



Date:

**SUB: INTERNSHIP COMPLETION LETTER**

We are glade to inform you that Mr.V.Vishal Kumar from Kakatiya University, has successfully completed his internship at Aurore Life Sciences Private Limited R&D Centre from April, 2022 to August, 2022.

During his internship, he was exposed to the various activities in Research & Development. We found his extremely inquisitive and hard working. He was very much interested to learn the functions of our core division and willing to put his best efforts and get into the depth of the subject to understand it better.

His association with us was very fruitful and we wish him all the best in his future endeavours.

  
Authorised Signature.  

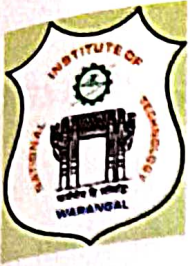

For Aurore Life Sciences Private Limited  
Research & Development Centre

**Aurore Life Sciences Pvt Ltd**

Corporate Office : Plot # 68 & 69, 2<sup>nd</sup> Floor, Jubilee Heights, Beside  
Shilparamam, Madhapur, Hyderabad, Telangana 500081.

**AURORE LIFE SCIENCES PRIVATE LIMITED**  
Research & Development Centre,  
Shapur Nagar - 55, Hyderabad.





**NATIONAL INSTITUTE OF TECHNOLOGY, WARANGAL**  
WARANGAL, TELANGANA, INDIA, 506004  
one: +91-870-2459191 | FAX : +91-870-2459547 Website: <https://www.nitw.ac.in>

### CERTIFICATE

This is to certify that the dissertation work entitled **SYNTHESIS OF TAMARIND SEED POLY SACCHARIDE BASED ZINC NANOPARTICLES, AND EVALUATION OF THEIR EFFECT ON ETHANOL FERMENTATION CAPACITY OF YEAST STRAIN ISOLATED FROM PALM WINE** is a bonafide record of work carried out by **"SILUVERU UDAY PAUL, with Roll No.18000S9009"**, submitted to the Department of Biotechnology, Kakatiya University, Telangana, India", for the partial fulfillment of the requirements for the award of the five-year Integrated Master of Science in Biotechnology, during the academic year 2021-2022.

Date:

*May 30/8/22*

*[Signature]*

**Prof. SREENIVASA RAO PARCHA**

Department of Biotechnology  
NIT Warangal.



## TO WHOMSOEVER IT MAY CONCERN

This is to certify that, the thesis work entitled **“PHENOTYPIC AND MOLECULAR SCREENING OF ADVANCED BREEDING LINES FOR GALLMIDGE RESISTANCE IN RICE (*Oryza sativa.L.*)”** is submitted by **Ms.V.ENUSHA** bearing registered number **18000S9013** in partial fulfillment for the award of degree of **Master of Science in Biotechnology** to Kakatiya University Warangal, is a record of bonafide work carried by has under **my supervision** for a period of **4 Months from 4 Months from 5<sup>th</sup> April to 5<sup>th</sup> August 2022**. The results embedded in this thesis have not been submitted to any other University or Institute for the award of any degree.

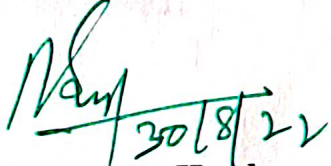
Dr. Y.Hari  
Scientist (Biotechnology)  
RARS, Warangal.

## CERTIFICATE



Department of Biotechnology Kakatiya  
University, Warangal – 506009

This is to certify that Ms. **P. Shilpa** of Integrated M.Sc. Biotechnology has been carried out the project work embodied in the present dissertation entitled "**TO EXAMINE NITRIC OXIDE'S SIGNALLING ROLE IN RESISTANCE TO PATHOGEN INTERACTION IN DIFFERENT TYPES OF TOMATO**" under the supervision of Dr. **B. Mallesham** Department of Biotechnology Agri Biotech foundation Hyderabad, in partial fulfilment for the award of Integrated M.Sc. Biotechnology.

