



CERTIFICATE

This is to certify that Ms. ANJU SINGHWANE, student of M.Sc. (Industrial Microbiology) 4th semester, Enrollment Number – DS1900247, School of life Devi Ahilya Vishwavidhyala Indore, (M.P) has carried out her dissertation entitled - "Study of Synthesis of gel for making antibacterial tiles useful in healthcare sector" submitted for the award of degree of Master of Science in Industrial microbiology is a record of substantial research work under our guidance at CSIR-AMPRI, Bhopal.

She has satisfactorily completed the dissertation work at CSIR-AMPRI as partial fulfilment of her Master of Science (Industrial Microbiology) from DAVV, Indore (M.P).

Dr. Sarika Verma

Principal Scientist & Supervisor

CSIR-AMPRI,

Bhopal



Devi Ahilya Vishwavidyalaya

SCHOOL OF LIFE SCIENCES

Takshashila Campus, Ovandera Road

Indore 452 001 (M.F.: INDIA Phone 0731 2467029

E-mail headshdavv@gmail.com

CERTIFICATE

Albizia lebbeck leaf extracts in the regulation of hyperlipidemia in mice"submitted by Apurva Mishra in the partial fulfillment of the award of Master of Science (M.Sc.) in Life Sciences, of Devi Ahilya Vishwa Vidhyalaya, is a bonafide record of the project done by her under my supervision and guidance.

She did this project during the period from March 2021 to August 2021

The dissertation embodies original research work and the data have not been plagiarized from any source

(Supervisor)

SCHOOL OF LIFE SCIENCES

Takshashila Campus, Khandwa Road. Indore - 452 001 (M.P.) INDIA Phone: 0731 2467029

E-mail: headslsdavv@gmail.com

CERTIFICATE

This is to certify that the project "Role of Ficus religiosa and Artocarpus heterophyllus leaf extracts in the regulation of thyroid functions in mice" submitted by Blessy Elsa Jose for the partial fulfillment of the award of Master of Science (M.Sc.) in Life Sciences, of Devi Ahilya Vishwa Vidhyalaya, is a bonafide record of the project done by her under my supervision and guidance.

She did this project during the period from March 2021 to August 2021.

The dissertation embodies original research work and the data have not been plagiarized from any source.

Dr. Anand Kar

(Supervisor)



DEVI AHILYA VISHWAVIDYALAYA, INDORE SCHOOL OF BIOTECHNOLOGY

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Phone: 0731-2470373

E-mail: biotechdavv@gmail.com

head.biotech@dauniv.ac.in

o...../Biotech/20

Date / /20

Certificate

This is to certify that this dissertation entitled "Effect of R-Spondin 2 (β-catenin pathway promoter) on DHT induced pattern baldness in male mice" is a bonafide record of the project work carried out by Ms. Nousheen Sheikh under my supervision for the partial fulfillment of the requirement for the degree of Master of Science in Life Science from Devi Ahilya Vishwavidyalaya, Indore. However, it is noteworthy that the data presented here are only preliminary results and need further repetition of the research work; as our research work severely affected by the COVID-19 pandemic and associated lockdown of many months in the whole nation.

Dr. Hamendra Singh Parmar

amendra

Assistant Professor School of Biotechnology Devi Ahilya University

INDORE-452001(M.P.) INDIA



Dr. Raju Khan

Principal Scientist & Associate Professor Microfluidics & MEMS Centre CSIR-AMPRI Bhopal-462026, MP, India Tel.:-+91-8134954435 khan.raju@gmail.com

August 17, 2021

CERTIFICATE

This is to certify that Ms. Reema Kalthiya, student of 4th semester, pursuing M.Sc. in Industrial Microbiology at School of Life Sciences, Devi Ahilya Vishwa Vidyalaya, Indore has completed her project "Carbon dots and its nanocomposites as potent antimicrobial application" under my supervision and guidance at Industrial Waste Utilization, Nano and Biomaterials, CSIR-APMRI, Bhopal from March 2021 to August 2021.

During the period of project work, her conduct was satisfactory, sincere and she diligently carried out the assigned studies.

laj. 0-17.8.2021.

