

**NARINGENIN IMPROVES GLUCOSE UPTAKE THROUGH GLUT12
EXPRESSION IN C2C12 CELLS INSULIN RESISTANCE MODELS**

THESIS



Submitted by:

Fanny Aderia Fitri

20/454890/FA/12546

To

**FACULTY OF PHARMACY
GADJAH MADA UNIVERSITY
YOGYAKARTA**

June 2024

**NARINGENIN IMPROVES GLUCOSE UPTAKE THROUGH GLUT12
EXPRESSION IN C2C12 CELLS INSULIN RESISTANCE MODELS**

THESIS

Submitted to fulfill one of the requirements of achieving

Bachelor of Pharmacy (S.Farm.)

Pharmaceutical Science Study Program at the Faculty of Pharmacy

Gadjah Mada University

Yogyakarta

By:

Fanny Aderia Fitri

20/454890/FA/12546

FACULTY OF PHARMACY
GADJAH MADA UNIVERSITY
YOGYAKARTA

2024

THESIS VALIDATION

Titled

**NARINGENIN IMPROVES GLUCOSE UPTAKE THROUGH GLUT12 EXPRESSION
IN C2C12 CELLS INSULIN RESISTANCE MODELS**

By:

Fanny Aderia Fitri

20/454890/FA/12546

Defended in front of the Thesis Examiner Committee

Faculty of Pharmacy, Gadjah Mada University

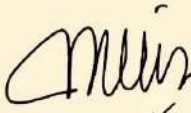
On July 5th, 2024

Supervisor



Dr. apt. Dyaningtyas Dewi Pamungkas Putri, M.Sc.

Co-Supervisor



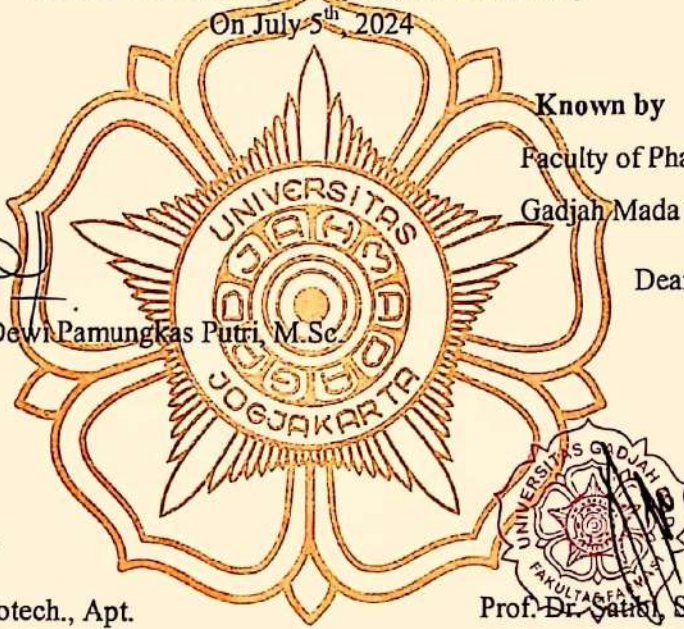
Dr. Adhyatmika, M.Biotech., Apt.

Known by

Faculty of Pharmacy

Gadjah Mada University

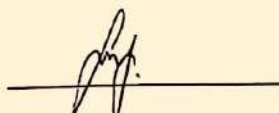
Dean



Prof. Dr. Saiful, S.Si., M.Si. Apt.

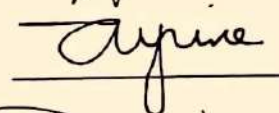
Examiners:

Chairperson : Dr. apt. Soni Siswanto, M.Biomed.



Members :

1. Nur Ayunie Zulkepli, Ph.D.



2. Dr. apt. Dyaningtyas Dewi Pamungkas Putri, M.Sc.



3. Dr. Adhyatmika, M.Biotech., Apt.