  
Signature of the Head

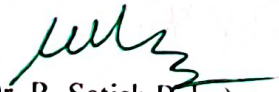
DEPARTMENT OF BIOTECHNOLOGY  
NATIONAL INSTITUTE OF TECHNOLOGY  
WARANGAL- 506004



CERTIFICATE

This to certify that the work presented in the dissertation entitled “**Production and Purification of L- Glutaminase from *Bacillus Licheniformis***” submitted to Kakatiya University in the partial fulfillment of requirement for the award Master of Science in Biotechnology during the year 2017-2019 has been carried out by **K. NAGA MALLIKA (H.T NO.18000S1605)** during the period of June 2018 to July 2018 under the guidance of Dr. R. Satish Babu, Associate professor, Department of Biotechnology at National Institute of Technology, Warangal.

**Project Guide**

  
(Dr. R. Satish Babu)  
Associate professor  
**Dr. R. SATISH BABU**  
Associate Professor  
Department. of Biotechnology  
NATIONAL INSTITUTE OF TECHNOLOGY  
WARANGAL-506 004. TS, INDIA

# CERTIFICATE



Department of Biotechnology  
Kakatiya University, Waranga1-506009

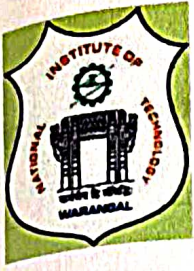
This is to certify That **Mr. Neelam Shantikumar** student of Integrated M.Sc. Biotechnology has been carried out the project work embodied in the present dissertation entitled "Validation of High-Performance Liquid Chromatography Mass Spectrometric Method in Negative Ion mode for the Estimation of Monomethyl fumarate in Human Plasma Using Monomethyl fumarate D3 as Internal Standard". under the supervision of. Dr. Chirag Khatri, Head of Aurora Life Sciences in partial fulfilment for the award of Integrated M.Sc. Biotechnology.

Approved by

External Examiner

A handwritten signature in green ink, appearing to be 'N. S.', with a horizontal line underneath. To the right of the signature, the date '30/8/22' is written in green ink.

Head of the Department

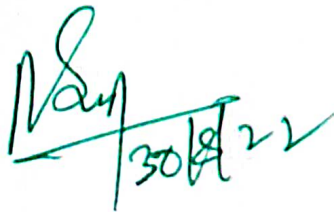


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one: +91-870-2459191 | FAX: +91-870-2459547 Website: <https://www.nitw.ac.in>

## CERTIFICATE

This is to certify that the dissertation work entitled "**IN- VITRO REGENERATION STUDIES ON *PTEROCARPUS SANTALINUS.L* (RED SANDAL)**" is a bonafide record of work carried out by **BURRA PRAVALIKA with Roll No.18000S9023**, submitted to the Department of Biotechnology, Kakatiya University, Telangana, India", for the partial fulfillment of the requirements for the award of the Five-years Integrated Masters of Science in Biotechnology, during the academic year 2021-2022.

Date:16-08-2022

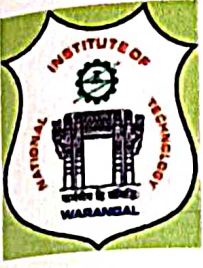
  
30/8/22



**Dr. RATHNAPRABHA**  
Assistant Professor,

Department of Biotechnology  
NIT, Warangal





**NATIONAL INSTITUTE OF TECHNOLOGY, WARANGAL**  
WARANGAL, TELANGANA, INDIA, 506004  
one: +91-870-2459191 | FAX: +91-870-2459547 Website: <https://www.nitw.ac.in>

## CERTIFICATE

This is to certify that the dissertation work entitled **“IN-VITRO MICROPROPAGATION OF SOLANUM SURATTENSE (WILD BRINJAL) A MEDICINAL PLANT”** is a bonafide record of work carried out by **“MAMIDALA SOUMYA with Roll No.18000S9028,”** submitted to the Department of Biotechnology, Kakatiya University, Telangana, India", for the partial fulfillment of the requirements for the award of the Five-years Integrated Masters of Science in Biotechnology, during the academic year 2021-2022.