Dr. Raju Khan
Principal Scientist & Associate Professor
Industrial Waste Utilization, Nano and Biomaterials
CSIR-AMPRI

Bhopal – 462024, MP डॉ. राजू खान / Dr. Raju Khan प्रमुख वैज्ञानिक / Principal Scientist सीएसआईआर-प्रगत पदार्थ तथा प्रक्रम अनुसंघान संस्थान CSIR-Advanced Materials & Processes Research Institute होशंगाबाद रोड, भोपाल–462026 Hoshangabad Road, Bhopal-462026



DEVI AHILYA VISHWAVIDYALAYA, INDORE SCHOOL OF BIOTECHNOLOGY

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Phone: 0731-2470373

E-mail: biotechdavv@gmail.com

head.biotech@dauniv.ac.in

2...../Biotech/20

Certificate

/20 Date /

This is to certify that this dissertation entitled "Effect of valproic acid (\$\beta\$-catenin pathway stabilizer) on DHT induced pattern baldness in male mice" is a bonafide record of the project work carried out by Ms. Roshni Vani under my supervision for the partial fulfillment of the requirement for the degree of Master of Science in Life Science from Devi Ahilya Vishwavidyalaya, Indore. However, it is noteworthy that the data presented here are only preliminary results and need further repetition of the research work; as our research work severely affected by the COVID-19 pandemic and associated lockdown of many months in the whole nation.

Dr. Hamendra Singh Parmar

Assistant Professor School of Biotechnology

Devi Ahilya University INDORE-452001(M.P.) INDIA



Dr. Raju Khan

Principal Scientist & Associate Professor Microfluidics & MEMS Centre CSIR-AMPRI Bhopal-462026, MP, India Tel.:-+91-8134954435 khan.raju@gmail.com

August 17, 2021

CERTIFICATE

This is to certify that Ms. Samraddhi Atre, student of 4th semester, pursuing M.Sc. in Industrial Microbiology at School of Life Sciences, Devi Ahilya Vishwa Vidyalaya, Indore has completed her project "Potential Graphene Oxide and their Nanocomposites for Biomedical Applications" under my supervision and guidance at Industrial Waste Utilization, Nano and Biomaterials, CSIR-APMRI, Bhopal from March 2021 to August 2021.

During the period of project work, her conduct was satisfactory, sincere and she diligently carried out the assigned studies.

Dr. Raju Khan

Principal Scientist & Associate Professor Industrial Waste Utilization, Nano and Biomaterials

CSIR-AMPRI

डॉ. रिप्र टान Bhepabju 462024, MP प्रमुख वैज्ञानिक / Principal Scientist गिएसआईआर-प्रस्त पटार्थ तथा प्रक्रम अनुसंधान संस्थान 'R-Advanced Materials & Processes Research Institute ोशंगाबाद रोड, गोपाल-462026

Inchangebad Road, Chopel-AC2026



सूक्ष्मजीव प्रौद्योगिकी संस्थान

सैक्टर ३९ - ए, चण्डीगढ - १६० ०३६ (भारत)

INSTITUTE OF MICROBIAL TECHNOLOGY

(A CONSTITUENT ESTABLISHMENT OF CSIR)
Sector 39-A, Chandigarh-160 036 (INDIA)

CERTIFICATE

This is to certify that the dissertation work entitled "Phenotypic profiling of neuronal markers in cellular differentiation of human neuronal sharps that the dopaminergic neurons" has been carried out by Mr. SHSY-5Y cells into dopaminergic neurons" has been carried out by Mr. Shridhar Shukla under my guidance at CSIR-Institute of Microbial Shridhar Shukla under my guidance at CSIR-Institute of Microbial Technology, Chandigarh, from February, 2021 to July, 2021. This work is original and has not been submitted, in part or as whole, for any other degree or diploma, to any other University/Institute.

Dr. PAWAN GUPTA

(Research Supervisor)

Date: 21st July, 2021

Place: Chandigarh



177

6666611111666

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महाराष्ट्र असोसिएशन फॉर द किल्टव्हेशन ऑफ सायन्स आघारकर अनुसंधान संस्थान (विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार के अधिन स्वायत्त संस्थान) गो. ग. आगरकर पथ, पूर्ण - ४११ ००४.

Maharashtra Association for the Cultivation of Science AGHARKAR RESEARCH INSTITUTE

(An Autonomous Body under the Department of Science and Technology, Govt. of India) G. G. Agarkar Road, Pune - 411 004.

