

Comparative Proteomics Study of Bacillus anthracis in culture and from Biofilm to identify the genes responsible for biofilm induction & resistance to drugs/antibiotics

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Two types of culture can be taken: Bacteria growing in culture/Broth and bacteria from biofilm. The

proteins from the two can be extracted and they can be stained with different dyes Cy 3 and Cy 5 and run on the 2D gel. The dissimilar proteins of the two identified or have varied would be mapped to gene sequence analysed with the Mass Spectrometry / MALDI/DIGE. The genes identified could also be studied for Biofilm formation and induction, gene expression, maturation of the

biofilm, correlation with sporulation, antibiotic resistance. Once the genes and their gene products have been identified antibodies could be administered against the specific protein products and also to analyse the response of the biofilm forming pathogenic strains towards different concentration of antibiotics. Hence, the Comparative proteomics will help us to determine the molecular function of the various genes involved in biofilm formation and antibiotic resistance in B. anthracis