrax toxins and inhibit anthrax toxin-induced cytotoxicity.

Background
Anthrax is a disease caused by the bacterium Bacillus anthracis and is extremely lethal to both humans and animals. Although Anthrax is considered one of the biggest biological war threats, current treatments for inhalation of anthrax are limited. Antibiotics have proven very efficient in eliminating the bacterial infection, but they lack the ability to destroy or inhibit the toxins released by the bacteria. This is a significant problem, as the lethal factor (LF) toxin can remain active in the body for days after the infection has been eliminated causing further macrophage death. Therefore, inhibitors of the LF toxin can be used in addition to antibiotics for a more effective treatment of Anthrax infection. While several inhibitors have been identified, there is little incentive for drug companies to develop, test, and apply for FDA approval of the drugs due to the rare occurrence of an anthrax infection. Therefore, identifying FDA-approved drugs, which are currently used to treat other conditions, as LF inhibitors provides a promising anthrax treatment and will make it to the market faster and cheaper than a brand new drug or compound.

Looking for Partners
Looking for a partner to validate testing, conduct pre-clinical and clinical testing, and commercialize the technology.

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