

Department : BOTANY					
Acader	Academic Year : 2020-21				
Sr. No.	Programme Code	Name of the Programme			
01.	311	M. Sc. Botany			

Following students have carried out their Project work/ Internship/ Field Project/Industrial Training for the academic session 2020-21

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No.	Name of the Students	Number	
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2.	AMRITA GOP	GGV/19/3069	1-34
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MEDICINAL PLANTS USED TO TREAT DIABETES

A Dissertation Report

SUBMITTED

FOR THE PARTIAL FULFILMENT OF THE DEGREE OF

MASTER PF SCIENCE IN BOTANY

BY



GGV/16/3090

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Under the supervision of

DR.MAMTA PATRA SHAHI

ASSISTANT PROFESSOR

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GURU GHASIDAS VISHWAVIDYALAYA

BILASPUR – 495009 (CG) 2021

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CERTIFICATE

This is to certify that dissertation entitled MEDICINAL PLANTS USED TO TREAT DIABETES is based on the original review done by AARTI BARAIK student of Msc (Botany) under the guidance of DR.MAMTA PATRA SHAHI From the Department Of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur and the report has not been submitted to any other University for the award of any degree or diploma.

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Forwarded to the controller of examination, Guru Ghasidas Vishwavidyalaya, Bilaspur in partial fulfilment of the "Degree of Master's" of Science in Botany.

Place: Bilaspur Date: 16/11/2021



Dr.Mamta Patra Shahi Assistant Professor Department Of Botany GGV, Bilaspur

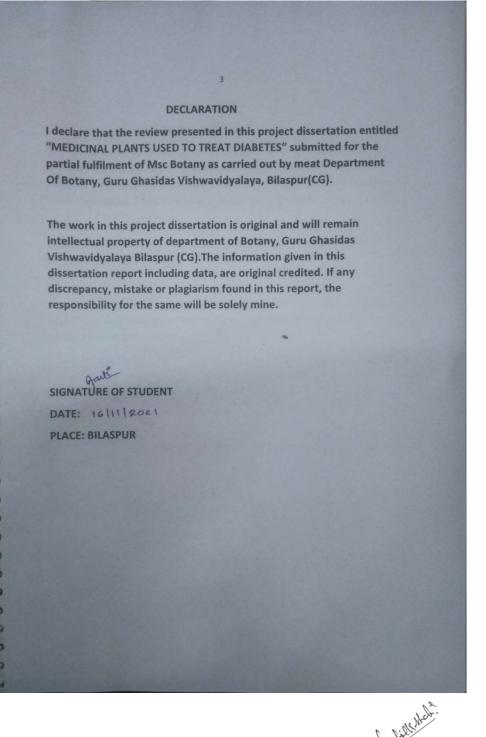
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It is my pleasure to express my sincere gratitude to my supervisor Dr. Mamta Patra Shahi Assistant Professor Department Of Botany, GGV Bilaspur (CG), under whose guidance rhe present project review has been completed. Their valuable suggestion helped me a lot.

I extend my thanks to all my dear classmates who always helped in completion of this review.

Last but not the least thanks to my family for their moral support and also those who directly or Indirectly contributed to successful completion of this review.

(Arti Barik)

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WEEDS PLANTS IN PHYTOREMEDIATION OF HEAVY METALS FROM INDUSTRIAL WASTE



SUBMITTED FORTHE PARTIAL FULFILMENT OF THE DEGREEOF

MASTER OF SCIENCE IN BOTANY (Hons.)

BY

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M. Sc (IV SEMESTER)

(Enrollment No. GGV/19/3069, Roll No. 19403303)

UNDER THE SUPERVISION OF

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DECLARATION

I, AMRITA GOP, hereby declare that the work presented in this project dissertation entitled "WEEDS PLANTS IN PHTOREMEDIATION OF HEAVY METALS FROM INDUSTRIAL WASTE" submitted for partial fulfillment of Master of Science in Botany (Hons.) was carried out at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G), India

The work was carried out by me under supervision of Dr. Vineet Kumar, Assistant professor, Department of Botany, Guru Ghasidas Vishwavidalaya, Bilaspur (C.G)

The work in this project dissertation is original and will remain intellectual property of department of botany .Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G)

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First and foremost,I express my deepest gratitude to my supervisor, Dr. Vineet Kumar ,Assistant professor, in the Department of Botany at Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G), India, whose inspiration ,supervision and support and encouragement to complete my dissertation work "WEEDS PLANTS IN PHYTOREMEDIATION OF HEAVY METALS FROM INDUSTRIAL WASTE" from preliminary to concluding level on this project I also thank for his kindness, timely cooperation and Guidance for this project

I would like to thanks Dr S.K Shahi Head of department of Botany, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G) for providing all the necessary facilities during the course of study.

Special thanks to my all teachers in the department, namely Dr.A.K Dixit, Dr. S.kpandey, v.nTripathi, Dr .S .Shweta, Dr. S. Prajapati and all faculties of the department for their guidance and encouragement during the study.

I am also thankful to my all classmates for sharing their literature and valuabale assistance, Finally, yet importantly, I take this opportunity to express my gratitude and love towards my parents and beloved family members, for their understanding, support and encouragement to give in this dissertation .

Date: July 26, 2021 Place: Bilaspur Name: Amrita GOP Roll No. 19403303



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বিধালযের Hoad বল্ববর্ষে গ্রাহ্য বিধায় Dopartment of Boteny বুল মানীয়ার বিধারিয়ার (১৬টা বি.বি.), নিয়ারান্ডুর (চ.স.) Guru Gnasdas Vishwakdyslaya (A Central University), B405ptr (C C)

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A REVIEW ON ROLE OF MEDICINAL PLANTS IN ENVIRONMENTAL WASTE MANAGEMENT

A Dissertation

SUBMITTED FOR THE PARTIAL FULFILMENT

OF THE DEGREE OF

MASTER OF SCIENCE

IN

BOTANY (Hons.)



BY

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Guru Ghasidas Vishwavidyalaya (A Central University Established by the Central Universities Act 2009 No. 25 of 2009) Koni, Bilaspur – 495009 (C.G.)

CERTIFICATE

This is to certify that the dissertation report entitled "A REVIEW ON ROLE OF MEDICINAL PLANTS IN ENVIRONMENTAL WASTE MANAGEMENT" submitted by ANAMIKA KANNOUJE is based on the review work carried out under the supervision of Dr. Vineet Kumar, Assistant Professor, Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh. This is an original report and has not been previously submitted in part or full for the award of any other degree or diploma to this or any other university.

DR. VINEET KUMAR Supervisor

Forwarded to the controller of staminations, GURU GHASIDAS VISHWAVIDYALAYA in partial fulfilment of the requirements of the Degree of Bachelor of Science in BOTANY (Hons.).

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DECLARTATION

I, ANAMIKA KANNOUJE, hereby declare that the work which is being presented in the thesis entitled "A REVIEW ON ROLE OF MEDICINAL PLANTS IN ENVIRONMENTAL WASTE MANAGEMENT" in partial fulfillment of the requirements for the award of the Degree of Bachelor of Science in Botany (Hons.) and submitted in the Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh is an authentic record of my own work carried out under the supervision of DR. VINEET KUMAR, Assistant Professor, Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh. The matter presented in this thesis has not been submitted by me for the award of any other degree in any other University/Deemed University without proper citation.