Date: 17/08/2022

*Mam*  
30/8/22

*D. Rathna*

**Dr. RATHNAPRABHA**  
Assistant Professor,

Department of Biotechnology  
NIT, Warangal







Institute of  
**Genet**



**CS** & Hospital for Genetic Diseases  
Unveiling the future

**Dr. A. Venkateshwari**  
Director (I/C)

**CERTIFICATE**

31/2/18

This is to certify that the work presented in this dissertation entitled "ROLE OF KCNJ11 (rs5215) GENE POLYMORPHISM IN TYPE 1 DIABETES" submitted for the partial fulfillment of the award in M.Sc Biotechnology, Department of Biotechnology, Kakatiya University, Warangal has been carried out by Ms. Y.Ushakiran under the supervision of Dr. G. Shilpa Reddy from April - July, 2018. This report incorporates original results of her study and it has not formed the basis of any degree or diploma in part or full prior to this date.

*Shilpa Reddy*  
Dr. G. Shilpa Reddy  
Supervisor


*A. Venkateshwari*  
Dr. A. Venkateshwari  
Director (I/C)

### **CERTIFICATE BY THE SUPERVISOR**

This is to certify that **Mr. Sandeep Kothi** with Roll number, 18000S9018 from the Kakatiya University, Warangal has worked as an intern as part of his M.Sc. in Biotechnology From March 25<sup>th</sup>, 2022 to Aug 16<sup>th</sup>, 2022. He worked on a research project titled “Molecular cloning, expression, and purification of a *Leishmania* profilin deletion mutant” under the guidance of Dr. C M Gupta, Distinguished Professor and Infosys Chair, IBAB.

Date:

Place: Bengaluru

  
Prof. H S Subramanya  
Director, IBAB



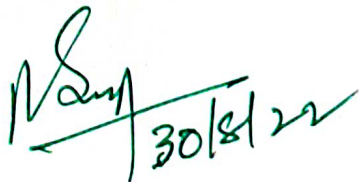



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### **CERTIFICATE**

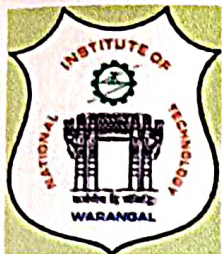
This is to certify that the dissertation work entitled "OPTIMIZATION OF BIOMASS PRETREATMENT FOR IMPROVING ENZYMATIC SACCHARIFICATION" is a bonafide record of work carried out by "Mr. KOTHI VAMSHI, with Roll No.18000S9024", submitted to the Department of Biotechnology, Kakatiya University, Warangal, Telangana, India", carried out under my supervision from 15<sup>th</sup> March to August 15<sup>th</sup>, 2022, for the partial fulfillment of the requirements for the award of the five-year integrated degree of Master of Science in Biotechnology, during the academic year 2017-2022.

Date:

  
30/8/22

  
Prof. SREENIVASA RAO PARCHA  
Department of Biotechnology  
NIT Warangal.





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one: +91-870-2459191 | FAX: +91-870-2459547 Website: <https://www.nitw.ac.in>

## **CERTIFICATE**

This is to certify that the dissertation work entitled **“IN-VITRO STUDIES ON MELOTHRIA SCABRA (CUCAMELON)”** is a bonafide record of work carried out by **“SHANIGARAPU SAISREE with Roll No.18000S9020,”** submitted to the Department of Biotechnology, Kakatiya University, Telangana, India", for the partial fulfillment of the requirements for the award of the 5 years Integrated Master of Science in Biotechnology, during the academic year 2021-2022.

Date: /08/2022

*May*  
30/8/22

*D. Rathna*  
**Dr. RATHNAPRABHA**  
Assistant Professor,

Department of Biotechnology  
NIT, Warangal





Accelerating Research

## GVK BIOSCIENCES PVT LTD

HYDARABAD, TELANGANA, INDIA,500029.

