
**DNA BARCODING OF LOCAL PIGS IN MINAHASA, NORTH SULAWESI,
INDONESIA**

Revolson Alexius Mege¹, Mokosuli Yermia Samuel²

¹Animal Physiology, Department of Biology, Faculty of Mathematics and Science, State University of Manado

²Laboratory of Bioactivity and Biomolecular, Department of Biology State University of Manado
Corresponding author Email : labbiomolunima@gmail.com

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ABSTRACT: DNA barcoding and Molecular phylogeny reconstruction of local pigs from Minahasa North Sulawesi, Indonesia was investigated using partial sequences of Cytochrome c oxidase subunit I gene (CO1). Two location according the place of traditional pigs farm used this study that is Minahasa Utara and Minahasa was analysis the partial CO1 gene. Phylogeny trees were constructed online in NCBI site. From the results of this studied, based on partial CO1 gene, local Pigs of Minahasa can not be sure of the position of species, because it does not have a sequence similar to the gene bank. The North Minahasa local pigs showed the similarity of the nearest CO1 sequence to the Pig DNA sequence from clone WTSI_1061-78D9. Similarly, the phylogeny construction shows the closest kinship based on the CO1 gene with Pig DNA sequence from clone WTSI_1061-78D9.

KEYWORDS : Local Pigs, Minahasa, CO1 gene, DNA barcoding.

INTRODUCTION

The pigs are farmed by the Minahasa community, consisting of local pigs and hybrid pigs. Large-scale breeders, preferring hybrid pigs because of their large body size to be able to provide meat in larger quantities, than smaller Minahasa local pigs. Feed for hybrid pigs, generally in the form of synthetic pellets. However, feed for local pigs that are farmed on a small scale using the remaining agricultural produce, among others: tubers, corn, rice bran (kongga) and others - generally derived from nature.

The Minahasa sub-ethnic group has been raising pigs for a long time. Pigs have been raised in Minahasa since the 18th century. Preliminary research has been done, found morphological differences between local pigs in Minahasa region. Morphological

variations include the shape of the mouth, the shape of the ear, the shape of the foot and the shape of the nose. Morphological variations occur, among others, due to the culture of Minahasan people doing cross-breeding between local pigs. In rural communities, pig farms do not use cages. Thus, it is suspected to have cross-breeding between local pigs and wild pigs. However, there has not been much research on the species and genetic diversity of local Minahasa pigs. Other local pig studies have been conducted in Indonesia including local Batak pigs, local Krawang pigs, local Nias pigs and local Toraja Land Pigs. Local pig identification is more conventionally done. This leads to the need for experts and a considerable amount of time