



CERTIFICATE

I hereby certify that this dissertation entitled '***In silico screening of potential drugs for candidiasis***' embodies the results of work done by **Shreya Patel** student of M. Sc. Biotechnology, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology. I further, certify that this work has not been submitted to other Universities or Institutions for the award of any Degree.



Place : Changa

Date : 01/06/2021

Heed
Shreya


Dr. Mandar Kulkarni

Dissertation Guide



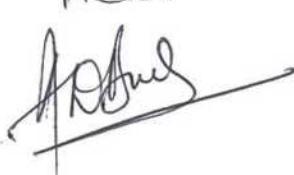
CERTIFICATE

I hereby certify that this dissertation entitled "**Development and quality evaluation of honey and papaya beverages**" embodies the results of work done by **Ruchi Atodaria** student of M. Sc. Biotechnology, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology. I further, certify that this work has not been submitted to other Universities or Institutions for the award of any Degree or Diploma.



Place : Changra

Date : 01/06/2021

Hecel



Dr. Mandar Kulkarni
Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "metal organic framework based entrapment of an enzyme and its kinetic studies" embodies the results of work done by BARAIYA URJAstudent of M. Sc.

Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Kiran Patel

Dissertation Guide



Head



CERTIFICATE

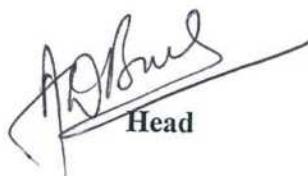
I hereby certify that this dissertation entitled "To study in vitro cell migration and programmed cell death by benzo[c]coumarin on cancer cells" embodies the results of work done by Dharti Bhadla student of M. Sc. Biotechnology, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfillment of the degree of Master of Science in Biotechnology. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

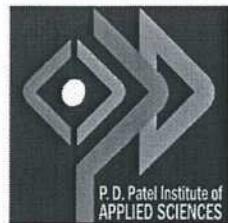
Date: 31/05/2021

26.21
Dr. Neeraj Jain

Dissertation Guide


Head





CERTIFICATE

I hereby certify that this dissertation entitled "Effect of chemical agent (camphor and alum) as disinfectant" embodies the results of work done by CHAUDHARI TIRTHANAS student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Janki Thakker

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Study of sequence homology in PhnJ coding for C-P lyase in bacteria" embodies the results of work done by CHAUDHARY DHRUV student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Bragadish Iyer

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Effect of symbiotic therapy in targeting adipokine signaling pathway in alcoholic liver disease/ non-alcoholic liver disease." embodies the results of work done by CHOUDHARY SAMRIDDHI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

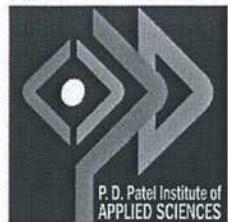
Date: June, 2021



Head
[Signature]

[Signature]
Dr. Palash Mandal

Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "DEVELOPMENT OF ANTIBACTERIAL NANOFIBER MATS AS WOUND MANAGEMENT AID" embodies the results of work done by DADAWALA DEVARSHI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Bragadish Iyer

Dissertation Guide


Head



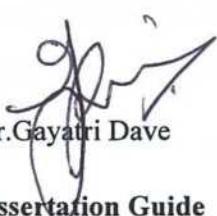
CERTIFICATE

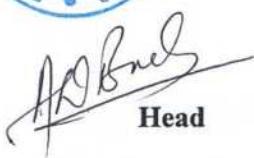
I hereby certify that this dissertation entitled "Screening, Cultivation and Growth Parameters Optimization for Selected Diatom Speceis" embodies the results of work done by GAJERA NIRAL student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr.Gayatri Dave
Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Evaluation of banana sap on growth of few selected plants in a square foot kitchen garden model" embodies the results of work done by GHODASARA RUTIK student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

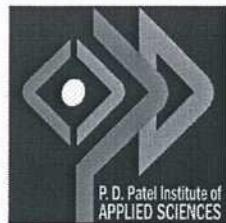
Date: June, 2021



Dr. Anamika Jha

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Possible cytotoxic and genotoxic or cytoprotective and genoprotective effect of various fruit peels" embodies the results of work done by GORASIYA RAVI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Tapan Patel

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Treatment of diazo dye relative red 152 in a dual chamber microbial fuel cell system using an electroactive bacterial strain" embodies the results of work done by JAIN POOJA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

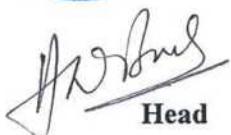
Place : Changa

Date: June, 2021

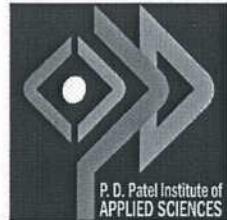


Dr.Chirayu Desai

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Adhesive exopolysaccharides" embodies the results of work done by KAPADIA JINAL student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Head


