

Declaration by Research Scholar

Originality of Research Work

I, **Ashish Vipulbhai Chovatiya** declare that thesis entitled "*Genome Editing through CRISPR Cas9 for Improvement of Beta Carotene in Groundnut [Arachis hypogaea (L.)*" is my own work conducted under the supervision of **Dr. Preetam Joshi** at Department of Biotechnology, Faculty of Science, Atmiya University, Rajkot, Gujarat, India and approved by the Director of Research.

I further declare that to the best of my knowledge the thesis does not contain any part of any work which has been submitted for award of any degree either in this University or any other University without proper citation.

Date:

06/01/2025

Place:

Rajkot

A.V. Chovatiya

Ashish Vipulbhai Chovatiya

Research Scholar

Certificate of Supervisor

This is to certify that work entitled "*Genome Editing through CRISPR Cas9 for Improvement of Beta Carotene in Groundnut [Arachis hypogaea (L.)]*" is a piece of research work done by **Ashish Vipulbhai Chovatiya** under my supervision for the degree of Doctor of Philosophy in Department of Biotechnology, Faculty of Sciences, Atmiya University, Rajkot, Gujarat, India

To the best of my knowledge and belief the research work and thesis

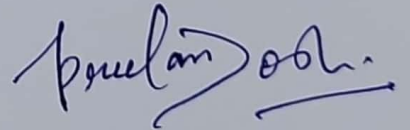
- I. Embodies the work of candidate himself,
- II. Has duly been completed,
- III. Fulfils the requirement of ordinance related to Ph.D. degree of the University & is up to the standard both in respect of content and language for being referred to the examiner.

Date:

06/01/2025

Place:

Rajkot



Dr. Preetam Joshi

Supervisor



ATMIYA UNIVERSITY

(Established under the Gujarat Private University Act II, 2018)

Yogidham Gurukul, Kalawad Road, Rajkot - 360005, Gujarat (INDIA)

Certificate

Pre Thesis Submission Presentation

This is to certify that **Ashish Vipulbhai Chovatiya** has made Pre Ph.D. presentation on the research work entitled **Genome editing through CRISPR-Cas9 for improvement of Beta carotene in Groundnut [Arachi hypogaea (L.)]** in the Faculty of Science, Atmiya University, Rajkot on 06/11/2024 before Departmental Research Committee for getting feedback and comments.

This is also to certify that all the suggestions and comments given by the Doctoral Progress Review Committee are incorporated. Moreover the presented research work was appreciated and recommended by all attendees.

Date: 06/11/2024

Place: Rajkot



Director

Centre for Research, Innovation & Translation

Thesis Approval Form

The Viva-Voce of the Ph.D. thesis entitled "*Genome editing through CRISPR-Cas9 for improvement of Beta carotene in Groundnut [Arachi hypogaea (L).f*" submitted by **Ashish Vipulbhai Chovatiya (Enrolment No. 211681001)** was conducted on **30/12/2024 (Monday)** at Atmiya University, Rajkot, Gujarat

Based on the Performance of the Candidate, We, the panel of examiners, recommend that
(Please tick any of the following)

- 1. He / She be awarded Ph.D. Degree
- 2. He / She be awarded Ph.D. Degree with minor modification

Please Suggest Modification

- 3. The following modifications are to be incorporated in the thesis within one month and viva-voce be re-conducted by the same panel of examiners


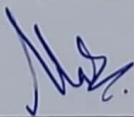
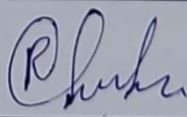
Please Suggest Modification

- 4. He / She should not be awarded Ph.D. Degree.

Please mention Reason for Rejection

Date: 30/12/2024

Place: Rajkot

Signature			
	Research Supervisor	University Nominee	External Examiner