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I am sincerely thankful to GGV Bilaspur (C.G.) for providing with the opportunity to write a review paper in the form of a dissertation on the topic 'A REVIEW ON ROLE OF MEDICINAL PLANTS IN ENVIRONMENTAL WASTE MANAGEMENT".

I am also thankful to my advisor Dr. Vineet Kumar, Assistant Professor, Department of Botany at Guru Ghasidas Vishwavidyalaya, Bilaspur, for imparting his knowledge and expertise in this study guiding me in every stage of this paper without his support for me to prepare the paper so meaningful and interesting.

I would like to thanks Dr S. K. Shahi, Head, Department of Botany at Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G), for providing all the necessary facilities during the course of study.

Special thanks to my all teachers in the department, namely Dr. A.K. Dixit, Dr. S.K. Pandey, Dr. V.N. Tripathi, Dr. S. Prajapati, Dr. S. Shweta, Dr. Deepankar Yadav, and all faculties of the department for their guidance and encouragement during the study.

I am also thankful to my all classmates.

Finally, yet importantly, I take this opportunity to express my gratitude and love towards my parents and beloved family members, for their understanding, support and encouragement to give in this dissertation

(Anamika Kannouje)

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Submitted in the Partial Fulfillment of the Requirements for the Award of the

Degree of Master of Science in Botany

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(Anwesha Dalpati)

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"Ethno Medicinal Plants Used for Treatment of Common Health Problems in Belgahna Village of Chhattisgarh"

А

Dissertation Report

Submitted in Partial Fulfillment of the Requirement for the Award of the Degree of

MASTER OF SCIENCE IN BOTANY

ТО



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ETHNOMEDICINAL PLANTS USED BY TRIBAL PEOPLE OF PUSSORE

BLOCK, RAIGARH, CHATTISGARH, INDIA (A REVIEW)

A DISSERTATION REPORT

SUBMITTED

FOR THE FULFILMENT OF THE DEGREE

OF

MASTER OF SCIENCE

IN

BOTANY



BY **BALVANT PATEL ROLL NO. - 19403308**

UNDER THE SUPERVISION OF DR. RAMESH KUMAR AHIRWAR ASSISTANT PROFESSOR **DEPARTMENT OF BOTANY** GURU GHASIDAS VISHWAVIDYALAYA, BILASPUP-

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A review on the Effect of Cobalt on plant

A Dissertation report

SUBMITTED ON THE PARTIAL FULFILMENT OF THE DEGREEOF MASTER

OFSCIENCE IN BOTANY



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I declare that the work presented in this thesis "A Reviem on the effect of cobalt in plant " submitted in partial fulfilment of MSc. Botany has beencarried out at the Department of Botany, Guru Ghasidas Vish-wavidyalaya,Bilaspur(C.G).

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I would like to thanks Dr. S.K Shahi Head of department of Botany, GuruGHASIDAS VISHWAVI-DALAYA(C.G) for providing all the necessary facilities during the course of study

Special thanks to my all teachers in the department, namely Dr .A.K Dixit, Dr. S.kpandey, v.n Tripathi, Dr .S .Shweta, Dr.s. prajapati and all faculties of the department for their guidance and encouragement during the study.

I am also thankful to my all classmates for sharing their literature and valuable assistance

Finally, yet importantly, I take this opportunity to express my gratitude and love towards my parents and beloved family members, for their understanding, support and encouragement to give in this dissertation

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- Cobalt in plants and the environment

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- Beneficial effect
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- Toxic effect of Cobalt on plant
- Toxic effect of Cobalt on seed germination
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- Toxic effect of Cobalt on photosynthesis
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- Effect of Cobalt in enzyme in plant
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- Effect of Cobalt on nutrient
- 3. Cobalt uptake translocation and accumulation in plant
- 4. Effect of Cobalt on plant growth
- 5. Cobalt deficiency
- 6. Treating cobalt deficiency
- 7. Interaction of Cobalt with other metal
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 - Iron
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- 8. Reference

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Molecular modeling and structure based drug discovery

against main protease of SARS COV-2



SESSION 2019-2021

DEPARTMENT OF BOTANY

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Submitted by

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This is to certify that the dissertation entitled "Molecular modelling and structure based drug discovery against main protease of SARS COV-2" is based on the original work done by Ms. **BharatiSwain, M.Sc. 4th semester**, Department of Botany, Guru GhasidasVishwavidyalaya, Koni, Bilaspur (C.G.) and this has not previously formed the basis for the award of any degree, diploma, associate-ship, fellowship, or any other similar title and its represents entirely an independent work of the candidate.

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DECLARATION I hereby declare that the work presented in this dissertation entitled "Molecular modelling and structure based drug discovery against main protease of SARS-COV-2", submitted for the partial fulfillment of M.Sc. Botany was carried out at the Department of Botany, Guru GhasidasVishwavidyalaya, Bilaspur (C.G.). The work was carried out by me under the supervision of Dr. S.K. Pandey Assistant professor, Department of Botany, Guru GhasidasVishwavidyalaya, Bilaspur (C.G.). If any discrepancy, mistake and plagiarism are found in the report, the responsibility for the same will be solely mine. PLACE: BILASPUR DATE: Bharati Swain Bharati Swain M.Sc IVTH Semester **Department of Botany Guru Ghasidas** Vishwavidyalaya **BILASPUR(C.G.)** Ammun वनस्पति शास्त्र विभाग Department of Botony तुरू पासीवास विश्वविद्यालय (केन्द्रीय वि.वि.), विसासपुर (छ.म.) au Ghasidas Vishwavidyalaya (A Contral University), Bilasput (G Signature and Seal of the Head 3 | Page



ACKNOWLEDGEMENT

I am extremely thankful and express my sincere gratitude to my supervisor **Dr. S.K. Pandey** Assistant Professor, Department of Botany, G.G.V. Bilaspur Chhattisgarh India, whose encouragement, supervision and support from the preliminary to the concluding level enabled me to develop an understanding subject.

I express my greatest gratitude to **Dr**. **S.K. Shahi** Head of Department of Botany, GGV, for granting permission and providing me with an environment to complete my project successfully within the department.

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Finally, yet importantly, I take this opportunity to express my gratitude to all Research Scholars, my parents and beloved family members for their support and encouragement to do my work more efficiently during the crucial times.

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Justill Helt? বিশালাঘৰৰ Moad অলহখনি ৰাহজ বিশাল Dopartment of Botony দুল মালীৱলা বিধ্ববিদ্যালয় (উপটো বি.বি.), নিলেলহুং (চ.গ.) Guru Ghasidas Vishwarkhyclaya (A Contrai University), Désigut (C.C.) Signature and Seal of the Head

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Monography on *Ipomoea aquatica* Forsk. used in rural area of Chhattisgarh

A Dissertation Report

Submitted

FOR THE PARTIAL FULFILLMENT OF THE DEGREE OF MASTER OF SCIENCE IN



Deeksha Goswami

GGV/16/3114, 19403312

Under the supervision of Dr. A.K DIXIT Associate Professor Department of Botany, GGV, Bilaspur

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(SUPERVISOR) ASSOCIATE PROFESSOR

I forwarded the dissertation report to the respective examiners.