Dr. Bragadish Iyer

Dissertation Guide

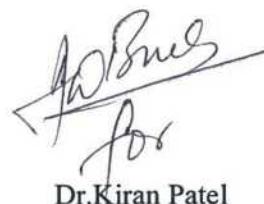


CERTIFICATE

I hereby certify that this dissertation entitled "Antimicrobial activity studies of surface active ionic liquids." embodies the results of work done by LIMBANI ARPITA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



for
Dr.Kiran Patel

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "To study cytotoxicity and Anti-migration effect of Phosphonium ionic liquid on HeLa cells." embodies the results of work done by Vidhi M. Makwana student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

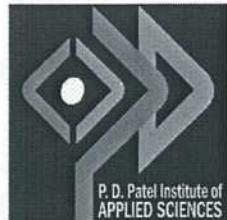
Date : 1/6/2021



Dr. Neeraj Jain
2.6.21

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Novel non-biological applications of microbial Redox - Active secondary metabolites" embodies the results of work done by MEHTA ANERIstudent of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

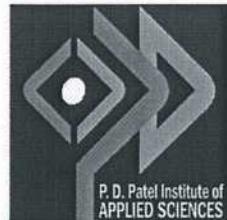
Date: June, 2021




Dr. Aditi Buch

Dissertation Guide


Head



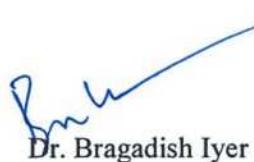
CERTIFICATE

I hereby certify that this dissertation entitled "Development of extraction strategies for PHB" embodies the results of work done by NAIR ANJALI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



Place : Changa

Date: June, 2021



Dr. Bragadish Iyer

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Microscopic study on Diatoms Diversity from polluted, Europhiv and fresh water stream" embodies the results of work done by PATEL AESHA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr.Gayatri Dave

Dissertation Guide



Head

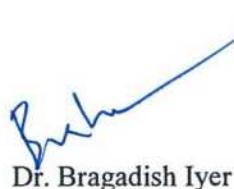


CERTIFICATE

I hereby certify that this dissertation entitled "Mutational analysis for glyphosate degradation by stenotrophomonas maltophilia" embodies the results of work done by PATEL HARSH student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021

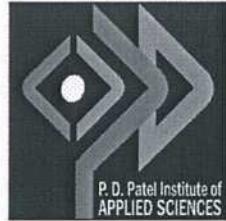


Dr. Bragadish Iyer

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Studying the relationship between PNPLA3/TM6SF2/ ADH2/RASGRF2 genetic factors in alcoholic liver disease in the HepG2 cell line." embodies the results of work done by PATEL HITAXI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



Place : Changa

Date: June, 2021

Dr. Palash Mandal

Dissertation Guide

Head



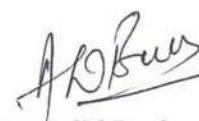
CERTIFICATE

I hereby certify that this dissertation entitled "Cloning and heterologous expression of putative hydroxycitric acid transporters in E. coli" embodies the results of work done by PATEL KAIRAV student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

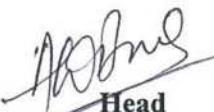
Place : Changa

Date: June, 2021




Dr. Aditi Buch

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "To study in cytotoxicity and anti-migrational activity of phenol fused coumarin on HeLa cells" embodies the results of work done by Maulik Patel student of M. Sc. Biotechnology, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

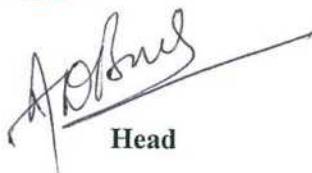
Place : Changa

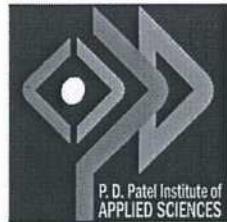
Date : 01/06/2021



Dr. Neeraj Jain
26.21

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Genome mining for biocontrol activity in endophytic bacteria" embodies the results of work done by PATEL NIYATI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Janki Patel

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Nanosystem enabled edible coating for post-harvest storage of fruits" embodies the results of work done by PATEL SAURAV student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Anamika Jha

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "**Characterization of Endophytic bacterial isolates from wheat**" embodies the results of work done by **Sweta R. Patel** student of M. Sc. Biotechnology, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology. I further, certify that this work has not been submitted to other Universities or Institutions for the award of any Degree or Diploma.



