

ABSTRACT

Belva Aqila Mumtaz, 24020221130032. Potential of Lactic Acid Bacteria Isolates from *Dali Ni Horbo* Fermented Food as Probiotic Candidates and Their Molecular Identification. Under the guidance of **Dr. Dra. Arina Tri Lunggani, M.Si.** dan **Dr. Siti Nur Jannah, S.Si., M.Si.**

Probiotics are non-pathogenic living microorganisms that, when consumed in sufficient quantities, can provide health benefits to their hosts. One group of microorganisms that has been widely found as probiotic candidates is lactic acid bacteria (LAB). Several LAB strains that have been known to be probiotic include *Lactobacillus*, *Enterococcus*, *Streptococcus*, *Bacillus*, *Bifidobacterium*, and *Kluyveromyces*. These LAB strains can be sourced from various fermented foods, dairy products and their derivatives, vegetables, fruits, and so on. *Dali Ni Horbo* is one of the traditional fermented foods typical of the Batak Tribe, North Sumatra. *Dali Ni Horbo* is also known as "Batak Cheese" which is made from buffalo milk. The purpose of this study was to determine the potential of LAB isolates from *Dali Ni Horbo* fermented food as probiotic candidates. The method for determining probiotic candidates used was elimination based on tolerance tests to acid pH, tolerance tests to bile salts, hydrophobicity tests, and coaggregation tests. The results showed that isolate DNH 52.3 had the potential to be the best probiotic candidate. This conclusion is based on its ability to survive acidic pH conditions and bile salts with a survival percentage of >80%. In addition, it has a high hydrophobicity percentage of 68%, and a high coaggregation percentage of 34%. Isolate DNH 52.3 was identified molecularly using 16s rRNA markers with universal primer 27F as having a close relationship with *Bacillus cereus strain 3.2*. Isolate DNH 52.3 is suspected of being contaminated during the DNA isolation stage.

Key word: Dali Ni Horbo, Lactic Acid Bacteria, Molecular Identification, Probiotic