### CERTIFICATE

This is to certify that Mr. G.SRIKANTH of M.Sc. Biotechnology has been carried out the project work embodied in the present dissertation entitled " DEVELOPMENT OF EFFECTIVE IN VITRO PROPAGATION PROTOCOLS FOR 2 SPECIES OF

BAMBOO" was carried out under the supervision of Dr.G.KALYAN CHAKRAVARTHYI,

GVK BIOSCIENCES PVT LTD, HYDERABAD and that work has not been submitted for any degree or diploma of any other University or Institute during the academic year 2021-2022

*G.K. Chakraborty*

Signature of Head



**REGIONAL AGRICULTURAL RESEARCH STATION (RARS)  
PJTSAU-WARANGAL-506 007, TELANGANA, INDIA**

**TO WHOMS OEVER IT MAY CONCERN**

This is to certify that, the thesis work entitled as **“MOLECULAR SCREENING OF BACKCROSS DERIVED LINES FOR BLAST RESISTANCE IN WGL-14, A POPULAR RICE VARIETY”** is submitted by **Ms L.SUMA** bearing registered number **18000S1601** in partial fulfillment for the award of degree of M.Sc Biotechnology in Kakatiya University Warangal, is a record of bonafide work carried by her under my supervision for a period of **45 days during 1<sup>st</sup> June to 15<sup>th</sup> July 2018**. The results embedded in this thesis have not been submitted to any other University or Institute for the award of any degree.

*Y Hari*

Dr.Y.Hari

Scientist (Biotechnology)

RARS, Warangal.

*Scientist (Biotechnology)  
Regional Agricultural Research Station  
Warangal 506 007*



**NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL –  
505004, TELANGANA, INDIA**

**CERTIFICATE**

This is to certify that, the thesis work entitled as **“OPTIMIZATION AND PRODUCTION OF CELLULASE ENZYMES FROM ALKALOPHILIC AND THERMOPHILIC STRAIN *ASPERGILLUS FUMIGATUS* UNDER SUBMERGED FERMENTATION”** is submitted by **Mr. S. HARISH** bearing registered number 18000S1628 in partial fulfillment for the award of degree of M.Sc Biotechnology in Kakatiya University Warangal, is a record of bonafide work carried by her under my supervision for a period of **45 days during 1<sup>st</sup> June to 15<sup>th</sup> July 2018**. The results embedded in this thesis have not been submitted to any other University or Institute for the award of any degree.

Dr. K. Narasimhulu

Asst. Professor (Biotechnology)

NIT, Warangal.

Dr.K. NARASIMHULU  
Associate Professor  
Department of Biotechnology  
NIT Warangal-506004, TS, India

**NATIONAL INSTITUTE OF TECHNOLOGY  
WARANGAL – 506004**



**CERTIFICATE**

This is to certify that the work presented in the dissertation entitled "Preparation and Characterization of a novel composite scaffold using Cellulose derivative for bone tissue engineering applications" submitted to Kakatiya University in the partial fulfilment of requirement for the award Master of Science in Biotechnology during the year 2017 - 2019 has been carried out by **Malothu Sinduja (H.T no.18000S1610)** during the period of June 2018 to July 2018 under the guidance of **Dr. P. Sreenivasa Rao**, Associate professor, Department of Biotechnology, National Institute of Technology, Warangal.

**Project Guide**

**Dr. P. Sreenivasa Rao**  
Associate Professor  
Department of Biotechnology  
NIT, Warangal  
**Dr. Partha Sreenivasa Rao**  
Associate Professor  
Department of Biotechnology  
NIT, Warangal, India





**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY**  
**CENTRE FOR BIOTECHNOLOGY, INSTITUTE OF SCIENCE & TECHNOLOGY**  
Kukatpally, Hyderabad-500 085 (T.S.) Tele / Fax : 040-23156129