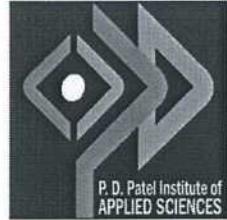
Place : Changa

Date : 01/06/2021

Head
Signature

Dr. Mandar Kulkarni

Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "Extraction, purification and applications of marine microbial pigments" embodies the results of work done by PATEL TANVI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021

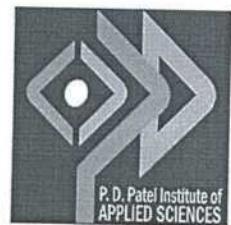


Dr. Janki Thakker

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "To investigate cytotoxic and anti-migration potential of 1-naphthalene substituted coumarin on HeLa cells" embodies the results of work done by Tushar Patel student of M. Sc. Biotechnology, Department of Biological Sciences, P. D. Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date : 01/06/2021

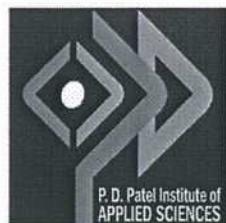
Dr. Neeraj Jain
2.6.21

Dissertation Guide



Head





CERTIFICATE

I hereby certify that this dissertation entitled "Druggability analysis of herbal compound with noted antibacterial activity" embodies the results of work done by PATEL VIYUSHTI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

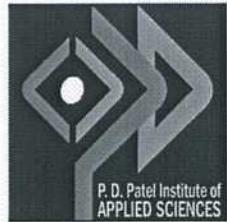
Date: June, 2021




Dr. Gayatri Dave

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Inslico analysis of antifugnal genes present in different biocontrol agents" embodies the results of work done by SHAH RUTVI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Kiran Patel

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Study the plant growth promoting ability of diazotrophic endophytic bacteria" embodies the results of work done by SHAIKH KAZIMA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Janki Patel

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Study of metabolic intermediates of glyphosate biodegradation pathway" embodies the results of work done by UPADHYAYA JOLLY student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Bragadish Iyer

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "In silico analysis of Bacterial functional amyloids for interaction and moonlighting activities" embodies the results of work done by PATEL MAHIMA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Anoop Markande

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "**Composition of endophytic bacterial community in wheat under pesticide regimen**" embodies the results of work done by **Ms. Falguni K. Baria** student of M. Sc. Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date : 31/05/2021


Mandar
Kulkarni


Dr. Mandar Kulkarni
Dissertation Guide



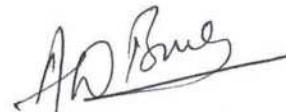


CERTIFICATE

I hereby certify that this dissertation entitled "Novel applications of microbial pigments in sustainable energy" embodies the results of work done by DAVE RIYA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

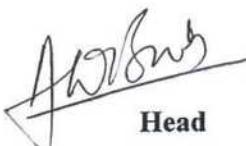
Place : Changa

Date: June,2021



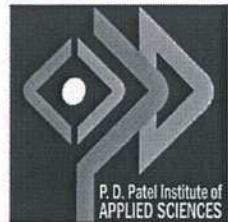
Dr. Aditi Buch

Dissertation Guide



Head





CERTIFICATE

I hereby certify that this dissertation entitled "PGPR-enabled augmentation of pyrroloquinoline quinone (PQQ) levels in plants" embodies the results of work done by GODHASARA MANSI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June,2021



Dr. Aditi Buch

Dissertation Guide



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CERTIFICATE

I hereby certify that this dissertation entitled "molecular docking analysis of various textile dyes with azoreductase protein from *Bacillus aryabhattai* sp." embodies the results of work done by KAPADIA NEER student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Dr. Chirayu Desai

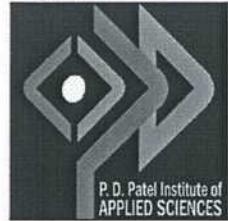
Place : Changa

Date: June,2021

Dissertation Guide

AP Buley
Head





CERTIFICATE

I hereby certify that this dissertation entitled "Allelopathic effect of lemon and orange peel on the seedling germination and growth of mung beans and maize" embodies the results of work done by PARMAR PAYAL student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Dr. Tapan Patel

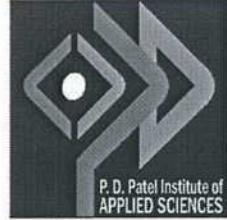
Place : Changa

Date: June,2021

Dissertation Guide

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CERTIFICATE

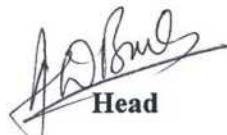
I hereby certify that this dissertation entitled "Optimization and characterization of edible oil nanoemulsion for mixed Fruit juice preservation" embodies the results of work done by PATEL AAKRUTI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June,2021

Dr.Anamika Jha

Dissertation Guide


Head





CERTIFICATE

I hereby certify that this dissertation entitled "Purification and characterization of Recombinant Xylanase and Phytase" embodies the results of work done by PATEL AKSHAY student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June,2021



Dr.Kiran Patel

Dissertation Guide



Head





CERTIFICATE

I hereby certify that this dissertation entitled "Nutrient dependent production of secondary metabolites by *Pseudomonas aeruginosa* P4" embodies the results of work done by PATEL DEVANSHI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June,2021



Dr. Aditi Buch

Dissertation Guide



P.D. PATEL INSTITUTE OF APPLIED SCIENCES
CHARUSAT



CERTIFICATE

I hereby certify that this dissertation entitled "Partial purification and characterization of L-asparaginase" embodies the results of work done by PATEL HARSH student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June,2021



