UNIVERSITI TEKNOLOGI MARA

INVESTIGATION OF ANTIBACTERIAL ACTIVITY OF 3,4,5-TRIHYDROXYBENZOHYDRAZIDE DERIVATIVES

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ABSTRACT

The establishment of new antimicrobial agents is crucial since a few species of bacteria has developed resistance to the older antimicrobial agents especially when it comes to clinically important pathogens. The antimicrobial activity of compounds with hydrazine as the functional group has not been extensively studied. In this study, the bacterial live cultures of four species of clinically important pathogens including *Staphylococcus aureus* and *Pseudomonas Aeruginosa* were tested with thirty-two derivatives of 3,4,5-trihydroxybenzohydrazide derivatives. Vancomycin is used as a control in this study. It was found out that only a few out of thirty-two compounds are showing the inhibition.

CHAPTER 1

INTRODUCTION

1.1 Background of 3,4,5-trihydroxybenzohydrazide

The 3,4,5-trihydroxybenzohydrazide was synthesized from the reaction between 3,4,5-trihydroxybenzoylhydrazine and indole-2-carboxaldehyde. The common name of the parent compounds is gallic acid (Khaledi *et al*, 2009).

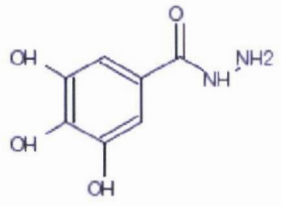

Figure 1: Structure of 3,4,5-trihydroxybenzohydrazide

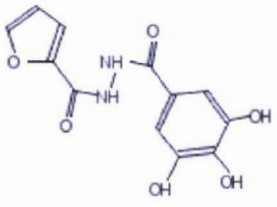

Figure 2: Structure of 3,4,5-trihydroxybenzoylhydrazine