CERTIFICATE

This is to certify that **Aishwarya**, student of IV semester, pursuing M.Sc. in Industrial Microbiology at School of Life Sciences, Devi Ahilya Vishwa Vidhyalaya, Indore has practically done her dissertation work entitled "Modern Taxonomic studies of *Penicillium* Species Belonging to Subgenus *Aspergilloides* and Delving in to their Industrial and Medical **Applications**" under my supervision and guidance at Department of Biodiversity and Palaeobiology. Agharkar Research Institute (ARI) Pune from 15th February 2021 to 25th August 2021.

The work embodied in current dissertation as not taken from any previous published work of any other research group or laboratory. The content of the report has been drafted by the candidate and submitted.

Supervisor

Dr. Rajesh Kumar K.C.

Scientist D

Biodiversity & Palaeobiology (Lungi) group.

Agharkar Research Institute, Pune

Sun Pharmaceutical Industries Ltd.

Piot No.-2-2A, Industrial Ares - 3, Dewas - 455 001 (M.P.), India Phone : (91-7272) 496100 www.sunpharma.com CIN: L24230GJ1993PLC019050 SUN PHARMA

SPIL/DEWAS//HR 20/Aug/2021

TO WHOM IT MAY CONCERN

This is to certify that Ms. Anjali Soai pursuing M. Sc.- IV Semester from School Of Life Sciences, Devi Ahilya Vishwavidyalay Indore has undergone industrial training in our Organization from 05th Apr., 2021 to 20th Aug., 2021.

During this period we found her hard working and committed towards work and we wish her all the best in her future endeavors for his life.

With Best Wishes

for SUN PHARMACEUTICAL INDUSTIRES LTD.

Puja Shukla Executive – L&OD





DAIRY MICROBIOLOZY DIVISION

ICAR-NATIONAL DAIRY RESEARCH INSTITUTE

(DEEMED UNIVERSITY)

KARNAL -132001 (HARYANA)

CERTIFICATE

This is to certify that the project titled "Characterisation of Antimicrobial Resistance in Lactic Acid Bacteria of Food Origin" submitted by ANUSHKA KOKASH in the partial fulfilment of the requirement for the award of Master of Science (M.Sc) in Industrial Microbiology of School of Life Sciences, DAVV, is a bonafide record of the project done by her/him under my supervision and guidance. She did this project during the period from March 2021 to August 2021. The dissertation embodies original work and that this has not been plagiarized from any source.

Name of Supervisor

Dr. Diwas Pradhan

Date 19/02/2071

डॉ. दिवस प्रधान, वैज्ञानिक Dr. Diwas Pradhan, Scientist मूर्ग मक्ष्म नाविज्ञान प्रभाग Dany Microbiology Division भाक् अन्प अल्डोअनु स., करनाल-1320 ICAR-N.D.R.I., Karnal-13200



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कॅक्स / Fax : 020-2565 1542 वेब / Web : www.aripune.org ई-मेल/E-mail : director@aripune.org महाराष्ट्र असोसिएशन फॉर द कल्टिव्हेशन ऑफ सायन्स आधारकर अनुसंधान संस्थान (विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार के अधिन स्वायत्त संस्थान) गो. ग. आगरकर पथ, पुणे – ४११ ००४.

Maharashtra Association for the Cultivation of Science AGHARKAR RESEARCH INSTITUTE

(An Autonomous Body under the Department of Science and Technology, Govt. of India) G. G. Agarkar Road, Pune - 411 004.

CERTIFICATE

This is to certify that the project titled 'Studies on Identification and Secondary Metabolites of Fusarium species' submitted by Ms Bhavika Patil, in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Life Sciences, School of Life Sciences, Devi Ahilya Vishwavidyalaya, Indore, is a bonafide record of the project done by her under my supervision and guidance.

Ms Bhavika Patil did this project during the period from 22nd February-25th August 2021 at this Institute. This dissertation embodies original work done by her.

Date: 25/08/2021

Place: ARI, Pune

Dr. Sanjay K. Singh

Scientist-F & Coordinator

National Fungal Culture Collection of India (DST-National Facility)

Biodiversity and Palaeobiology Group Email: sksingh@aripune.org



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महाराष्ट्र असोसिएशन फॉर द कल्टिव्हेशन ऑफ सायन्स आघारकर अनुसंधान संस्थान

(विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार के अधिन स्वायत्त संस्थान) गो. ग. आगरकर पथ, पूर्ण - ४११ ००४.