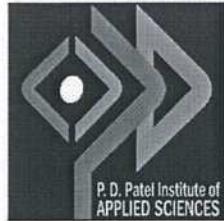
Dr.Bhavtosh Kikani

Dissertation Guide



Head





CERTIFICATE

I hereby certify that this dissertation entitled "Study the effect of pomegranate peel powder on the seedling germination and growth of mung and maize" embodies the results of work done by PATEL MITAL student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

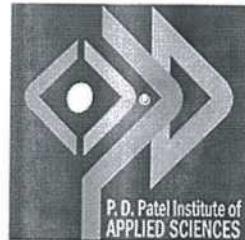
Date: June,2021

Dr. Tapan Patel

Dissertation Guide

Head





CERTIFICATE

I hereby certify that this dissertation entitled "**Study of plant growth promoting traits in endophytic isolates from wheat plant**" embodies the results of work done by **Mausami Suhagiya** student of M. Sc. Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biochemistry. I further, certify that this work has not been submitted to other Universities or Institutions for the award of any Degree or Diploma.

Place : Changa

Date : 01/06/2021

Dr. Mandar Kulkarni

Dissertation Guide





CERTIFICATE

I hereby certify that this dissertation entitled "Isolation of diazotrophic endophytic bacteria from medicinal plants" embodies the results of work done by ANTALA ANJALI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Janki Patel

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Extraction and characterization pigment produced by *Bacillus spp.*" embodies the results of work done by ARDESHANA SHREYA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

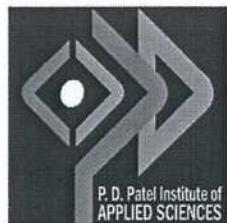
Date: June, 2021




Dr. Janki Patel

Dissertation Guide


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CERTIFICATE

I hereby certify that this dissertation entitled "Characterization of antimicrobial agent production in *Bacillus spp.*" embodies the results of work done by BHoot HELISHA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa




Dr. Janki Patel

Date: June, 2021

Dissertation Guide


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CERTIFICATE

I hereby certify that this dissertation entitled "Cloning and expression of Enolase from B. subtilis" embodies the results of work done by CHAUDHARY YASHASVI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa



Date: June, 2021


Dr. Anoop Markande

Dissertation Guide





CERTIFICATE

I hereby certify that this dissertation entitled "Use of biochar based formulation as base for microbial fertilizer" embodies the results of work done by CHAUHAN RINKAL student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

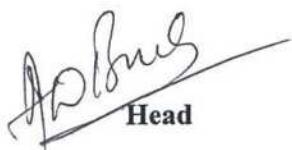


Date: June, 2021



Dr.Janki Thakker

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Tracking the prevalence of antimicrobial resistance genes (ARGs) and Antimicrobial Resistance Bacteria(ARB) in Narmada River ,Gujarat" embodies the results of work done by CHAUHAN SUHANI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa



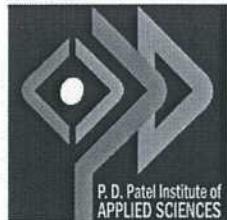
Date: June, 2021

Dr.Chirayu Desai

Dissertation Guide



Head



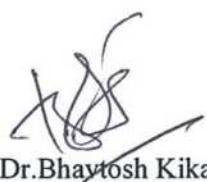
CERTIFICATE

I hereby certify that this dissertation entitled "Isolation and characterization of bifenthrin degrading bacteria" embodies the results of work done by DARJI AKSHINI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr.Bhaytosh Kikani

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Allelopathic effect of Papaya fruit peel on mung and maize seeds" embodies the results of work done by GAJERA RUCHITA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



Place : Changa

Date: June, 2021

Dr. Tapan Patel

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Allelopathic effect of Banana fruit peel on mung and maize seeds" embodies the results of work done by GAJJAR MANSI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Tapan Patel

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Isolation and characterization of plant wax and resin degrading microorganisms for potential application in paper and pulp industries." embodies the results of work done by GANDHI CHARMI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



Place : Changa

Date: June, 2021


Dr. Seema Amin

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "To study cytotoxicity and anti-migrational action of 2-naphthalene substituted coumarin derivative on cancer cell line HeLa" embodies the results of work done by Iyer Uma Nilkanth student of M. Sc. Microbiology, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Microbiology. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

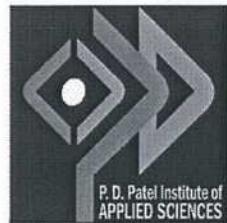
Date: 01/06 /2021



Dr. Neeraj Jain

Dissertation Guide

Head



CERTIFICATE

I hereby certify that this dissertation entitled "Characterisation of rhizospheric bacteria isolates of fenugreek." embodies the results of work done by JOSHI KHUSHALI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa



Date: June, 2021



Dr. Murali Sharaff

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Circadian rhythms: a potential player in alcoholic fatty liver disease pathophysiology" embodies the results of work done by KASVALA RAKSHITA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