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I extend my thanks to my respected parents, my classmates and my seniors who always help in completion of project work.

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5	Materials & methods
6	Phytochemical screening
7	Result, discussion & conclusion
8	Reference

Junkill Mede Hood बनदारी शास्त्र विभाग Dopartment of Botony कुत्त प्राप्तीयता विश्वविद्यात्र (केन्द्रीय वि.वे.), शिसासुर (ए.म.) Garu Ghasdas Vizhwardy, Jage (A. Corrai Universy), Bilescer (C.C.) Signature and Seal of the Head

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ETHNOMEDICINAL PLANTS USED BY THE TRIBAL PEOPLE IN DISTRICT BILASPUR, CHHATTISGARH (A REVIEW) A Dissertation Report

Submitted

For the fulfilment of the degree of MASTER OF SCIENCE IN



By

DIKSHA GUPTA

Roll No. 19403313

Under the Supervision of

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This is to certify that dissertation entitled "Ethnomedicinal plants used by the tribal people in District Bilaspur, Chhattisgarh (A Review)" is based on original work done by Diksha Gupta (Enrollment no. GGV/16/3117) Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur under the guidance of Dr. R.K. Ahirwar from the Dept. of Botany, GGV, Bilaspur and the report has not been submitted to any other University for the award of any Degree or Diploma.

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Place: Bilaspur Date:

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DEGRADATION OF ANTIBIOTICS IN THE ENVIRONMENT

(REVIEW)

A Dissertation Report submitted for the partial fulfilment of the requirement of the

Award of Degree

OF

MASTER OF SCIENCEE IN BOTANY

At

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)



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2



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DECLARATION

I, Diptesh Kumar Bhoi, hereby declare that the work presented in the project work entitled Degradation of antibiotics in the environment (REVIEW) submitted for the partial fulfilment of M.Sc. Botany has been performed in the Dept. of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur under the supervision of Dr. V.N. Tripathi, Assistant Professor, Dept. of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, (C.G.).

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I wish to acknowledge **Dr. S.K. Shahi**, HOD, Dept. of Botany, GGV, Bilaspur (C.G.), who gave me opportunity to undergo project work.

I would like to thank Dr. A.K. Dixit, Dr. D.K. Patel, Dr. S.K. Pandey, Dr. S.K. Prajapati, Dr. S. Shweta, Dr. R.K, Ahirwar, and Dr. Deepanker Yadav for their kind encouragement.

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I would like to thank all my classmates and those who have directly or indirectly helped me to complete my work.

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EFFECTOR PROTEINS IN BACTERIAL PATHOGENESIS AND THEIR T4SS MECHANISM (REVIEW)

A Dissertation Report submitted in partial fulfillment of the requirement of the

Award of Degree

OF

MASTER OF SCIENCE INBOTANY

AT

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)

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2020-2021

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This is certify that the dissertation entitled "Effector proteins in bacterial pathogenesis and their t4ss mechanism (REVIEW)", is based on review of literature work done by Gayatri Devi Biswal (Enrollment no.-GGV/16/3125) Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, C.G. and this has not previously formed the basis of the award of any degree, diploma, associateship and any other similar title and it represents entirely an independent work on the part of the candidate.

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I am also grateful to the Head of the Department, Dr. S.K. Shahi for his dedication towards encouraging the students and gave me opportunity to undergo my project work entitled "Role of T4SSeffector proteins of in pathogenicity (REVIEW)" within this department.

Special thanks to faculty members of the Department, Dr. S. Shweta and Dr. Deepanker Yadav for their kind encouragement.

I would like to thank Ms. Shivali Sharma (Ad-hoc) and Ms. Nikita Sahoo(Senior) to spare their precious time to help me throughout this project.

I would like to thank all my classmates for helping me to complete this project work.

I would like to thank those who have directly or indirectly contributed to the successful completion of this project work.

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ETHNOBOTANICAL STUDY OF DHARAMJAIGARH BLOCK DISTRICT RAIGARH (A REVIEW)

A Dissertation Report

Submitted For the fulfilment of the degree of MASTER OF SCIENCE IN BOTANY



By

Gopal Patel

Roll No. 19403316

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I hearby declare that the work presented in this dissertation Report entitled "Ethnobotanical study of Dharamjaigarh block district Raigarh (A Review)" submitted for the partial fulfilment of M.Sc. Botany was carried out at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) The work was carried out by me under the guidance of Dr. Ramesh Kumar Ahirwar, Assistant Professor, department of Botany, Guru Ghasidas Vishwavidyalaya Bilaspur (CG.). The work in this dissertation Report is original and will remain intellectual property of department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (CG.).

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Gopal Patel



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A Review on- medicinal uses of Prosopis cineraria

A DISSERTATION

Submitted in the fulfillment of the requirement for the award of the degree

Of

Master of Science in Botany

То



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I am also thanks to my friends for help in making these project a successful one.

Last but not least I convey my regards to all those who directly or indirectly contributed to the successful completion of this project work.

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ENVIRONMENTAL EFFECT OF COAL MINING INDUSTRY A Dissertation Report SUBMITTED ON THE PARTIAL FULFILMENT OF THE DEGREE OF MASTER OF SCIENCE IN BOTANY



GURU GHASIDAS VISHWAVIDALAYA

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BY

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CERTIFICATE

This is certify that dissertation entitled "ENVIRONMENTAL EFFECT OF COAL MINING INDUSTRY" submitted to the Department of BOTANY, GGV is a record of independent dissertation work carried out by Indramani Painkra for the degree of Master of Science under my supervision and guidance. This has not been previously submitted for the award of any degree diploma or any other similar title.

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DECLARATION

I hereby declare that the work presented in this project dissertation entitled "ENVIRONMETAL EFFECT OF COAL MINING INDUSTRY" Submitted for partial fulfillment of M. Sc. Botany was carried out at Department of Botany, Guru GhasidasVishwavidyalaya, Bilaspur (C.G.)

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I would like to thanks Dr S. K. Shahi, Head of the Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C. G) for providing all the necessary facilities during the course of study.

Special thanks to my all teachers in the department, namely Dr. A. K Dixit, Dr. S.K. Pandey, Dr. V.N. Tripathi, Dr. S. Shweta, Dr. Amar Abhishek, Dr. Vinita Dixit, Mr C Dewangan and all the faculties of the department for their guidance and encouragement during the study.

I am also thankful to all my classmates for sharing their literature and valuable assistance.

Finally, yet importantly, I take this opportunity to express my gratitude and love towards my parents and beloved family members, for their understanding, support and encouragement to give in this dissertation.

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2.Underground mining

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Conclusion

References

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Bioremediation of medical waste

(REVIEW)

A Dissertation Report submitted for the partial fulfilment of the requirement of the

Award of Degree

OF

MASTER OF SCIENCE IN BOTANY

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)



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DECLARATION

I, Indulata Choudhary, hereby declare that the work presented in the project work entitled "Bioremediation of medical waste (REVIEW)" submitted for the partial fulfilment of M.Sc. Botany has been performed in the Dept. of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur under the supervision of Dr. V.N. Tripathi, Assistant Professor, Dept. of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, (C.G.).