Maharashtra Association for the Cultivation of Science AGHARKAR RESEARCH INSTITUTE

(An Autonomous Body under the Department of Science and Technology, Govt. of India) G. G. Agarkar Road, Pune - 411 004.

Date: 06/09/2021

Place: ARI, Pune

CERTIFICATE

This is to certify that the Project Report entitled "BIOMIMICKING THE SLUDGE CONDITIONS FOR SYNTHESIS OF MICROBIAL POLYHYDROXY BUTYRATE (BIOPLASTIC)", submitted by Ms. Divyanshi Dangi as the record of the work carried out by her at MACS- Agharkar Research Institute, Pune during the period from 1st March - 31st August 2021 is accepted as the P.G Project Work Report submission in partial fulfilment of the requirement for the award of degree of Masters in Industrial Microbiology in School of Life Sciences, Devi Ahilya Vishwavidyalaya, University, Indore.

Mr. Pranav R Kshirsagar (Guide)

Scientist D, Bioenergy Group

MACS-Agharkar Research Institute (ARI), Pune

Dr. Vikram B Lanjekar (Co-Guide)

Technical Officer B, Bioenergy Group MACS-Agharkar Research Institute (ARI), Pune

Dr. Sumit S Dagar (Co-Guide)

Scientist D, Bioenergy Group MACS-Agharkar Research Institute (ARI). Pune



Devi Ahilya Vishwavidyalaya

SCHOOL OF LIFE SCIENCES

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Phone: 0731 2467029

E-mail: headslsdavv@gmail.com

CERTIFICATE

This is to certify that the dissertation entitled "Isolation of Some Plant Pathogenic Fungus and Oomycetes from Cucumber, Ginger, Onion, Garlic, Potato and Safed Musli and their Biocontrol", is a piece of project work done by Mr. Jay Vyas under my guidance and supervision for partial fulfillment of the degree of "Master of Science - Industrial Microbiology" at Applied Microbiology Laboratory, School of Life Sciences, Devi Ahilya Vishwavidyalaya, Indore (M.P.).

To the best of my knowledge and belief the dissertation embodies the work of the candidate himself and is up to the standard both in respect of content and language for being referred to the examiner. He has completed the dissertation work in prescribed time.

Dr. Tushar Banerjee

Head

CERTIFICATE

Isolation of Entophytic Fungi" submitted by Mahima Choudhary, in the partial fulfillment of requirement for the award of Master of Science (M.Sc.) in Industrial Microbiology of School of Life Sciences, DAVV, is a bona fide record of the project done by her under my supervision and guidance. She did the project during the period from March 2021 to April 2021. The dissertation embodies original work and that this has not been plagiarized from any source.

Prof. S. S. Sandhu

W. J.

CERTIFICATE

This is to certify that the project titled 'Prebiotic degrading bacteria from cow dung samples as a possible combination of synbiotic' submitted by Niharika Songaonkar, in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Industrial Microbiology of School of Lifesciences, DAVV, is a bonafide record of the project done by her under my supervision and guidance. She did this project during the period from 01.03.2021 to 04.08.2021. The dissertation embodies original work and has not been submitted as a whole or part to any other university/Institute.

Date: 9th August 2021

Place: Vadodara

Prof. G ARCHANA

Head

Department of Microbialogy

Faculty of Science IS. S. Ligivorsity of Beredo



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महाराष्ट्र असोसिएशन फॉर द कल्टिव्हेशन ऑफ सायन्स आघारकर अनुसंधान संस्थान

(विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार के अधिन स्वायत्त संस्थान) गो. ग. आगरकर पथ, पूणे - ४११ ००४.

Maharashtra Association for the Cultivation of Science AGHARKAR RESEARCH INSTITUTE

(An Autonomous Body under the Department of Science and Technology, Govt. of India) G. G. Agarkar Road, Pune - 411 004.

CERTIFICATE

This is to certify that the project titled "Deciphering the phylogeny of industrially important Black Aspergilli (Section Nigri) through polyphasic approach and its bioprospecting applications" submitted by Osheen Dubey, in the partial fulfilment of the requirement for the award of Master of Science (M.Sc.) in Industrial Microbiology of School of Life Sciences, DAVV, is a bonafide record of the project done by her under my supervision and guidance. She did this project during the period from February 2021 to August 2021. The dissertation embodies original work and has not been plagiarized from any source.