**Dr. A. UMA**  
**Associate Professor**

**CERTIFICATE**

This is to certify that the dissertation titled **“PHYTOCHEMICAL AND ANTIDIABETIC PROPERTIES OF COMMERCIALY AVAILABLE THREE MILLET VARIETIES”** submitted by **MS. PANGOTH MOUNIKA**, bearing Roll No.18000S9017 to the **DEPARTMENT OF BIOTECHNOLOGY, KAKATIYA UNIVERSITY, WARANGAL**, in the partial fulfilment of the requirement for the award of degree in **5 YEARS INTEGRATED M.SC BIOTECHNOLOGY** as a bonafide work done under the supervision of **Dr A. UMA, Associate professor, CBT, IST, JNTUH, KUKATPALLY, HYDERABAD.**

It is further certified that the present work or any part thereof has not been submitted elsewhere for any other degree or diploma

**Place: HYDERABAD**

**Date:**

**(Dr. A. UMA)**

**Associate Professor**

**Dr. A. UMA M.Tech., Ph.D.**  
Associate Professor  
Centre for Biotechnology  
Institute of Science and Technology  
J.N.T. University Hyderabad,  
Kukatpally, Hyderabad-85, Telangana State

**PROFESSOR JAYASHANKAR TELANGANA STATE AGRICULTURAL UNIVERSITY**

**Dr. P. JAGAN MOHAN RAO**  
Associate Director of Research  
CENTRAL TELANGANA ZONE




Regional Agricultural Research Station  
**WARANGAL – 506 007**  
TELANGANA STATE  
Phone : 0870-2975223  
Mobile : 9989625223  
E-mail : adrrars\_wgl@yahoo.co.in

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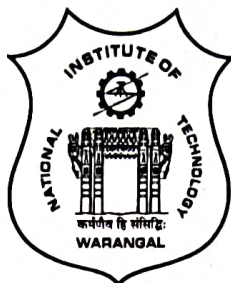
**CERTIFICATE**

**Date:01-04-2019**

I Certify that, the dissertation work entitled “**Identification and Characterization of a Novel Gene (*GhZFP*) Involved in Salt Stress Tolerance and Fungal Disease Resistance in *Gossypium hirsutum***” is submitted by **V. Supriya** bearing registered number **18000S1611** in partial fulfillment for a period of 45 days during **1<sup>st</sup> June -15<sup>th</sup> July 2018** for the award of **Degree of Master of Science in Biotechnology to Kakatiya University**, is a bonafied work and may be placed before the examination board for their consideration.

  
Associate Director of Research  
R.A.R.S., Warangal  
Associate Director of Research  
R.A.R.S CTZ. Warangal.

**NATIONAL INSTITUTE OF TECHNOLOGY  
WARANGAL – 506004**



**CERTIFICATE**

This is to certify that the work presented in the dissertation entitled "Preparation and Characterization of a novel composite scaffold using Cellulose derivative for bone tissue engineering applications" submitted to Kakatiya University in the partial fulfilment of requirement for the award Master of Science in Biotechnology during the year 2017 - 2019 has been carried out by **Gopu Akhila (H.T no.18000S1604)** during the period of June 2018 to July 2018 under the guidance of **Dr. P. Sreenivasa Rao**, Associate professor, Department of Biotechnology, National Institute of Technology, Warangal.

**Project Guide**

**Dr. P. Sreenivasa Rao**  
Associate Professor  
Department of Biotechnology  
NIT, Warangal

**Dr. Parcha Sreenivasa Rao**  
Associate Professor  
Department of Biotechnology  
NIT, Warangal, India



**Dr. A. Venkateshwari**  
Director (I/C)

28/7/2018

## CERTIFICATE

This is to certify that the work presented in the dissertation entitled of "Association of ACE I/D rs4646994 Gene Polymorphism with Diabetic Nephropathy" submitted for the partial fulfillment in Msc.Biotechnology has been carried out by Voruganti Priyanka under the super vision of Dr. M.L.N Deepika during June to July 2018 at Institute of Genetics & Hospital for Genetic Diseases Osmania University, Hyderabad. This report incorporates original result for her study and it has found not formed the basis of any degree or diploma in the part of full prior to this date.

*M.L.N Deepika*

**Dr. M.L.N Deepika**

Supervisor

Institute of Genetics &  
Hospital for Genetic Diseases  
Osmania University  
Begumpet, Hyderabad - 16.

