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Characterization of CotJC Spore Protein in *Bacillus anthracis*

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Bacillus anthracis is a spore forming bacteria that is responsible for anthrax disease. We are interested in the roles of the outermost layers, the coat, interspace, and exosporium, with respect to resistance and germination. Previously, we have shown that *cotH* spores germinate more completely than wild-type (WT). We have also shown that *cotH* mutant spores are missing proteins in addition to CotH. One of these possible CotH assembly-dependent proteins is CotJC. We have constructed a strain of *B. anthracis* that expresses green fluorescent protein attached to CotJC (CotJC-GFP). We monitored the expression and assembly of CotJC-GFP in both WT and *cotH* backgrounds. Fluorescent microscopic examination of spores suggests that CotJC-GFP assembly is CotH dependent. We are currently in the process of constructing a marker-less *cotJC* deletion in *B. anthracis*. Once isolated, we will measure the germination rates of the WT, *cotH*, and *cotJC* mutant spores. Our goal is to clarify if CotJC contributes to the *cotH* mutant enhanced germination phenotype.