Mentor

Lawling

डा. राज्यतुरु .. १५० तो , वंदानिति Dr. Rajeshkumar K. C., Scientist जैन-विविधता एवं पुत्राचीति । १५८ (८००) Biodiversity & Palaeobiology (४०००) (४०००) आयारकर अनुसंधान संस्थान, पुरो-र्य 11004 , ४०० क्षेत्र Research Institute, Punce (१०००

Dr. Rajesh Kumar K. C. Scientist, National Fungal Culture Collection of India (NFCCI) Biodiversity & Palaeobiology (Fungi) Group Agharkar Research Institute, Pune 411 004, Maharashtra, India

SCHOOL OF LIFE SCIENCES

Takshashila Campus, Khandwa Road, Indore - 452 001 (M.P.) INDIA

Phone: 0731 2467029

E-mail: headslsdavv@gmail.com

CERTIFICATE

This is to certify that the dissertation entitled "Isolation of Some Seeds Borne Pathogenic Fungus and Oomycetes from Paddy, Cluster bean, Mung bean and Soybean and their Biocontrol", is a piece of project work done by Mr. Rahul Malviya under my guidance and supervision for partial fulfillment of the degree of "Master of Science - Industrial Supervision Microbiology" at Applied Microbiology Laboratory, School of Life Sciences, Devi Ahilya Vishwavidyalaya, Indore (M.P.).

To the best of my knowledge and belief the dissertation embodies the work of the candidate himself and is up to the standard both in respect of content and language for being referred to the examiner. He has completed the dissertation work in prescribed time.

Dr. Tushar Banerjee

Head



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ई-पेल/E-mail : director@aripunc.org

महाराष्ट्र असोसिएशन फॉर द कल्टिव्हेशन ऑफ सायन्स आघारकर अनुसंधान संस्थान (विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार के अधिन स्वायत्त संस्थान) गो. ग. आगरकर पथ, पुणे - ४११ ००४.

Maharashtra Association for the Cultivation of Science AGHARKAR RESEARCH INSTITUTE

(An Autonomous Body under the Department of Science and Technology, Govt. of India) G. G. Agarkar Road, Pune - 411 004.

CERTIFICATE

This is to certify that the project titled 'Identification, Taxonomy and Screening of Antimicrobial Potential of Rare Fungi from India' submitted by Ms Richa Dixit, in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Life Sciences, School of Life Sciences, Devi Ahilya Vishwavidyalaya, Indore, is a bonafide record of the project done by her under my supervision and guidance.

Ms. Richa did this project during the period from 22nd February-25th August 2021 at this Institute. This dissertation embodies original work done by her.

Date: 25/08/2021

Place: ARI, Pune

Dr. Sanjay K. Singh

Scientist-F & Coordinator

National Fungal Culture Collection of India (DST-National Facility)

Biodiversity and Palaeobiology Group

Email: sksingh@aripune.org



Plant Tissue Culture Laboratory

M.P. Council of Science & Technology (Dept. of Science and Technology, Govt of Madhya Pradesh)

Vigyan Bhavan, Nehru Nagar, Bhopal-462003 Tel.: 0755-2670447, EPBX: 2433126, 2671612

Fax: 0755-2671600

E-mail: dranitatilwari2015@gmail.com, anitatilwari@mpcost.nic.in

No. %/CST/PTC/Dis/2021

CERTIFICATE

It is certified that the Dissertation Report entitled "Shoot initiation of Bambusa balcooa (Bamboo) from nodal Explants" which is being submitted by Mr. Anand Sharma in partial fulfillment of the requirements for the award of the degree of Master of Science in Life Sciences, Department of Life Sciences, School of Life Sciences, Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh. The matter embodied in this report has not been submitted for award of any other degree.

It is a record of the bonafide work carried out by him from March to Aug, 2021 under my guidance and supervision. He has acknowledged all the assistance and help received during the course of the investigation.

We wish for him successful carrier.