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I wish to acknowledge **Dr. S.K. Shahi**, HOD, Dept. of Botany, GGV, Bilaspur (C.G.), who gave me opportunity to undergo project work.

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I would like to express my heartfelt gratitude to my family for giving me the moral support and a lot of encouragement for carrying out my work.

I would like to thank all my classmates and those who have directly or indirectly helped me to complete my work.

Indulata Choudhary



CONTENT

- 1. Introduction;- What is bioremediation and medical waste, Classification of medical waste.
- 2. Review of literature
- 3. Bioremediation technique and different methods
- 4. Bioremediation applications
- 5. Advantage of bioremediation
- 6. Disadvantage of bioremediation
- 7. Limitations of bioremediation
- 8. Conclusion
- 9. Reference

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Monograph on Butea monosperma

A Dissertation Report

SUBMITTED FOR

THE PARTIAL FULFILMENT OF THE DEGREE OF

MASTER OF SCIENCE IN BOTANY



By

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Page 2 of 67

DECLARATION

I here declare that the work presented in this project dissertation entitled "A Monograph On Butea monosperma" submitted for partial fulfillment of M.Sc Botany was carried out at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

The work was carried out by me under supervision of **Dr. A.K. Dixit**, Assistant Professor, Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G). The work in this project dissertation is original and will remain intellectual property of department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

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With the all most appreciation, I would like to concede respected supervision Dr. A. K. Dixit for hisguidance, selfless efforts, sparing their precious time for guidance and supervision and always being ready for pointing out mistakes and giving suggestions to improve them.

I am highly thankful to honorable Dr.S.K. Shahi, Head of Botany department, GGV, Bilaspur for his dedication towards the pursue of knowledge andreadiness to instill the same.

Special thanks to the teachers in the Department namely Dr. S.K. Pandey, Dr. S.K. Prajapati, Dr.V.N.Tripathi, , Dr. Amar Abhishek , Dr. Veenita Dixit , Dr. Ramesh Kumar Ahirwar, Dr. Sweta Subhramanim , Ms. Shivali Sharmaand during the study.

No words can suffice the efforts taken by my parents for the completion of my project. This work is an outcome of their blessing & constant moral support.

Finally I am thankful from the bottom of my heart to my classmates who encouraged me at each step with great affection.

Last but not least I convey my regards to all those who directly or indirectly contributed to the successful completion of this project work.

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ANALYSIS OF GLOBAL RESEARCH ON MALARIA AND A REVIEW OF ANTIMALARIAL PLANTS

A Dissertation Report SUBMITTED FOR THE PARTIAL FULFILMENT OF THE DEGREE OF MASTER OF SCIENCE IN BOTANY



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With the utmost appreciation, I would like to concede respected supervisors **Dr. S.K. Shahi** for their guidance, selfless efforts, sparing their precious time for guidance and supervision and always being ready for pointing out mistakes and giving suggestions to improve them. I am highly thankful to honourable **Dr. SK Shahi**, **Head of Botany & Dean of Life Science**, **GGV**, **Bilaspur** for his dedication towards pursue of knowledge and readiness to instill the same.

Special thanks to the teachers in the Department, namely, **Dr. A.K. Dixit, Dr. S.K. Prajapati**, **Dr. S.K. Pandey, Dr. V.N .Tripathi, Dr. M.P. Shahi** add other also for encouragement during the study.

I am also like to thanks the lab technician and librarian **Mr Naresh Chandraker & amp; Nirmalkar** for help in making this projects a successful one.

No words can suffice the efforts taken by my parents for the completion of my project. This work is an outcome of their blessing & amp; constant moral support.

Finally I am thankful from the bottom of my heart to my classmates **Subhangi Maity, Tripti Sharma, Lalita Sahu, and Riya Reshma Tirkey** who encouraged me at each step with great affection.

Last but not least I convey my regards to all those who directly or indirectly contributed to the successful completion of this project work.

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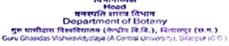
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- 3.3 Statistical analysis
- 3.4 Identification of phytochemicals in extracts
- 4. Results and discussion
- 5. Conclusion
- 6. References

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ETHNOBOTANICAL, PHYTOCHEMICAL, AND PHARMACOLOGICAL STUDY OF INDIAN HERBAL QUEEN-*TINOSPORA CORDIFOLIA (GILOY)*

A Dissertation Report

SUBMITTED

FOR THE PARTIAL FULFILLMENT OF THE DEGREE

OF

MASTER OF SCIENCE

IN

BOTANY



By

LALITA SAHU

Enrollment No. GGV/16/3143, Roll No. 19403323

Under the supervision of

DR. SUSHIL KUMAR SHAHI

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CERTIFICATE

This is to certify that dissertation entitled 'Ethnobotanical, Phytochemical and Pharmacological Study of Indian Herbal Queen-*Tinospora cordifolia* (Giloy)'is based on review done by **LALITA SAHU** (Enrollment no. GGV/16/3143) Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur and this has not previously formed the basis of the award of any degree, diploma, associate ship and any other similar title and it represent entirely an independent work on the part of the candidate.

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DECLARATION

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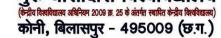
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THE GENUS CROTALARIA L. (LEGUMINOSAE): CYTOLOGICAL REVIEW

Dissertation Report Submitted For the partial fulfilment of the degree of

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IN TAP

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Ву

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I hereby declare that the work presented in the projected dissertation entitled "The genus Crotalaria L. (Leguminosae): Cytological review" submitted as partial fulfilment of M.Sc. Botany IV Semester, was carried out by me at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

I owe the sole responsibility for the entire content of this project including the manuscript, figures, tables and graphs.

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দত্যের বিশাস ত্রন্থমের বিশাস Department of Boteny দুদ মানীয়ান বিশাবীয়ারে (উপটো বি.বি.), নিজেন্ডেং (চ.গ.) Guni Ghasidas Vishwardy,রাজ্যর (A Contrai University), Bilastur (C.C.)

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ETHNOMEDICINAL PLANTS USED BY THE TRIBES OF RAIGARH DISTRICT CHHATTISGARH INDIA: A REVIEW

A DESERTATION REPORT

SUBMITTED

For the Fulfilment of the degree

of

MASTER OF SCIENCE

IN

BOTANY



By

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This is to certify that dissertation entitled "Ethnomedicinal Plants used by the tribes of Raigarh district Chhattisgarh India: A Review" is based on original work done by Madhulata Behra (Enrollment no. GGV/16/3145) Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur under the guidance of Dr. R.K. Ahirwar from the Dept. of Botany, GGV, Bilaspur and the report has not been submitted to any other University for the award of any Degree or Diploma.

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DECLARATION

I hereby declare that the work presented in this dissertation report entitled "Ethnomedicinal Plants used by the tribes of Raigarh district Chhattisgarh India" submitted for the partial fulfilment of M.Sc. Botany, was carried out at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C. G).

