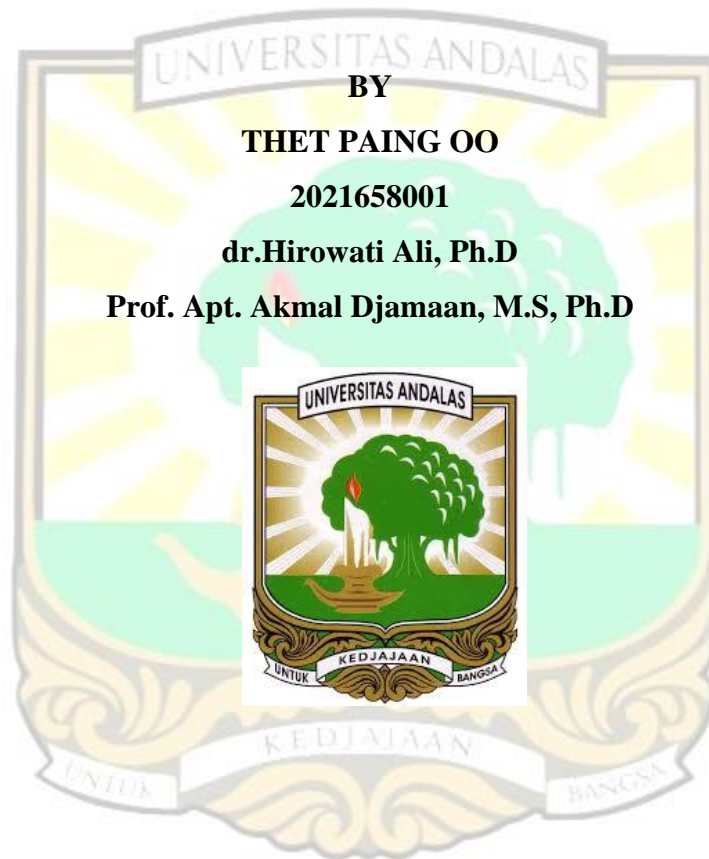


**ISOLATION AND CHARACTERIZATION OF PROBIOTIC BACTERIA FROM LAPHET  
(MYANMAR'S TRADITIONAL FERMENTED TEA LEAVES): AND ANALYSIS OF *IL-6*, *TNF- $\alpha$*  AND *IL1- $\beta$*  GENES EXPRESSION IN DSS INDUCED ANIMAL MODEL  
COLITIS**

**THESIS**



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ISOLATION AND CHARACTERIZATION OF PROBIOTIC BACTERIA FROM LAPHET  
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Abstract

Laphet (Myanmar's traditional fermented tea leaves) is one of the most consumed daily snacks throughout Myanmar and it contains Lactic Acid Bacteria (LAB) which plays an important role in probiotics. Probiotics are live microbial food constituents that affect the microflora and provide health benefits to the host when consumed in sufficient quantities. This study used the catalase assay and the type of fermentation to assess the features and biochemical properties of LAB. Inflammatory bowel disease (IBD), a chronic relapsing and remitting sickness that includes Crohn's disease (CD) and Ulcerative colitis (UC), has an unknown origin. CD and UC are unidentified causes of chronic inflammatory gastrointestinal diseases. Laphet is one of Myanmar traditional food derived from tea leaves (*Camellia sinensis*) and it has abundance of lactic acid bacteria, antioxidant properties, catechin, and probiotic properties. Tumor necrosis factor- $\alpha$  (*TNF- $\alpha$* ), interleukin-1 beta (*IL-1 $\beta$* ) and interleukin-6 (*IL-6*) genes play a pivotal role in IBD expression and these genes were measured using quantitative real-time reverse transcriptase polymerase chain reaction (RT-PCR). The present study aims to investigate the anti-inflammatory effect and expression in DSS induced animal model treated with Laphet extract. According to the data presented in this sample, the p values for *IL-6*, *TNF- $\alpha$* , and *IL-1 $\beta$*  are 0.500, 0.68, and 0.08, respectively. These p values imply that the observed differences in gene expression for *IL-6*, *TNF- $\alpha$* , and *IL-1 $\beta$*  between the Laphet's extract-treated group and the control group are not statistically significant.