

**ROLE OF SEROTONERGIC TRANSMISSION IN THE
BERBERINE INDUCED EFFECTS ON
BEHAVIORAL DESPAIR IN MICE**

A

Thesis

Submitted for Partial Fulfilment of the Requirement for the

Award of Degree of

Master of Pharmacy

(Pharmacology)



2021-2022

SUPERVISED BY

Dr. Nishant S. Jain
(M.Pharm., Ph.D)
Asst. Prof. (Pharmacology)

SUBMITTED BY

Venu Anand Das Vaishna
Roll No. : 20705012
Enroll. No. : GGV/20/0634

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GURU GHASIDAS VISHWAVIDYALAYA
(A CENTRAL UNIVERSITY)
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DEPARTMENT OF PHARMACY
GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (C.G.)
(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)
Tel: +91-7752-260027 (O); +91-8827989653 (Mob); Fax: +91-7752-260148

FORWARDING CERTIFICATE

This is to certify that *Mr. Venu Anand Das Vaishnav* D/o. *Mr. Sunder Lal Vaishnav* student of *M.Pharm (Final Semester)* in Department of *pharmacy (GGV)* has submitted his thesis entitled "*Role of serotonergic transmission in the berberine induced effects on behavioral despair in mice.*" for the partial fulfilment of the requirement of *Degree of Master of Pharmacy in Pharmacology* with his truly and honesty observed inference during his project work. He has completed his project work under the supervision of *Dr. Nishant S. Jain* (Asst. Prof.). His work is original, satisfactory and is not submitted anywhere else for the award of any degree.

I hereby forward his thesis for the award of *M.Pharmacy (Pharmacology)* during the academic session 2021-22.

Forwarded by


Dr. Bharti Ahirwar
(H.O.D)
Head

Department of Pharmacy
Guru Ghasidas Vishwavidyalaya
(A Central University)
Bilaspur (C.G.)



DEPARTMENT OF PHARMACY

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Tel: +91-7752-260027 (O); +91-8827989653 (Mob); Fax: +91-7752-260148

CERTIFICATE

This is to certify that Mr. Venu Anand Das Vaishnav S/o. Mr. Sunder Lal Vaishnav, student of M.Pharm (Final Semester) in Department of Pharmacy has submitted his thesis entitled "Role of serotonergic transmission in the berberine induced effects on behavioral despair in mice" for the partial fulfilment of the requirement of Master of Pharmacy in Pharmacology with his truly and honesty observed inference during his project work. He has completed his project work under my supervision. His work is original, satisfactory and is not submitted anywhere else for the award of any degree.

I hereby forward his thesis for the award of M.Pharmacy (Pharmacology) during the academic session 2021-22.


7/11/22

Dr. Nishant S. Jain
(Supervisor)

Dr. Nishant S. Jain
Asstt. Professor (Pharmacology)
Institute of Pharmaceutical Sciences
Guru Ghasidas Vishwavidyalaya
Bilaspur (C.G.) INDIA



DEPARTMENT OF PHARMACY

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(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)

Tel: +91-7752-260027 (O); +91-8827989653 (Mob); Fax: +91-7752-260148

DECLARATION

I hereby declare that this dissertation work entitled "Role of serotonergic transmission in the berberine induced effects on behavioral despair in mice" is prepared under the guidance of Dr. Nishant S. Jain, Department of Pharmacy, Bilaspur (C.G.) for the partial fulfilment of the requirement of Master of Pharmacy in Pharmacology.

I further declare that I have not submitted this dissertation previously for the award of any degree or diploma to me.

A handwritten signature in blue ink, appearing to read 'Venu Anand Das Vaishnav', is written over a horizontal line.

Venu Anand Das Vaishnav

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Venu Anand Das Vaishnav

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