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The work in this dissertation report is original and will remain intellectual property of Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

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WATER POLLUTION IN LEATHER INDUSTRY

A

Dissertation Report

SUBMITTED ON THE PARTIAL FULFILMENT OF

THE DEGREE OF

MASTERS OF SCIENCE

IN

DEPARTMENT OF BOTANY

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I declare that the work done in my dissertation entitled, "Water Pollution In Leather Industry" has been carried out by me and does not involve plagiarism. I also certify that: No sentence, equation, diagram, table, paragraph, or section has been copied verbatim from previous work unless it is placed under quotation marks and duly referenced. The project work will remain the intellectual property of the Department of Botany, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.).

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ETHNOMEDICINAL PLANTS USED TO TREAT GYNAECOLOGICAL DISORDERS BY TRIBAL PEOPLE IN NARSINGHANATH VALLEY OF BARGARH DISTRICT ODISHA (A REVIEW)

A DISSERTATION REPORT SUBMITTED FOR THE FULFILMENT OF THE DEGREE

OF

MASTER OF SCIENCE

IN

BOTANY



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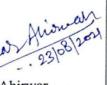
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I won't Forget to mention my classmates & friends for their wonderful and skillful guidance and support.

Last, but not the least, I also thank my parents for their moral support to ensure successful completion of the project.

Manish Padhee



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"Abiotic stress and its eradication in Glycine max (soyabean)."

A Dissertation report submitted for the fulfilment of the degree of MASTER OF SCIENCE IN BOTANY



SESSION 2020-2021 DEPARTMENT OF BOTANY GURU GHASIDAS VISHWAVIDYALAYA (A CENTRAL UNIVERSITY) BILASPUR (CG)

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CERTIFICATE

This is to certify that the dissertation entitled "Abiotic stress and its management in Glycine max This is to control on the review work done by Ms. Moustumee Mahapatra, M. Sc IV semester Department (soyabean). Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur (C.G.) and this has not previously formed the of Botany. Current of any degree, diploma, associate ship, fellowship or any other similar title and it represents

Place: Bilaspur

Date- 25-07-2021

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DECLARATION

I hereby declare that the work presented in this dissertation entitled "Abiotic stress and its management in <u>Glycine max</u> (soyabean).", submitted for the partial fulfilment of M.Sc.Botany as carried out at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur(C.G.).

The work was carried out by me under the supervision of Dr. S.K.Pandey Assistant Professor, Department of Botany. Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).The work presented in this dissertation is original and will remain intellectual property of Department of Botany, Guru Ghasidas Vishwavidyalaya. Bilaspur (C.G.). If any discrepancy, mistake and plagiarism is found in the report, the responsibility for the same will be solely mine.

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OPPORTUNISTIC PATHOGENS

(REVIEW)

A Dissertation Report submitted for the partial fulfilment of the requirement of the

Award of Degree

OF

MASTER OF SCIENCE IN BOTANY

At

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)



2020-2021

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This is certify that dissertation entitled "Opportunistic Pathogen (REVIEW) ", is based on review of literature work done by Narasingh Bag (Enrollment No.- GGV/19/3244) Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, C.G. and this has not previously formed the basis of the award of any degree, diploma, associate ship and any other similar title and it represents entirely an independent work on the part of the candidate.

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Dr. V. N. Tripathi (supervisor) Assistant Professor

I recommend the Project Report to be forwarded to the respective examiners for evaluation. I wish her all the success in her carrier and life.

Place: Bilaspur Date25/07/2021

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DECLARATION

I, Narasingh Bag, hereby declare that the work presented in the project work entitled OPPORTUNISTIC PATHOGEN (REVIEW) submitted for the partial fulfilment of M.Sc. Botany has been performed in the Dept. of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur under the supervision of Dr. V.N. Tripathi, Assistant Professor, Dept. of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, (C.G.).

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A

DISSERTATION

ON

A REVIEW ON MEDICINAL PLANT ASPARAGUS RACEMOSUS AND ACORUS CALAMUS Submitted for the partial fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

In

BOTANY

То

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C. G.)



By

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M.Sc. IV Sem. (BOTANY) 2020-21

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UNDER THE SUPERVISION OF

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This is to certify that the dissertation entitled "A review on medicinal plant Asparagus racemosus and Acorus calamus" is based on the review work done by Ku. Poonam Walive, student of M.Sc. 4th Semester Botany, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur (C.G.). Further, this is also certified that the content of this work has not been submitted or published for the award of any degree, diploma or any other similar title and represents entirely an independent work done by candidate.

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DECLARATION

I, **Poonam walive** hereby declare that the work presented in the project dissertation entitled **"A review on medicinal plant** *Asparagus racemosus* and *Acorus calamus*" submitted for partial fulfilment of M.Sc. Botany has been carried out at Department of Botany, Guru Ghasidas Vishwayidyalya, Bilaspur (C.G.)

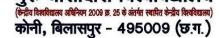
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I express my heartfelt gratitude to my family for giving me the moral support and a lot of encouragement for carrying out my work.

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Poonam Walive

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DECLARATION

A REVIEW ON SALT STRESS AND PLANTS DEFENCE

A Dissertation

Report

SUBMITTED ON THE PARTIAL FULFILMENT OF

THE DEGREE OF MASTER OF SCIENCE

IN DEPARTMENT OF

BOTANY

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DECLARATION

I declare that the work presented in this thesis "a review on salt stress and plants defence" submitted in partial fulfilment of MSc. Botany has been carried out at the Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G). The work presented in this thesis is original and will remain the intellectual property of Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G). The information presented in this dissertation report including data, figures and picture are original and duly credited. If any discrepancy, mistake, or plagiarism found in this report, the responsibility for the same will be solely mine.

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ACKNOWLEDGEMENT

First and foremost, I express my deepest gratitude to my supervisor Dr. Deepanker Yadav, Assistant Professor, Department of Botany, GGV, Bilaspur, C.G., India; whose inspiration, supervision, and support and encouragement to complete my dissertation work entitled A REVIEW ON SALT STRESS AND PLANTS DEFENSE from preliminary to concluding level on this project. I also thank him for his kindness, timely cooperation, and guidance for this project.

I would like to thank Dr. S. K. Shahi, Head of the Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C. G) for providing all the necessary facilities during the course of study.

Special thanks to all my teachers in the department, namely Dr. A. K Dixit, Dr. S.K. Pandey, Dr. SK Prajapati, Dr. V.N. Tripathi, Dr. S. Shweta, Dr. Amar Abhishek, Dr. Vineeta Dixit, Mr. C Dewangan, and all the faculties of the department for their guidance and encouragement during the study.

I am also thankful to all my classmates for sharing their literature and valuable assistance.

Finally, yet importantly, I take this opportunity to express my gratitude and love towards my parents and beloved family members, for their understanding, support, and encouragement to give in this dissertation.

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a. Physiological mechanism b.

Biochemical mechanism

- i. Antioxidative mechanism
 - A. Enzymatic
 - B. Non-enzymatic
 - ii. Hormonal adaptation.
- 4. CONCLUSION

Head चनस्पति सात्य विभाग Department of Boteny पुरु पानीवल विश्वविद्यालय (केस्ट्रीय वि.वि.), सिलावपुर (ए.ग.) Gun Ghasdas Vishwardy,shya (A Contra University), विद्यारण (००) Signature and Seal of the Head



Α

DISSERTATION

ON

A REVIEW ON ALOE VERA AND TRIGONELLA FOENUM -GRAECUM

Submitted for the partial fulfilment of the requirement for the award of the degree of

MASTER OF SCIENCE IN BOTANY

TO

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C. G.)