Forward ed

Senior Scientist & In charge

Dated: 26.08.2021

डॉ राजेश सक्सेना तरि प्रधान वैज्ञानिक एवं प्रमुख प्लाट टिश्यू कल्बर प्रयोगशाला म.प्र. विज्ञान एवं प्रौद्योगिकी परिषद्, भोषाल



M Sc, PhD, PDF (Malaysia)

Plant Tissue Culture Laboratory

M.P. Council of Science & Technology

(Dept. of Science and Technology, Govt of Madhya Pradesh) Vigyan Bhavan, Nehru Nagar, Bhopal-462003 Tel.: 0755-2670447, EPBX: 2433126, 2671612

Fax: 0755-2671600

Dated: 26.08.2021

E-mail: dranitatilwari2015@gmail.com, anitatilwari@mpcost.nic.in

No. 095/CST/PTC/Dis/2021

CERTIFICATE

It is certified that the Dissertation Report entitled "In vitro and Ex Vitro seed germination and axillary buds initiation in Sandal wood (santalum album)" which is being submitted by Mr. David Minj in partial fulfillment of the requirements for the award of the degree of Master of Science in Life Sciences, Department of Life Sciences, School of Life Sciences, Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh. The matter embodied in this report has not been submitted for award of any other degree.

It is a record of the bonafide work carried out by him from March to Aug, 2021 under my guidance and supervision. He has acknowledged all the assistance and help received during the course of the investigation.

We wish for him successful carrier.

Senior Scientist & In charge

Lumander

डॉ. राजेश सक्सेना तरि. प्रधान वैज्ञानिक एवं प्रमुख प्लांट टिश्यू कल्चर प्रयोगशाला म ए विज्ञान एवं पौट्टोगिकी परिषद, भोपाल

DEVI AHILYA VISHWAVIDYALAYA, INDORE

SCHOOL OF LIFE SCIENCES

VIGYAN BHAWAN

Takshashila Campus, Khandwa Road,

INDORE 452 001 (M. P.) INDIA

Phone: 0731-2467029

E-mail: hodlifesci@rediffmail.com

Certificate

This is to certify that the project titled Effect of silicon nanoparticles on bioremediation of pyrene, a polycyclic aromatic hydrocarbon by Chlorella vulgaris submitted by Dheeraj Sharma in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Life Science of School of Life Sciences, DAVV is a bonafide record of the project done by him under my supervision and guidance.

He did this project in Photosynthesis lab during the period from March 2021 to August 2021.

The dissertation embodies original work and data has not been plagiarized from any source.

Dr. Anjana Jajoo

(Supervisor)

Indian council of Agriculture Research (ICAR)

Indian Institute of soybean Research (IISR)

Khandwa Road Indore- 452001(M.P.)



CERTIFICATE

This is to certify that the dissertation work entitled "Parental Polymorphism survey of soybean variety using SSR marker (NRC109 & NRC 138)" has been carried out by Miss. Divya Jharbade under the guidance of Dr. Vineet Kumar, Principal Scientist, Department of Biochemistry at ICAR-Indian Institute of soybean Research, Indore, from 15-February-2021 to 15-August-2021. This work is original and has not been submitted, in part or as whole, for any other degree or diploma, to any other University/Institute.

Date: 21.8-2)

Place: Indore

Dr. Vineet Kumar

(principal scientist)

डॉ. विनीत कुमार
Dr. VINEET KUMAR
प्रधान वैज्ञानिक (जैव रसायन)
Principal Scientist (Bio Chemistry)
भा.कं.अनु.प. सोयावीन अनुसंधान िदशालय
ICAR Directorate of Soybean Research
इन्दोर (म.प्र.)/Indore (M.P.)

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CERTIFICATE

This is to certify that the project "Bioremediation of polycyclic aromatic hydrocarbons by Chlorella vulgaris" submitted by Mokshita Chhajed in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Life Science of School of Life Sciences, DAVV, is a bonafide record of the project done by her under my supervision and guidance.

She did this project in Photosynthesis lab during the period from March 2021 to August 2021.

The dissertation embodies original research work and the data has not been plagiarized from any source. Jula 18/8/2021

Dr. Anjana Jajoo

(SUPERVISOR)



Indian Council of Agricultural Research Indian Institute of Soybean Research Khandwa Road, Indore – 452 001

Dr. Mrinal K. Kuchlan Senior Scientist (Crop Improvement Div.)

Dr.Punam Kuchlan Senior Scientist (Crop Improvement Div.) ICAR-IISR, Indore

CERTIFICATE

This is certified that the dissertation entitled "Molecular characterization for seed coat cracking in Soybean (Glycine max (I.) Merrill.) seed" is a bonafide record of the project work carried out by Ms. Muskan Gupta for the partial fulfilment of the requirement for the degree of Master of Science in Life sciences under my supervision from ICAR-Indian Institute Of Soybean Research, Khandwa Road, Indore, M.P., India - 452001. The contents of this dissertation, in full or in parts, have not been submitted to any other Institute or University for the award of any Degree or Diploma.

