

Public Abstract

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Graduation Term:SS 2008

Department:Veterinary Pathobiology

Degree:MS

Title:AMINO-TERMINAL SEQUENCES OF THE BACILLUS ANTHRACIS EXOSPORIUM PROTEINS
BCLA AND BCLB IMPORTANT FOR LOCALIZATION AND ATTACHMENT TO THE SPORE SURFACE

Bacillus anthracis is a bacterium that causes the disease known as anthrax. When this bacterium encounters stresses due to lack of nutrients, it undergoes a process called sporulation, where the bacterium shifts forms to a rugged, resistant spore. The outermost layer of this spore is called the exosporium. The exosporium is made up of many proteins, two of which are the BclA and BclB proteins. We have identified parts of these proteins involved in their assembly and incorporation into the exosporium layer during the sporulation phase of the B. anthracis lifecycle. Using these newly identified protein domains allows us to express foreign protein components on the outside of B. anthracis spores, using these spores as a potential vaccine delivery system.