То

GURU GHASIDAS VISHWAVIDYALAYA (A CENTRAL UNIVERSITY)

By

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Department of Botany

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Date -

Name of the Supervisor Dr. Devendra Kumar Patel Department of Botany

Forwarded to the controller of examination, Guru Ghasidas Vishwavidyalaya, Bilaspur in partial fulfillment of the degree of Master of Science in Botany.

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Date :

Head of department Dr. S.K. Sahi

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DECLARATION

I hereby declare that the work presented in this project dissertation entitled **A REVIEW ON ALOE VERA AND TRIGONELLA FOENUM -GRAECUM** submitted for partial fulfilment of M. Sc. Botany was carried out at department of Botany Guru Ghasidas Vishwavidyalaya Bilaspur Chhattisgarh the work was carried out by me under supervision of Dr. Devendra Kumar Patel, associated professor department of Botany Guru Ghasidas Vishwavidyalaya Bilaspur Chhattisgarh the work is the project dissertation is original and remains intellectual property of department of Botany Guru Ghasidas Vishwavidyalaya Bilaspur Chhattisgarh.

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I am also grateful to Head of Department Dr. S.K. Sahi for his dedication towards the pursue of knowledge and readiness to instill the same in his student has always been encouraging.

Special thanks to the teacher in the department, namely Dr. A.K. Dixit, Dr.V.N. Tripathi, Dr. Deepankar Yadav, Dr.Ramesh Kumar Ahirwar , Dr. S. Sweta for encouragement during the study.

I am also thanks to qZ friends for help in making these projects a successful one.

Last but not least I convey my regards to all those who directly or indirectly contributed to the successful completion of this project work.

Pragati Verma

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SEED DISPERSAL MECHANISMS IN THE SUB-FAMILY PAPILIONOIDEAE (LEGUMINOSAE)

Dissertation Report

Submitted

For the partial fulfilment of the degree of

MASTER OF SCIENCE

IN

BOTANY



By PUJA BHOI ROLL NO. 19403336 2020-21

Under the supervision of

Dr. S. SHWETA Assistant Professor of Botany

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Signature of Head of Department

Dr. S.K.Shahip JE

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DECLARATION

I hereby declare that the work presented in the projected dissertation entitled "Seed dispersal mechanisms in the Sub-family Papilionoideae (Leguminosae)" submitted as partial fulfilment of M.Sc. Botany IV Semester, was carried out by me at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

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I would like to express my heartfelt thanks and immense gratitude to all those who helped and encouraged me to complete my dissertation entitled **"Seed dispersal mechanisms in the Sub-family Papilionoideae (Leguminosae)"** as partial fulfilment of the degree of Master of Science in Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

It is a great pleasure for me to pay earnest thanks and profound gratitude to my supervisor, Dr. S. Shweta, Assistant Professor, Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G) for giving me an opportunity to work under her supervision at this esteemed University and for regular discussions on the topic.

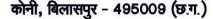
I would like to thank Dr. S. K. Shahi, Head, department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G) for providing all the necessary facilities during the course of this study and for constant encouragement and support. I owe my profound thanks to Dr. A. K. Dixit, Dr. D. K. Patel, Dr. S. K. Prajapati, Dr. S. K. Pandey, Dr. V. N. Tripathi, Dr. D. Yadav, Dr. R. K. Ahirvar, Dr. M. P. Shahi, Dr. Vineet Kumar, Dr. Preeti Verma, Mr. Deepak K. Singh and Miss. Shivali Sharma for their valuable suggestions. I would also like to extend my thanks to all the Ph. D. scholars who encouraged me during the course of this work.

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I am indebted to my parents, sister and friends for their moral support and encouragement during the course of work.

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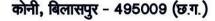


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EFFECT OF LIGHT POLLUTION ON ENVIRONMENT

A Dissertation Report

SUBMITTED ON THE PARTIAL FULFILMENT OF THE DEGREE

OF

MASTER OF SCIENCE IN BOTANY



GURU GHASIDAS VISHWAVIDALAYA

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BY PUSHPANJLI KASHYAP M. Sc (IV SEMESTER)

(Enrollment No: GGV/19/3313, Roll No: 19403337) UNDER THE SUPERVISION OF Dr. Santosh Kumar Prajapati Assistant Professor Department of BOTANY GURU GHASIDAS VISHWAVIDALAYA, KONI, BILASPUR-495009

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DECLARATION

I hereby declare that the work presented in this project dissertation entitled "EFFECT OF LIGHT POLLUTION ON ENVIRONMENT" Submitted for partial fulfillment of M. Sc. Botany was carried out at Department of Botany, Guru GhasidasVishwavidyalaya, Bilaspur (C.G.)

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ACKNOWLEDGEMENT

First and foremost, I express my deepest gratitude to my supervisor Dr. Santosh Kumar Prajapati, Assistant Professor, Department of Botany, GGV, Bilaspur, C.G., India; whose inspiration, supervision and support and encouragement to complete my dissertation work entitled "EFFECT OF LIGHT POLLUTION ON ENVIRONMENT" from preliminary to concluding level on this project. I also thank for his kindness, timely cooperation and guidance for this project.

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I am also thankful to all my classmates for sharing their literature and valuable assistance.

Finally, yet importantly, I take this opportunity to express my gratitude and love towards my parents and beloved family members, for their understanding, support and encouragement to give in this dissertation.

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- 6. Effects on Air Pollution
- E). Solution of Light Pollution F).Conclusion

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Hoad मनरपति सारव विभाग Department of Boteny पुरु प्रातीवारा विश्वविद्यालय (केन्द्रीय वि.वि.), विद्यालय (प्र.ग.) Guru Ghasidas Vishwakdyshya (A Contral University), Bilascur (C.C.) Signature and Seal of the Head



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A DISSERTATION ON REVIEW ON MEDICINAL PLANT OCIMUM SANCTUM AND EMBLICA OFFICINALIS

Submitted for the Partial Fulfilment of the requirement for the award of the Degree of Master of Science in Botany

То

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C. G.)



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CARTIFICATE

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I take this opportunity to express my sincere thanks to my supervisor **Dr**. **Devendra Kumar Patel** who have been a constant source of inspiration and strength to me through my study. It is a great pleasure to acknowledge my sincere thanks to **Dr.Devendra kumar Patel**, Department of Botany, **GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR**, for their valuable feedback and suggestion.

I am also greatful to head of department **Dr.S.K Sahi** for his dedication towards the pursure of knowledge and readiness to instill the name of the student has always been encouraging.

Special thanks to the teacher in the department namely, **Dr. S.K.Shahi**, **Dr.A.K.Dixit**,, **Dr.S.K.Pandey**, **S.K.Prajapati**, **Dr.V.N.Tripathi**, **Dr.DeepankerYadav**, **Dr. M.P.Shahi**, **Dr. S. Shweta** for encouragement during the study.

Finally, I thank all those who have helped me directly or indirectly to collect for completing this Dissertation.

