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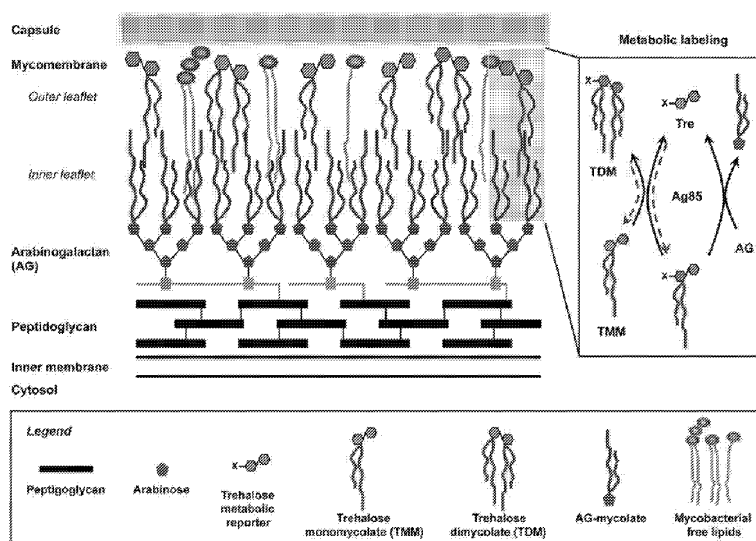
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(54) Title: METHODS FOR DETECTING MYCOBACTERIA WITH SOLVATOCHROMIC DYE CONJUGATES

Figure 1



(57) **Abstract:** A series of carbohydrate-dye conjugates, as well as a method for detection of pathogenic or other organisms (e.g., bacteria) using the same are provided. The carbohydrate-dye conjugate can be enzymatically incorporated into live and active (viable) bacteria of interest for facile detection of said bacteria. The conjugate incorporation is achieved by utilizing one or more of the enzymes that are endogenous to the bacteria of interest, which can incorporate the conjugate via the conjugate's carbohydrate. A detectable signal is produced by the conjugate's dye only upon incorporation into the bacteria of interest, due to the changes in the dye's local environment upon incorporation. The conjugate may be metabolically incorporated into the fatty outer membrane of a bacterial cell wall, which provides a distinctly hydrophobic environment for the conjugate's dye, causing it to produce a detectable signal.

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