J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION

ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, B. Komarapalayam-638 183, Namakkal Dist. Tamilnadu,India.

Approved by : Pharmacy Council of India. New Delhi & Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai.

Website : www.jkkmmrfpharmacy.edu.in / E-Mail : principal@jkkmmrfpharmacy.edu.in

Contact No : +919789456750, +919943066944, +919943069944.

Dr.N. SENTHILKUMAR, M.Pharm., Ph.D.,
Principal

M.Pharm [Pharmacology] Students under taking **Project work**/Field work / Internship for the Academic Year 2022-2023.

S.NO	DESCRIPTION
1	Certificate of Head of Institution
2	List of **M.Pharm [Pharmacology]** Students under taking Project work/Field work / Internship-HOI
3	List of **M.Pharm [Pharmacology]** Students under taking Project work/Field work / Internship.

J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION

ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, B. Komarapalayam-638 183, Namakkal Dist. Tamilnadu,India.

Approved by : Pharmacy Council of India. New Delhi & Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai.

Website : www.jkkmmrfpharmacy.edu.in / E-Mail : principal@jkkmmrfpharmacy.edu.in

Contact No : +919789456750, +919943066944, +919943069944.

Dr.N. SENTHILKUMAR, M.Pharm., Ph.D.,
Principal

CERTIFICATE OF HEAD OF INSTITUTION

J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION

ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, B. Komarapalayam-638 183, Namakkal Dist. Tamilnadu,India.

Approved by : Pharmacy Council of India. New Delhi & Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai.

Website : www.jkkmmrfpharmacy.edu.in / E-Mail : principal@jkkmmrfpharmacy.edu.in

Contact No : +919789456750, +919943066944, +919943069944.

Dr.N. SENTHILKUMAR, M.Pharm., Ph.D.,
Principal

TO WHOMSOEVER IT MAY CONCERN

Number of Students undertaking **Project work**/Field work / Internship for the Academic Year **2022-2023** is **10.**

The Students Participated in More than one activity has been counted as **ONE** only.

JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY
Komarapalayam
638 183

Dr. N.SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY
Ethirmedu, B. Komarapalayam-638 183, Namakkal Dist. Tamilnadu,India.
Approved by : Pharmacy Council of India. New Delhi & Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai.
Website : www.jkkmmrfpharmacy.edu.in / E-Mail : principal@jkkmmrfpharmacy.edu.in
Contact No : +919789456750, +919943066944, +919943069944.

Dr.N. SENTHILKUMAR, M.Pharm., Ph.D.,
Principal

TO WHOMSOEVER IT MAY CONCERN

This to certify that the List of **M.Pharm [Pharmacology]** Students under taking **Project work**/Field work / Internship for the Academic Year 2022-2023 are given below.

S. No	Reg.No	Name of the Student	Year	Project Work-Topic	Field work	Internship
1.	261620507501	AJITH KUMAR B	II	EVALUATION OF ANTI-ANXIETY AND ANTI-CONVULSANT POTENTIAL OF NATURAL PRODUCT	-	-
2.	261620507502	AKASHRAJ K	II	EVALUATION OF ANTI-DEPRESENT EFFECT OF EUPHORBIA CYANTIHOPHORA LEAVES IN RESERPINE INDUCED CNS DEPRESSION IN RATS	-	-
3.	261620507503	DIVYA SHALINI B	II	ANTI-ALZHEIMER ACTIVITY OF METHANOLI	-	-

JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY
Komarapalayam 638 183

Dr. N.SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY
Ethirmedu, B. Komarapalayam-638 183, Namakkal Dist. Tamilnadu,India.
Approved by : Pharmacy Council of India. New Delhi & Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai.
Website : www.jkkmmrfpharmacy.edu.in / E-Mail : principal@jkkmmrfpharmacy.edu.in
Contact No : +919789456750, +919943066944, +919943069944.

Dr.N. SENTHILKUMAR, M.Pharm., Ph.D.,
Principal

				C EXTRACT OF ENSETE SUPERBUM CHEESM SEEDS		
4.	261620507504	GANESH S	II	ANTI-DIABETIC EVALUATION OF ETHANOLIC EXTRACT OF PHYLLANTHUISRETTICULATUS IN STZ INDUCED DIABETIC IN RATS.	-	-
5.	261620507505	HEMAMALINI B	II	EVALUATION OF ANTI-CONVULSION EFFECT OF JATROPHA TANJORENSIS LEAVES IN ISONIAZID INDUCED CONVULSION DRUGS.	-	-
6.	261620507506	KAMAL G	II	HEPATOPROTECTIVE EVALUATIO	-	-

JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY
Komarapalayam 638 183

Dr. N.SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY
Ethirmedu, B. Komarapalayam-638 183, Namakkal Dist. Tamilnadu,India.
Approved by : Pharmacy Council of India. New Delhi & Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai.
Website : www.jkkmmrfpharmacy.edu.in / E-Mail : principal@jkkmmrfpharmacy.edu.in
Contact No : +919789456750, +919943066944, +919943069944.

Dr.N. SENTHILKUMAR, M.Pharm., Ph.D.,
Principal

				N OF GALANGA (ALPINIA OFFICINARUM) RHIZOME EXTRACT AGAINST PARACETAMOL INDUCED HEPATOTOXICITY IN RATS.		
7.	261620507509	KRISHNAN R	II	EVALUATION OF ANTI-PSYCHOTIC EFFECT OF MENTHA ARVENSIS LEAVES IN APOMORPHINRE INDUCED PSYCHOSIS IN RATS.	-	-
8.	261620507510	LATHA S	II	ANXIOLYTIC AND ANTI-COVULSANT ACTIVITY OF METHANOLIC EXTRACT OF ENSETE SUPERBUM CHEESM	-	-

JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAL JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY
Komarapalayam 638 183

Dr. N.SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY
Ethirmedu, B. Komarapalayam-638 183, Namakkal Dist. Tamilnadu,India.
Approved by : Pharmacy Council of India. New Delhi & Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai.
Website : www.jkkmmrfpharmacy.edu.in / E-Mail : principal@jkkmmrfpharmacy.edu.in
Contact No : +919789456750, +919943066944, +919943069944.