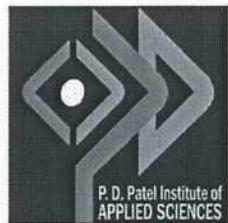
Date: June, 2021



Dr. Palash Mandal

Dissertation Guide

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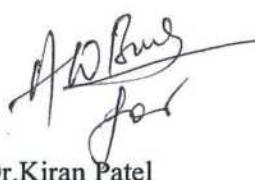


CERTIFICATE

I hereby certify that this dissertation entitled "expression studies of Hydrophobins from different fungal biocontrol agents" embodies the results of work done by HARESHBHAI MEHTA SACHI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

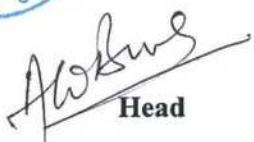
Place : Changa

Date: June, 2021



Dr. Kiran Patel

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Molecular docking analysis of oxidoreductase enzymes with azo dyes present in dyestuff wastewater" embodies the results of work done by MISTRY DIVYA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

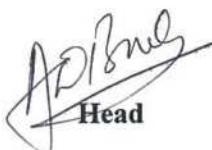
Place : Changa

Date: June, 2021

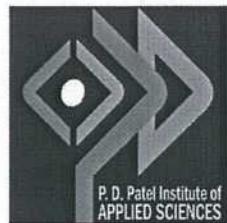


Dr. Chirayu Desai

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Biotransformation of eugenol to vanillin." embodies the results of work done by NAGAR TANYA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

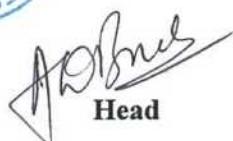
Place : Changa

Date: June, 2021




Dr. Seema Amin

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Gene Expression Analysis for Plant pathogenic fungus that cause disease in *Arabidopsis thaliana*" embodies the results of work done by NAGAR YAGINI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa
Date: June, 2021



Dr.Janki Thakker and Dr. Gayatri Dave
Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Studying the hormetic behaviour of antibiotics" embodies the results of work done by PANCHAL VRUTTI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

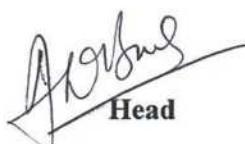
Place : Changa

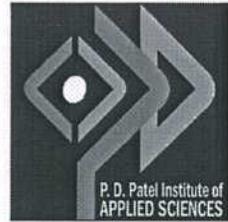
Date: June, 2021




Dr. Ruchi Chaturvedi

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "A comparative study on the crop productivity by conventional Vs organic kitchen gardening in a square foot kitchen garden model" embodies the results of work done by PARMAR CHIRAG student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

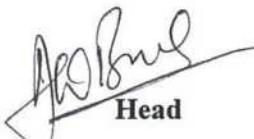
Place : Changa



Date: June, 2021

Dr. Anamika Jha

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Isolation and EPS production by Lactobacilli" embodies the results of work done by PATADIYA JAY student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021

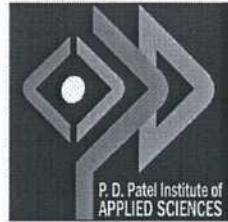


Dr. Bhavtosh Kikani

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Comparative analysis of traditional Vs nanotechnological methods of Fruit juice preservation" embodies the results of work done by PATEL AAKASH student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

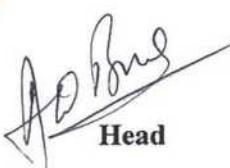
Place : Changa

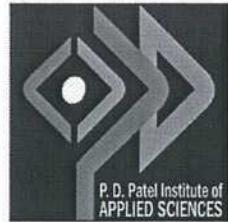
Date: June, 2021



Dr. Anamika Jha

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "In Silico investigation on potential of ayurveda herbs on 1 Tbad ,a novel marker for evaluating drug - resistance in M.Tuberculosis" embodies the results of work done by PATEL ABHISHEK K. student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

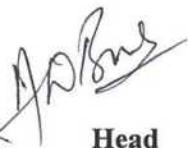


Date: June, 2021

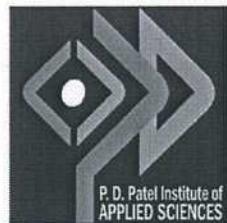


Dr.Gayatri Dave

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Isolation and characterization of non-symbiotic root nodules bacteria from fenugreek" embodies the results of work done by PATEL ANJALI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Murali Sharaff

Dissertation Guide



Head



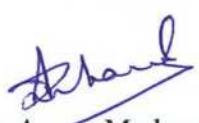
CERTIFICATE

I hereby certify that this dissertation entitled "Interaction of bacterial functional amyloids with drug targets for β -Amyloid and α -Synuclein in silico" embodies the results of work done by PATEL DIPALI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

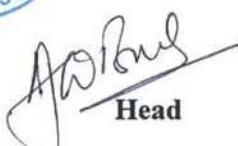
Place : Changa

Date: June, 2021




Dr. Anoop Markande

Dissertation Guide


Head



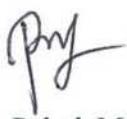
CERTIFICATE

I hereby certify that this dissertation entitled "Targeting the Gut for Early Diagnosis, Prevention, and Cure of Diabetic nephropathy" embodies the results of work done by PATEL DEVANSHI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Palash Mandal