*A. Venkateshwari*

**Dr.A.Venkateswari**

Director

**DIRECTOR**  
Institute of Genetics &  
Hospital for Genetic Diseases  
Osmania University  
Begumpet Hyderabad 500 016



Institute of  
**Genet**



**cs** & Hospital for Genetic Diseases  
Unveiling the future

**Dr. A. Venkateshwari**  
Director (I/C)

28/7/2018

## CERTIFICATE

This is to certify that the work presented in the dissertation entitled of "Association of FUT2 rs602662 G>A Gene Polymorphism with Hypothyroidism" submitted for the partial fulfillment of the M.sc course in Biotechnology has been carried out by Miss. Harika Kokkonda under the super vision of Dr. M.L.N Deepika during June to July 2018 at Institute of Genetics & Hospital for Genetic Diseases Osmania University, Hyderabad. This report incorporates original result for her study and it has found not formed the basis of any degree or diploma in the part of full prior to this date.

*M.L.N Deepika*  
**Dr. M.L.N Deepika**  
Supervisor  
Institute of Genetics &  
Hospital for Genetic Diseases  
Osmania University  
Begumpet, Hyderabad - 16.

*A. Venkateshwari*  
**Dr.A.Venkateswari**  
Director(I/C)  
DIRECTOR  
Institute of Genetics &  
Hospital for Genetic Diseases  
Osmania University  
Begumpet, Hyderabad 500 016

**PROJECT CERTIFICATE**

It is certified that **Mr. Guntuku Saikumar**, with roll number 18000S9004 from Kakatiya University, Warangal has worked as an intern as a part of his MSc in Biotechnology from 15<sup>th</sup> April till 15<sup>th</sup> August, 2022. He worked on research project titled “**Effect of Annona reticulata on Human lung malignant cell line A-549**” under my guidance.



**Dr M Madhukar Rao,**  
Senior Director, Analytical  
GVK Biosciences Pvt Ltd, Hyderabad



Prof. A. ROJA RANI

Department of Genetics  
Osmania University  
Hyderabad - 500 007  
Phone (Off) 91-27682335  
Fax: 91- 40 - 27095178  
E-mail: anupalligenetics@gmail.com

Date: 20-02-2019

### Certificate

This is to certify that the work presented in this dissertation, entitled "Cytotoxic Activity of *Acalypha Indica*. L, Leaf Extract on Breast Cancer Cell Lines (MCF-7)" has been carried out by PETTEM SAI PRIYANKA (HT NO: 18000S1632) Under my supervision and guidance in Dept of Genetics and Biotechnology, Osmania university, Hyderabad for the Degree of Master in Biotechnology (Biotechnology, Genetics and Chemistry) to Kakatiya University, Warangal and it has not been submitted in part or in whole for any degree or diploma of any other university

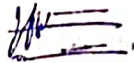
(Prof. A. Roja Rani)

Dr. ANUPALLI ROJA RANI  
Professor  
Department of Genetics  
Osmania University,  
Hyderabad-500 007. INDIA

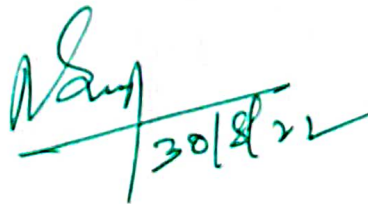
13<sup>th</sup> August 2022

**TO WHOM IT MAY CONCERN**

This is to certify that **Mr. Kurimindla Pawan**, with roll number, 18000S9026 from the Kakatiya University, Warangal has worked as an intern as part of his MSc in Biotechnology from 25<sup>th</sup> March 2022 till 13<sup>th</sup> August, 2022. He worked on a research project titled, "Molecular Cloning, Expression, and Purification of Genes Important for the Non-Obstructive Azoospermia Condition" under my guidance.



