

# I. INTRODUCTION

## 1.1 Background

Indonesia is a country that has the fourth largest population in the world. In 2020, the population of Indonesia was 273.5 million people (Population *et al.*, 2023). According to the population census of the Central Statistics Agency 2020, the population growth rate for the 2010-2020 period was 1.25%, which tends to decrease compared to the population growth rate for the 2000-2010 period, which was 1.49%. However, from 2010 to 2020, the population has increased by 32.56 million people (Statistik Indonesia 2023).

To suppress the rate of population growth, the government issued Government Regulation of the Republic of Indonesia number 78 of 2014 concerning population development and the development of family planning and family information systems. According to the Government Regulation of the Republic of Indonesia number 78 of 2014, family planning is an effort to regulate the birth of children, the ideal distance and age to give birth and regulate pregnancy through the promotion of protection and assistance following reproductive rights to create a quality family. The purpose of this legislation is to control population quantity, develop population quality, and direct population mobility. Therefore, the government formed the National Population and Family Planning Agency (BKKBN) to carry out government tasks related to population control and family planning.

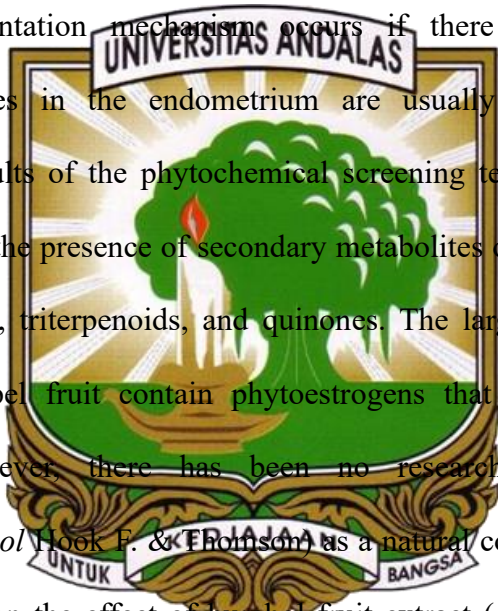
The way to control the population is to avoid unwanted births, get births that are wanted, and regulate the interval between births. Birth control can be done with contraception, both hormonal and non-hormonal contraceptives. Over time,



technological advances also increase the effectiveness of contraception to prevent pregnancy. In addition to artificial contraception, recent research has also found plants that have antifertility.

The burahol fruit (*Stelechocarpus burahol* Hook F. & Thomson) is a traditional fruit with several advantages. Burahol fruit contains antioxidants that absorb oxidative stress, according to Sunarni, Pramono and Asmah (2007). Furthermore, the burahol fruit is a breath freshener. This fruit, which has several advantages, is thought to have an anti-implantation effect.

The antiimplantation mechanism occurs if there is a change in the endometrium. Changes in the endometrium are usually caused by hormonal disturbances. The results of the phytochemical screening test on the simplicity of burahol flesh showed the presence of secondary metabolites of alkaloids, flavonoids, polyphenols, saponins, triterpenoids, and quinones. The large group of flavonoids contained in the Kepel fruit contain phytoestrogens that have the potential as phytoestrogens. However, there has been no research on burahol extract (*Stelechocarpus burahol* Hook F. & Thomson) as a natural contraceptive. Therefore, this study will focus on the effect of burahol fruit extract (*Stelechocarpus burahol* Hook F. & Thomson) on the antiimplantation activity and uterine histology of mice.



## 1.2 Problem Formulation

1. What is the effect of the Burahol Fruit Extract (*Stelechocarpus burahol* Hook F. & Thomson) on the implantation activity of mice?
2. What is the effect of Burahol Fruit Extract (*Stelechocarpus burahol* Hook F. & Thomson) on the uterus and ovary histology structure?

### 1.3 Research Objectives

1. To understand the effect of Burahol Fruit Extract (*Stelechocarpus burahol* Hook F. & Thomson) on the implantation activity of mice
2. To understand the effect of Burahol Fruit Extract (*Stelechocarpus burahol* Hook F. & Thomson) on the uterus histology structure

### 1.4 Significance of The Research

The importance of this research is to expand scientific information regarding the potential of Burahol fruit extract (*Stelechocarpus burahol* Hook F. & Thomson) as a natural contraceptive.