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Chapter-1: INTRODUCTION

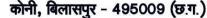
Chapter-2: TULSI PLANTOCIMUM SANCTUM

- . Review of literature
- . Material and methods
- . Plant profile
- . Chemical constituents
- . Traditional uses
- . Mode of preparation
- . Conservation status

Chapter-3: AMLA EMBLICA OFFICINALIS PLANT: -

- . Review of literature
- . Material and methods
- . Plant profile
- . Chemical constituents
- . Traditional uses
- . Mode of preparation
- . Conservation status
- . CONCLUSION: -
- . REFERENCES: -

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Monograph of Celosia agrentea L

A Dissertation

Submitted in partial fulfilment of the requirement for the award of degree

Master of science

In BOTANY To GURU GHASIDAS VISHWAVIDYALAYA (A Central University) By

> RINKU MAJUMDAR M.SC (IV Semester) (Enrolment no: GGV/16/3177) PROJECT SUPERVISIOR DR.ASHWINI KUMAR DIXIT Associate professor



Session: 2020-2021

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I express my heartfelt gratitude to my **Parents and family** for giving me the moral support and a lot of encouragement for carrying out my work.

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Last, but not the least, I thanks **God** who has been with me in all paths of my life.

Rinku Majumdar

M.SC, IV Semester, Botany



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ETHNOBOTANICAL, PHYTOCHEMICAL, AND PHARMACOLOGICAL STUDIES ON KARANJA [Pongamia pinnata]

A DISSERTATION REPORT SUBMITTED FOR THE PARTIAL FULFILMENT OF THE DEGREE OF MASTER OF SCIENCE IN BOTANY



By RIYA RESHMA TIRKEY Enrolment No- GGV/16/3179 Roll No- 19403340

Under the supervision of

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I am also like to thanks the lab technician and librarian Mr Naresh Chandraker & Nirmalkar sir for help in making this projects a successful one.

No words can suffice the efforts taken by my parents for the completion of my project. This work is an outcome of their blessing & constant moral support.

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Last but not least I convey my regards to all those who directly or indirectly contributed to the successful completion of this project work.

Riya Reshma Tirkey



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বিদ্যালাঘৰণ Hoad ਬৰহুমনি হাবের বিদ্যাল Department of Botony বুচ ঘানীবান বিধাবিয়ানন (কৈথ্রীয় বি.বি.), নিমাননুহ (ফ.গ.) Guru Ghasidas Vishwardy,slaya (A Cantral University), Britston (G.C.)



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Ethno medicinal, traditional and economical importance of *Madhuca longifolia*



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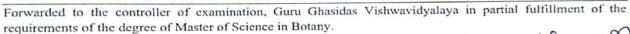


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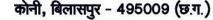
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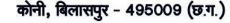
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Saranjeet Kour Bali





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A REVIEW ON DROUGHT STRESS AND PLANT DEFENSE

A Dissertation Report

Submitted to the Guru Ghasidas Vishwavidyalaya

Bilaspur-495009(C.G.)

For the partial fulfillment of the award of the degree of

MASTER OF SCIENCE

IN

BOTANY



BY

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I am also like to thanks the lab technician and librarian Mr. Nirmalkar and Mr. Naresh Chandrakar helping me in the project work.

I am thankful from bottom of my heart to my all classmates for their wonderful support during my project work.

No words can suffice the efforts taken by my parents and family for the completion of my project. This work is outcome of their blessing and their moral support.

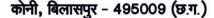
Last but not the least I convey my regards to all those who directly or indirectly contributed to the successful completion of this project work.

SHALINI KIAN KUSHWAHA



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SYSTEMATIC REVIEW OF THE GENUS DERRIS L. (LEGUMINOSAE)

Dissertation Report Submitted For the partial fulfilment of the degree of

> MASTER OF SCIENCE IN BOTANY



Ву

SMRUTISIKTA RATH ROLL NO: 19403343 2020-21

Under the supervision of

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I hereby declare that the work presented in the project dissertation entitled "Systematic review of the genus *Derris* L. (Leguminosae)" submitted as partial fulfilment for M.Sc. Botany IV Semester, was carried out by me at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

I owe the sole responsibility for the entire content of this project including the manuscript, figures, tables, and graphs.

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I wish to express my heartfelt thanks and immense gratitude to all those who helped and encouraged me to complete my dissertation entitled "**Systematic review of the genus** *Derris* **L. (Leguminosae)**", as partial fulfilment of the degree of Master of Science in Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

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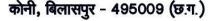
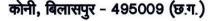




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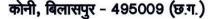
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CHARACTERISTICS OF ROOT NODULE AND BIOLOGICAL NITROGEN FIXATION IN ASTRAGALUS

Dissertation Report Submitted For the partial fulfilment of the degree of

MASTER OF SCIENCE



By

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Under the supervision of

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DECLARATION

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The work presented in this project is original and I owe the sole responsibility for the entire content of this project including the manuscript, figures, tables and graphs.

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ACKNOWLEDGEMENTS

I wish to express my heartfelt thanks and immense gratitude to all those who helped and encouraged me to complete my dissertation entitled **"CHARACTERISTICS OF ROOT NODULE AND BIOLOGICAL NITROGEN FIXATION IN ASTRAGALUS**II, as partial fulfilment of the degree of Master of Science in Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

It is a great pleasure for me to pay earnest thanks and profound gratitude to my supervisor, Dr. S. Shweta, Assistant Professor, Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G) for giving me an opportunity to work under her supervision at this esteemed University and for regular discussions on the topic.

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I am indebted to my parents, brothers and friends for their moral support and encouragement during the course of work.

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DIFFERENT ASPECTS OF POLLINATION MECHANISM IN SOME PLANTS OF SUB – FAMILY PAPILIONOIDEAE

Dissertation Report Submitted For the partial fulfilment of the degree of

> MASTER OF SCIENCE IN BOTANY



By

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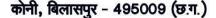
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DECLARATION

Thereby declare that the work presented in the project dissertation entitled 'DIFFERENT ASPECTS OF POILINATION MECHANISM IN SOME PLANTS OF SUB-FAMILY PAPILIONOIDEAE' submitted for partial fulfilment for MSc Botany IV semester, was carried out by me virtually at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

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I wish to express my heartfelt thanks and immense gratitude to all those who helped and encouraged me to complete my dissertation entitled -DIFFERENT ASPECTS OF POILINATION MECHANISM IN SOME PLANTS OF SUB-FAMILY PAPILIONOIDEAEII as partial fulfilment of the degree of Master of Science in Department of Botany, Guru Ghasidas Vishwavidyala, Bilaspur (C. G.).

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বিদ্যালয়ৰ Hoad বৰম্বেৰি হাবে বিদ্যাল Department of Botony বুদ মানীৱল বিদ্যবিধানৰ (কৈথ্ৰীৰ বি.বি.), নিজেবেং (চ.গ.) Gue Gassdas Vishward;staya (A Contral University), Bilaspur (C C) Signature and Seal of the Head

STUDY OF POTENTIAL DRUGS AND PLANT MOLECULES AGAINT COVID-19

A Dissertation Report

SUBMITTED

FOR THE PARTIAL FULFILMENT OF THE DEGREE

OF

MASTER OF SCIENCE

IN



BOTANY

By

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Enrolment No- GGV/19/3398; Roll No.-19403346

Under the supervision of

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Subhangi Maity.