**Dr. Kshitish K Acharya**  
Professor  
IBAB



30/8/22



**PROJECT CERTIFICATE**

This is certified that **Mr Jamalpuram Kishore**, with roll number 18000S9027 from Kakatiya University, Warangal has worked as an intern as a part of his MSc in Biotechnology from 15<sup>th</sup> April till 13<sup>th</sup> August, 2022. He worked on research titled, "EXPRESSION AND PURIFICATION OF GST GENE FROM PHLEBOTOMUS ARGENTIPES IN E. Coli EXPRESSION SYSTEM" under my guidance.

We wish him all the success in his future endeavours.



**K M V Narayan Rao,**  
Senior Director, Analytical  
GVK Biosciences Pvt Ltd, Hyderabad



Institute of  
**Genet**



**CS & Hospital for Genetic Diseases**  
Unveiling the future

**Dr. A. Venkateshwari**  
Director (I/C)

31/7/18

### CERTIFICATE

This is to certify that the work presented in this dissertation entitled "IMPLICATION OF KCNJ11 (rs5215) GENE POLYMORPHISM IN NEONATAL DIABETES" submitted for the partial fulfillment of the award in M.Sc Biotechnology, Department of Biotechnology, Kakatiya University, Warangal has been carried out by Ms. S. Sandhya Rani under the supervision of Dr. G. Shilpa Reddy from April - July, 2018. This report incorporates original results of her study and it has not formed the basis of any degree or diploma in part or full prior to this date.

*Shilpa Reddy*  
Dr. G. Shilpa Reddy  
Supervisor

*A. Venkateshwari*  
Dr. A. Venkateshwari  
Director (I/C)

**VIRUS RESEARCH AND DIAGNOSTIC LABORATORY (ICMR/DHR),  
DEPARTMENT OF MICROBIOLOGY, RANGARAYA MEDICAL COLLEGE,  
KAKINADA, ANDHRA PRADESH**

**CERTIFICATE**

This is to certify that Ms. V.S.V.Vaishnavi worked on a project entitled  
**"COVID-19 Seroprevalence in Paediatric Population of East Godavari  
District"** for the fulfillment of her dissertation from the month of February  
2022 to July 2022 under my supervision.

Date: 06-08-2022



  
Dr. D.S Murty

ASSOCIATE PROFESSOR & PI  
Dept. of Microbiology,  
Rangaraya Medical College,  
Kakinada, AP.

**PRINCIPAL INVESTIGATOR**  
Virus Research & Diagnostic Laboratory  
Department of Microbiology  
RMC KAKINADA-533001



**Department of Plant Sciences,  
School of Life Sciences,  
University of Hyderabad**

*(A Central University established by the Act of Parliament & India's Institute of Eminence)*  
**Hyderabad 500 046, Telangana.**

### CERTIFICATE

This is to certify that this dissertation entitled "**Isolation, Cloning and characterization of Plasmodesmatal Labelling protein (PDL) from *Arabidopsis thaliana columbina-0* and localization studies through Confocal laser scanning Microscopy**" submitted by **Veenavanka Malavika** in partial requirement of the fulfilment for the award of degree of Master of Science in Biotechnology of the Kakatiya University is based on the results of the studies carried out by her under the guidance and supervision of **Dr. Rahul Kumar**, Assistant Professor, Department of plant sciences, School of life sciences, University of Hyderabad, Telangana, during March 2022 to August 2022.

It is further certified that this dissertation or any other part thereof has not been submitted elsewhere for any degree or diploma or similar title.

**Head of the Department**

**(Prof. Rajagopal Subramanyan)**

**HEAD**

**Dept. of Plant Sciences  
School of Life Sciences  
University of Hyderabad  
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**Supervisor**

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## CERTIFICATE

This is to certify that the dissertation work entitled "To study the prevalence of Nontuberculous mycobacterial pulmonary infections in the community" submitted to Kakatiya university in partial fulfillment of the requirements for the award of master of science in Biotechnology during the year 2017-2019, is a bonafide work carried out by **MD.Afreen begum** during the period of 28<sup>th</sup> may 2018 to 30<sup>th</sup> July 2018 under the guidance of **Dr. MALATHI JOJULA** Dept. of microbiology Sri Shivani College of Pharmacy.



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