Dissertation Guide


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CERTIFICATE

I hereby certify that this dissertation entitled "Distribution and structure of c-di AMP encoding genes in bacteria" embodies the results of work done by PATEL DIPAL student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

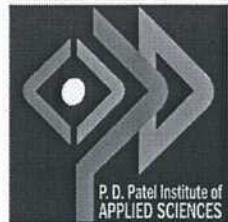


Date: June, 2021


Dr. Ruchi Chaturvedi

Dissertation Guide


Head



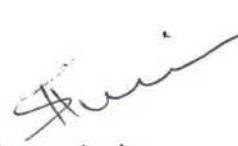
CERTIFICATE

I hereby certify that this dissertation entitled "Biotransformation of eugenol to vanillin. Virtual" embodies the results of work done by PATEL DIXITA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



Place : Changa

Date: June, 2021

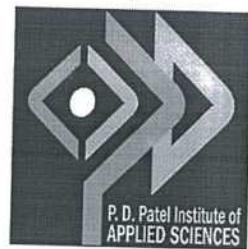


Dr. Seema Amin

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Effect of Magnetic nanoparticles on plant pathogenic fungus" embodies the results of work done by PATEL DRASHTI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date:June,2021



Dr.Janki Thakker

Dissertation Guide



Head



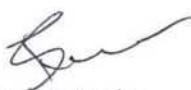
CERTIFICATE

I hereby certify that this dissertation entitled "Interaction between K. flava FA10 and plants." embodies the results of work done by PATEL HENI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Seema Amin

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Characterization of rhizobacteria isolates for fenugreek growth" embodies the results of work done by PATEL JIMITKUMAR student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr.Murali Sharaff

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Cloning and expression of *B. subtilis*" embodies the results of work done by PATEL MAHIMA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

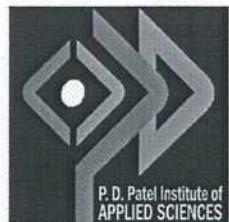
Date: June, 2021




Dr. Anoop Markande

Dissertation Guide


Head



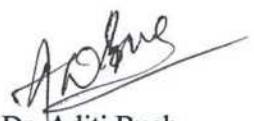
CERTIFICATE

I hereby certify that this dissertation entitled "Image processing tools for microbial Characterization" embodies the results of work done by PATEL PRACHI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa



Date: June, 2021



Dr. Aditi Buch

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Comparative analysis of plant endophytic bacteria and rhizobacteria" embodies the results of work done by PATEL PRACHI M student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa



Date: June, 2021



Dr. Janki Patel

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Comparative analysis of Hfq mediated responses in plant beneficial bacteria vs. plant pathogenic bacteria." embodies the results of work done by PATEL SHIVANI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

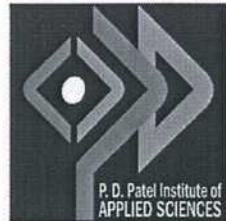
Date: June, 2021



AP Sharaf
Head

MS
Dr.Murali Sharaff

Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "Effect of H₂S on anti-oxidant genes in E.coli" embodies the results of work done by PRAJAPATI DISHA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Head



Dr. Ruchi Chaturvedi

Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "Microbial production of environment friendly bioplastics using agro - waste as a substrate" embodies the results of work done by PUROHIT MEENAKSHI H. student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021

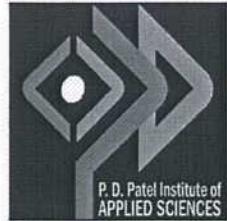


Dr. Chirayu Desai

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Use of marine microbes for Plant growth promotion" embodies the results of work done by RANA SHRUTI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa



Date: June, 2021



Dr.Janki Thakker

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Isolation of Hip A7 mutants in E.coli by chemical mutagenesis" embodies the results of work done by RANK DISHA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

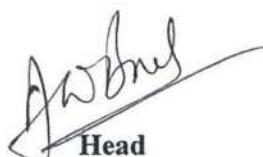


Date: June, 2021

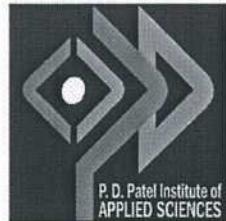


Dr. Ruchi Chaturvedi

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Isolation and characterisation of root nodulating bacteria from fenugreek" embodies the results of work done by RAVAL DHARITHRI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



Dr. Murali Sharaff

Dissertation Guide



Head



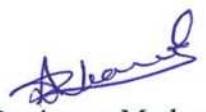
CERTIFICATE

I hereby certify that this dissertation entitled "Mining and *in silico* analysis of moonlighting proteins from *Bacillus* species" embodies the results of work done by RAVAL NIHAR student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