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- 3. Materials and Methods
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- 5. Discussion
- 6. Conclusion
- 7. References







ROLE OF GENETIC ENGINEERING IN BETTER CROP GROWTH: A REVIEW

(A dissertation report)

SUBMITTED ON THE PARTIAL FULFILMENT THE DEGREE

Of MASTER OF SCIENCE

IN BOTANY



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Session 2020 - 2021



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CERTIFICATE

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DECLARATION

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4

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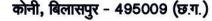
I, too, am grateful. Thank you to all of my classmates for sharing their materials and providing invaluable assistance.

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A

DISSERTATION

ON

"A REVIEW ON RAUWOLFIA SERPENTINA AND DIOSCOREA ALATA"

SUBMITTED FOR THE PARTIAL

FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF

THE DEGREE OF

MASTER OF SCIENCE

IN

BOTANY

ТО

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C. G.)



BY

TRIPTI CHATTERJEE

(ENROLLMENT NO. GGV/16/3209)

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I hereby declare that the work presented in this project dissertation entitled "A review on Rauwolfia serpentina and Dioscorea alata" submitted for the partial fulfillment of M.Sc. Botany was carried outat Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilspur (C.G.). The work wascarried out by me under the supervision of Dr. D.K. Patel, Associate Professor, Departmentof Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.). The work presented in this project dissertation is original and will remain the intellectual property of Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

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<u>A REVIEW O N THE PHA RMACO LOGICA L PROPE</u> <u>RTIES OF SOLA NUM NIGRUM"</u>

Α

Dissertation Report

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BY

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CERTIFICATE

This is to certify that dissertation entitled "A REVIEW ON THE PHARMACOLOGICAL PROPERTIES OF SOLANUM NIGRUM" is based on review done by Tripti Sharma, (Enrollment No- GGV/16/3210, Roll No- 19403350) Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur and this has not previously formed the basis of the award of any degree, diploma, associate ship and any other similar title and it represent entirely an independent work on the part of the candidate.

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submitted for partial fulfilment of M.Sc Botany was carried out at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

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DATE :- 26/07/2021

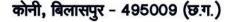
TRIPTI SHARMA

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- 2.4 Distinguishing Features
- 2.5 Cultivation
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- 3.3 Preliminary TLC screening for steroidal alkaloid production
- 3.4 HPLC quantification of Solamargine-
- 4. Result
- 5. Discussion
- 6. Conclusion
- 7. References
- 8. Plagiarism Report

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Chemical Signals in Quorum Sensing (REVIEW)

A Dissertation Report submitted for the partial fulfilment of the requirement of the

Award of Degree

OF

MASTER OF SCIENCEE IN BOTANY

At

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)



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Place: Bilaspur

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I recommend the Project Report to be forwarded to the respective examiners for evaluation. I wish his all the success in his carrier and life.

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Contents

- Introduction
- Quorum sensing of Gram-negative bacteria
- Quorum sensing of Gram-positive bacteria
- Quorum Quenching or Quorum sensing Inhibition
- Quorum sensing Application in different field of Significance
- Conclusion

দিশালাহাল দলবেরি লাকে বিশ্বাস Department of Boteny দুদ্দ মানীরেন বিদেশিয়াক (মি-ম), নিন্নেল্ডের (ম.ন.) Guy Gassias Vishwaridyclaye (A Central University), Blascut (C.C.) Signature and Seal of the Head

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CRISPR-CAS biology, mechanism and application in genome editing



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The work was carried out by me under the supervision of Dr. S.K.Pandey Assistant Professor, Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.). The work presented in this dissertation is original and will remain under the intellectual property of Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.). If any discrepancy, mistake and plagiarism are found in the report, the responsibility for the same will be solely mine.

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Varsha Masand



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Α DISSERTATION ON

"A REVIEW ON TINOSPORA CORDIFOLIA AND TERMINALIA ARJUNA"

SUBMITTED

FOR THE PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF

> **MASTER OF SCIENCE** IN BOTANY TO

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C. G)



BY

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(ENROLLMENT NO. GGV/16/3213)

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2020-2021



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EFFECT OF ACID RAIN ON SOIL QUALITY

A Dissertation Report

SUBMITTED ON THE PARTIAL FULFILMENT OF

THE DEGREE

OF

MASTER OF SCIENCE

IN

BOTANY



GURU GHASIDAS VISHWAVIDALAYA

(A Central University)

BY

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This is certify that dissertation entitled "EFFECT OF ACID RAIN ON SOIL QUALITY" submitted to the Department of BOTANY, GGV is a record of independent dissertation work carried out by Veer Singh Nirala, for the degree of master of Science under my supervision and guidance. This has not been previously submitted for the award of any degree diploma or any other similar title. To the best my knowledge andbelief this dissertation embodies the work done by the candideta.

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DECLARATION

I hereby declare that the work presented in this project dissertation entitled "EFFECT OF ACID RAIN ON SOIL QUALITY" Submitted for partial fulfillment of M. Sc. Botany was carried out at Department of Botany, Guru GhasidasVishwavidyalaya, Bilaspur (C.G.)

The work was carried out by me under supervisor of Dr. S. Prajapati, assistant professor, Department of Botany, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.).

The work in this project dissertation is original and will remain intellectual property of department of Botany, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.). I will be only responsible for any content of the dissertation.

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STUDY OF ETHNOMEDICINAL PLANTS USED BY TRIBAL PEOPLE OF SARANGARH AREA OF GOMARDA WILDLIFE SANCTUARY RAIGARH C.G.

A Dissertation report Submitted for the fulfillment of the degree of MASTER OF SCIENCE IN BOTANY



By

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DECLARATION

I, VIMLESH KUMAR KURREY, hereby declare that the work presented in the project dissertation entitled "STUDY OF ETHNOMEDICINAL PLANTS USED BY TRIBAL PEOPLE OF SARANGARH AREA OF GOMARDA WILDLIFE SANCTUARY RAIGARH C.G" submitted for partial fulfillment of AREA OF GOMARDA WILDLIFE SANCTUARY M.Sc. degree in Botany has been carried out at Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).The work was carried out by me under the supervision of Dr. SANTOSH KUMAR PRAJAPATI Assistant Professor Department of Botany, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.) The work done in the present dissertation in original and has not been submitted anywhere else for the degree or Diploma from any university / Institution.

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A REVIEW ON EFFECT OF HEAVY METAL STRESS ON **GROWTH AND YIELD OF RICE**

Dissertation submitted to the

Guru Ghasidas Vishwavidyalaya

For the partial fulfilment for the award of the degree of

Master of Science in Botany

By

Yogendra Kumar Netam

(Registration No.: GGV/16/3217)

Under the Supervision of

Dr. Deepanker Yadav



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CERTIFICATE

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DECLARATION

I declare that the work presented in this thesis "A Review On Effect Of Heavy Metal Stress On Growth And Yield Of Rice" submitted in partial fulfilment of Master of Science Botany has been carried out at the Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G).

The work presented in this thesis is original and will remain the intellectual property of Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G). The information presented in this dissertation report including data, figures, and pictures are original and duly credited. If any discrepancy, mistake, or plagiarism found in this report, the responsibility for the same will be solely mine.

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