

## **ABSTRACT**

***Agus Suparman. 2020. Anatomical Analysis of Ki Urat Plant Roots (Plantago major L) Based on Altitude Differences. Guided by Dr. Yusuf Ibrahim, M.Pd., M.P., and Drs. Suhara, M.Pd.***

*Every environment with a certain height above sea level has different environmental factors. Ki Urat (Plantago major L) is a plant that lives cosmopolitan so it has a wide tolerance range to the environment. Plants must be able to adapt to their environment in order to survive. The adaptability of plants consists of morphological, anatomical and physiological adaptations. The purpose of this study was to obtain information related to the anatomical plasticity of Ki Urat roots which is influenced by height. The sample was taken by using purposive sampling technique, namely by taking the flowering Ki Urat plant. The sampling location is at an altitude of 200 masl (meters above sea level), 400 masl, 600 masl, 800 masl, and 1000 masl. The length and width of the cells at the Ki Urat root were measured. The cells measured included the cells that made up the epidermis, cortex, endodermis, xylem and phloem, each of which was measured by five cells randomly. The results showed fluctuating data. Where Ki Urat plants that grow at an altitude of 600 masl have a tendency to higher anatomical variations. While the trend with the lowest anatomical variation is at an altitude of 400 masl. Microclimate is the actual cause of size changes at the cellular level of each Ki Urat plant tissue that grows from an altitude of 200 masl to 1000 masl. These environmental factors include soil moisture, soil pH, soil organic matter and soil temperature.*

***Keywords:*** *Root anatomy, Altitude, Adaptation, Plantago major L.*