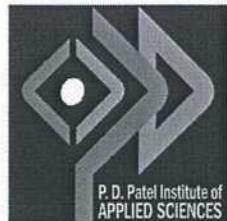
Place : Changa

Date: June, 2021


Dr. Anoop Markande

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Cloning and expression of PGI from B. subtilis" embodies the results of work done by ROHIT AJAY student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Anoop Markande

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Creation of an online database of Thermophilic bacterial diversity and probable adaptations (virtual)" embodies the results of work done by SHAH DHRUVI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




AP Bunk
Head


Dr.Bhavtosh Kikani

Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "Biotransformation of eugenol to vanillin." embodies the results of work done by SHAH NIDHI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



M. B. Patel
Head

Seema Amin
Dr. Seema Amin

Dissertation Guide

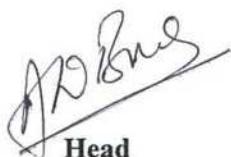


CERTIFICATE

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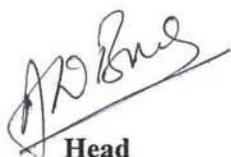
Place : Changa

Date: June, 2021



Dr. Seema Amin

Dissertation Guide



Head



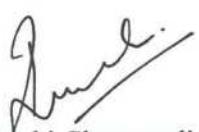
CERTIFICATE

I hereby certify that this dissertation entitled "Studying the molecular diversity of antibiotic producing micro-organisms from diverse environments" embodies the results of work done by SINGH SUBODH KUMAR student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Dr. Ruchi Chaturvedi

Dissertation Guide


Head



CERTIFICATE

I hereby certify that this dissertation entitled "Statistical optimization of L-asparaginase from a marine bacteria" embodies the results of work done by THAKER DEVARSHEE student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021




Head


Dr.Bhavtosh Kikani

Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "Exploring the role of gut in the management of diabetes." embodies the results of work done by THAKKAR NIDHI R student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



Place : Changa

Date: June, 2021



Dr. Palash Mandal

Dissertation Guide



Head



CERTIFICATE

I hereby certify that this dissertation entitled "Creation of database on thermophilic enzymes (virtual)" embodies the results of work done by THAKKER PARTH student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.



Place : Changa

Date: June, 2021


Dr. Bhavtosh Kikani

Dissertation Guide


Head



CERTIFICATE

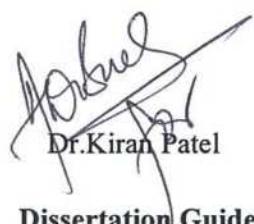
I hereby certify that this dissertation entitled "Optimization of mycorrhizal production in Growth Mini-chamber" embodies the results of work done by UPADYAY HARDITA student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021

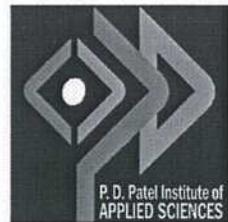


Head



Dr.Kiran Patel

Dissertation Guide



CERTIFICATE

I hereby certify that this dissertation entitled "Gut Microbiota-Derived Mediators as Potential Markers in Alcoholic Fatty Liver Disease" embodies the results of work done by ZALA DEVANGI student of M. Sc. Biotechnology/Microbiology/Biochemistry, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2020-2021 for the partial fulfilment of the degree of Master of Science in Biotechnology/Microbiology/Biochemistry. I further, certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.

Place : Changa

Date: June, 2021



APB
Head

PJ
Dr. Palash Mandal

Dissertation Guide



P.D. Patel Institute of Applied Sciences

Charotar University of science & Technology

Formed under Gujarat State Act No. 8 of 2009

CERTIFICATE

This is to certify that the dissertation entitled "**Magneto – chromatic properties of Transition Metal Oxide functionalized Ferrofluid**" submitted by **MUSKAN JAIN** to the CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY in partial fulfillment of the requirements of the degree of Master of Science Physics is a bonafide record of research work carried out by her under my/our supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for award or any degree, diploma or titles.

Dissertation Guide: Dr. Sanni KaPatel and Mr. Urvesh Soni.

Signature with Date:

Student's Signature:

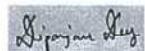
Departments of Physical Sciences
PDPPIAS
CHARUSAT

Department of Physical Sciences
CHARUSAT Campus, Changa-388421, Anand, Gujarat, INDIA
P. D. Patel Institute of Applied Sciences
Phone: 02697-248202, Fax: 02697-547100 Email:info@charusat.ac.in, www.charusat.ac.in
CHARUSAT, Changa.



Certificate

This is to certify that the dissertation entitled "Strength of Singularity in f(R) gravity" submitted by Parth R. Joshi (Roll No. 19PHY003), to the Charotar University of Science and Technology in partial fulfillment of the requirements of the degree of Master of Science (Physics) is a bonafide record of research project work carried out by him under our supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for award of any degree, diploma, or titles.



Research Project Guide: Dr Dipanjan Dey

Associate Professor,


Parth R. Joshi
June, 2021
Changa.

International Center for Astrophysics and Cosmology ,
Charusat university-Changa, Anand.


Head
Department of Physical Sciences
P. D. Patel Institute of Applied Sciences,
CHARUSAT, Changa.