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Dr. Mrinal K. Kuchlan



Dr. Punam Kuchlan

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Certificate

This is to certify that the project titled The impact of NaCl on bioremediation of pyrene by Chlorella vulgaris submitted by Pinki Rawat in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Life Sciences of School of Life Sciences, DAVV is a bonafide record of the project done by her under my supervision and guidance.

She did this project in Photosynthesis lab during the period from March 2021 to August 2021.

The dissertation embodies original research work and the data has not been plagiarized from any source.

(Supervisor)

from Febrauary-2021 to July-2021. This work is original and has not been submitted, in part or as whole, for any other or diploma, to any other been carried out by Ms. Priya Rathor for the partial fulfilment of the guidance and supervision at ICAR-India institute of soybean Research, Indore This is to certify that the dissertation work entitled "Genetic diversity in soybean [Glycine max (L) Merill] germplasm accessions using SSR marker "has requirement for the degree of Master of science in Life Science under my

Date: - 02-07-2021

university/institute.

Place -Indore

Chairman of the Advisory

Dr. Vangala Rajesh Committee)

Scientist (Genetics &

Plant Breeding)

ICAR-Indian Institute of Soybean Research

(Co-Chairman)

of Sorbean Research Principal Scientist and HOD i'e. Dr. Sanjay Gupta



Dr. Laxman Singh Rajput Scientist



Division of Crop Protection ICAR-Indian Institute of Soybean Research Indore -452001, India

CERTIFICATE

It is certified that the titled "Study of morpho-cultural and pathogenic variability in Colletotrichum truncatum causal agent of soybean anthracnose" submitted by Ms Priyanka Singh, in the partial fulfilment of the requirement for the award of Master of Science (M.Sc.) in Life Science of School of Life Sciences (SLS), Devi AhilyaVishwaVidhalaya (DAVV), is a bonafide record of the project done by her under our supervision and guidance at ICAR- Indian institute of soybean research (IISR), Indore. She did this project during the period from February, 2021 to August, 2021. The research work embodied in this dissertation has not been submitted for award of any other degree elsewhere.

Place: Indore

Date: 19/08/2021

(Laxman-Singh Rajput)

Signature of Supervisor

Seal

Laxma Zajina Zaj

(Mahaveer Prasad Sharma)

Signature of Co-Supervisor

Seal

डॉ. महावीर प्रशाद शर्मा Dr. Mahaveer P. Sharma प्रचान देवानिक (सुमर्गान निवान)

Principal Scient at (Microbiology)

माज्ञान पा-गान्तीय क्रीयानीन अनुसंसान संस्थान,
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CERTIFICATE

This is to certify that the project "Bioremediation of polycyclic aromatic hydrocarbons by Scenedesmus acutus" submitted by Priyanka Gupta in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Life Science of School of Life Sciences, DAVV, is a bonafide record of the project done by her under my supervision and guidance.

She did this project in Photosynthesis lab during the period from March 2021 to August 2021.

The dissertation embodies original research work and the data has not been plagiarized from any source.

Dr. Anjana Jajoo

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remediation of Pyrene by Scenedesmus acutus" submitted by Rajat Atre in the partial fulfillment of the requirement for the award of Master of Science (M.Sc.) in Life Sciences, School of Life Sciences, DAVV, is a bonafide This is to certify that the project "The effect of salinity on the biorecord of the project done by him under my supervision and guidance.

He did this project in Photosynthesis lab during the period from March 2021 to August 2021 The dissertation embodies original research work and the data has not been plagiarized from any source. 18/8/2019

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CERTIFICATE

452001. The contents of this dissertation, in full or in parts, have not been Indian Institute Of Soybean Research, Khandwa Road, Indore, M.P. India partial fulfillment of the requirement for the degree of Master of Science in Life sciences of School of Life Sciences, DAVV, under my supervision from ICARbonafide record of the project work carried out by Ms. Swati Deshmukh for the Based Study In Soybean (Glycine max (L.) Merrill.) for Seed Longevity " is a This is certified that the project tittle, "Polymorphism Microsatellite Marker submitted to any other Institute or $\ensuremath{\mathsf{University}}$ for the award of any Degree or Diploma.

Dr. Mrinal K. Kuchlan

Dr. Punam Kuchlan