

## **UNDERGRADUATE THESIS**

# **COMPREHENSIVE *IN-SILICO* STUDY COMBINED WITH EXPERIMENTAL VALIDATION TO RECONSTRUCT $\alpha$ - AGARASE FOR ENZYMATIC AGAROOOLIGOSACCHARIDES DEVELOPMENT**

## **UNDERGRADUATE THESIS**

To fulfill part of the requirements for obtaining a Bachelor of Science degree in  
the Biology Study Program



by:

**Mayland Muhammad Hanbal**

**20/457584/BI/10480**

**Thesis Advisor: Dr. biol.hom Nastiti Wijayanti, S.Si., M.Si.**

**FACULTY OF BIOLOGY  
UNIVERSITAS GADJAH MADA  
YOGYAKARTA**

**2025**

**VALIDATION PAGE**

**UNDERGRADUATE THESIS**

**COMPREHENSIVE *IN-SILICO* STUDY COMBINED WITH  
EXPERIMENTAL VALIDATION TO RECONSTRUCT  $\alpha$ -  
AGARASE FOR ENZYMATIC  
AGAROLIGOSACCHARIDES DEVELOPMENT**

Arranged by:

Mayland Muhammad Hanbal (20/457584/BI/10480)

This undergraduate thesis has been defended in front of the Examination Team on  
January 13<sup>th</sup>, 2025, and declared to have met the requirement


Yogyakarta, 14<sup>th</sup> January 2025

Faculty of Biology  
Universitas Gadjah Mada

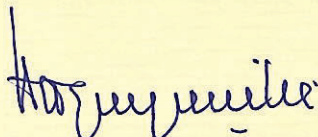
Examiners,  
Chief Examiner

Approved  
Dean

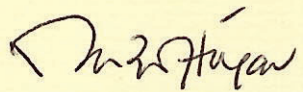
  
Ganies Riza Aristya, S.Si., M.Sc., Ph.D.  
NIP. 198402162009122005

  
Prof. Dr. Budi Setiadi Daryono, M.Agr.Sc. *ys*  
NIP. 197003261995121001

Thesis Advisor,

  
Dr. biol.hom Nastiti Wijayanti, S.Si., M.Si.  
NIP. 197003212008122001

Examiner,

  
Dr. Tri Rini Nuringtyas, S.Si., M.Sc.  
NIP. 197303271999032002