P. D. Patel Institute of Applied Sciences
Department of Physics

International Center for Cosmology

CERTIFICATE

This is to certify that the thesis entitled "TIMELIKE GEODESICS AND SHADOW FORMATIONS", submitted by AADARSH MEHTA to P. D. Patel Institute of Applied Science, CHARUSAT, is a record of bonafide research work under my supervision and I consider it worthy of consideration for the degree of Master in Physics(Astrophysics and Cosmology) of the Institute.

Dr. Dipanjan Dey
Supervisor
International Center for Cosmology

Place: P. D. Patel Institute of Applied Sciences
Date: June 17, 2021



Rucha
Head
Department of Physical Sciences
P. D. Patel Institute of Applied Sciences,
CHARUSAT, Changa.

P.D. Patel Institute of Applied Sciences

Charotar University of science & Technology

Formed under Gujarat State Act No. 8 of 2009

CERTIFICATE

This is to certify that the dissertation entitled "To study the sensitivity of Michelson Interferometer." submitted by Mehta Nidhi Santoshkumar(19PHY005) to the Charotar University of Science and Technology in partial fulfillment of the requirements of the degree of Masters of Science in Physics is a bonafide record of research work carried out by her under my supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for award of any degree, diploma or titles.

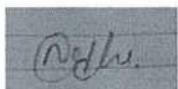
Rucha
17/6/2021

Dissertation Guide: Dr. Rucha P Desai

Associate professor,

Department of Physical Sciences

P.D.Patel Institute of Applied Sciences- Changa, Anand



Student Signature: Nidhi Mehta

Rucha

Head
Department of Physical Sciences
P. D. Patel Institute of Applied Sciences,
CHARUSAT, Changa.



P.D. Patel Institute of Applied Sciences
Charotar University of science & Technology

CERTIFICATE

This is to certify that the Dissertation Report on “**Preliminary studies of CdS films deposited by solution route**” submitted by Ms. Aayushi Naik [19Phy006] to the Charotar University of Science and Technology in partial fulfilment of the requirements of the degree of Masters of Science in Physics is a bonafide record of research work carried out by her under my supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for award of any degree, diploma or titles within India and/or Abroad.

Signature: 
Date: 17.06.2021
Aayushi Naik (19PHY006)

Signature: 
Date: 17.06.2021
Project Guide: **Dr. Anjana Kothari**
Research Scientist
KRADLE,
CHARUSAT

Rishi
Head
Department of Physical Sciences
P. D. Patel Institute of Applied Sciences,
CHARUSAT, Changa.

CHARUSAT Campus, Changa-388421, Anand, Gujarat, INDIA
Phone: 02697-248202, Fax: 02697-547100 Email: info@charusat.ac.in, www.charusat.ac.in



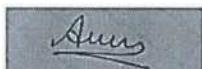


P. D. Patel Institute of Applied Sciences
Department of Physical sciences
Formed under Gujarat State Act No. 8 of 2009

CERTIFICATE

This is to certify that the thesis entitled "**STABILITY OF SPACETIME AND OTHER SOLUTION TO EINSTEIN FIELD EQUATION**", submitted by Anurag Patel to the Charotar University of Science and Technology in partial fulfilment of the requirements of the degree of Master of Science Physics is a bona fide record of research work carried out by him under our supervision. The contents of this project report, in full or in parts, have not been submitted to any other Institute or University for award of any degree, diploma or titles.

Supervisor: Dr. Dipanjan Dey
International Centre for Cosmology (ICC)
CHARUSAT, Changa



Anurag Patel,
P. D. Patel Institute of Applied Sciences
June, 2021



Rucha
Head
Department of Physical Sciences
P. D. Patel Institute of Applied Sciences,
CHARUSAT, Changa.



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Rucha
17/6/2021

Signature with date: 17th June, 2021

Signature:

Dissertation Guide: Dr. Rucha P Desai

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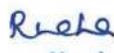


Research Project Guide: Dr. Manan Shah
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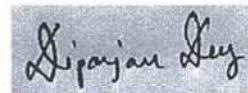
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June, 2021
Changa.



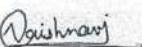
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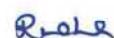
Research Project Guide: Dr. Dipanjan Dey
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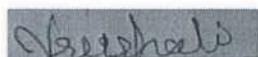
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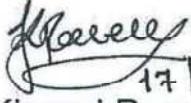
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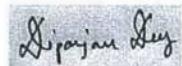
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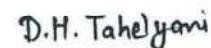

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Date: 17.06.2021

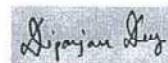
Project Guide: **Dr. Anjana Kothari**
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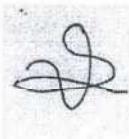


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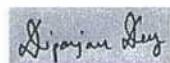
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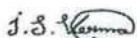
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Siddharth Madan

Guide

Head of Department

Principal

Date: 17th June, 2021

Place: Changa, Dist. Anand, Gujarat



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**Dr. C.K. Sumesh
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