Dr.N. SENTHILKUMAR, M.Pharm., Ph.D.,
Principal

				SEEDS.		
9.	261620507513	PAVITHRA D	II	ANTI-PARKINSONISM EFFECT OF SYZYGIUM LUMINI FRUITE ATTENUATES MPTP INDUCED PARKINSONISM IN MICE.	-	-
10.	261620507514	SANKAR N	II	EFFECT OF ETHANOLIC EXTRACT OF CATHARANTHUS ROSEUS FLOWER ON SCOPOLAMINE INDUCED AMNESIA.	-	-

JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION ★ ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY ★ Komarapalayam 638 183

Dr. N.SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

EVALUATION OF ANTI-ANXIETY AND ANTICONVULSANT POTENTIAL OF NATURAL PRODUCT

Dissertation submitted to

THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY,

CHENNAI-600 032

In partial fulfillment of the requirements for the award of the degree of

MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

Mr. AJITHKUMAR.B

Reg. No.261620507501

Under the guidance of

Mr.G.THAMOTHARAN, M.Pharm., (Ph.D).,

Associate Professor

Department of Pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION,

ANNAI J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,

KOMARAPALAYAM

APRIL-2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRF'S ANNAI JKK SAMPOORANI
AMMAL COLLEGE OF PHARMACY,
KOMARAPALYAM,
NAMAKKAL DT-638183
TAMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled " **EVALUATION OF ANTI-ANXIETY AND ANTICONVULSANT POTENTIAL OF NATURAL PRODUCT**" is the bonafide work carried out by, **Mr. AJITHKUMAR.B (Reg.No:261620507501)**, under the guidance and supervision of **Mr. G. Thamotharan., M.Pharm., (Ph.D.,)** Associate Professor, Department of Pharmacology.

This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (April-2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 14.06.2023

EVALUATED ON: 01/09/23

EVALUATOR (1): 01/9/23

Dr. V. CHITRA

EVALUATOR (2): 01/09/23

Dr. N. SURESH
Prof-Biol
TKKMMRFCP

DR. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.

DECLARATION

I hereby declare that this dissertation entitled "**EVALUATION OF ANTI-ANXIETY AND ANTICONVULSANT POTENTIAL OF NATURAL PRODUCT**" is based on the original work carried out by me under the guidance and supervision of **Mr.G.Thamotharan, M.Pharm.,(Ph.D).,** for submission to The Tamil Nadu Dr. M.G.R Medical University, Chennai in the partial fulfillment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part or full for the award of any degree or diploma to this or any other university.

B. JITH

Mr. **AJITHKUMAR.B**

(Reg.No:261620507501)

Date: 14.06.2023

Place: Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, T.N. India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ABSTRACT

Objective: To evaluate the anti - anxiety and anticonvulsant effect of Shilajit.

Methods: The anticonvulsant effect of the Shilajit (100 and 200 mg/kg) were evaluated in rat using the Maximal electroshock (MES) and Pentylenetetrazole (PTZ) induced seizure models. Standard drug taken for MES model was Phenytoin 20mg/kg. In PTZ model standard drug taken was diazepam 5mg/kg. Anxiolytic activity was evaluated in rat using the elevated plus maze (EPM) and the open field test. Diazepam 2mg/kg was taken as standard anxiolytic drug in both the models.

Results: in MES model Shilajit significantly decreased duration of tonic hind limb flexion (sec.), duration of tonic hind limb extension (sec.) clonus (sec.) and strupor (sec.) phase. In PTZ model it significantly delayed onset of clonus and tonic convulsion in a dose dependent manner. In EPM number of entry to open arm and average time spent in open arm significantly increased. In Open field test number of squares crossed and number of rearing are significantly increased.

Conclusion: It is concluded that Shilajit possess significant anti-anxiety and anticonvulsant activity.

Keywords: Anxiolytic, Shilajit, Anti-convulsant, Maximal electroshock, Pentylenetetrazole, Elevated plus maze, Open field test.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

"EVALUATION OF ANTI-DEPRESSANT EFFECT OF *EUPHORBIA CYANTHOPHORA* LEAVES IN RESERPINE INDUCED CNS DEPRESSION IN RATS"

A Dissertation submitted to

THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY

CHENNAI – 600032

In partial fulfilment for the award of the degree of

MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

Mr. K. AKASHRAJ.

Reg. No: 261620507502.

Under the Guidance of

Mr. G. MUTHUKUMARAN, M. Pharm., Ph.D.,

Associate Professor.

DEPARTMENT OF PHARMACOLOGY

JKKMMRF'S – ANNAI JKK SAMPOORANI AMMAL

COLLEGE OF PHARMACY, KOMARAPALAYAM – 638 183.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRFs ANNAI JKK SAMPOORANI
AMMAL COLLEGE OF PHARMACY,
B.KOMARAPALAYAM,
NAMAKKAL DT-638183
TAMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled **"EVALUATION OF ANTI-DEPRESSANT EFFECT OF *EUPHORBIA CYANTHOPHORA* LEAVES IN RESERPINE INDUCED CNS DEPRESSION IN RATS"** is the bonafide work carried out by **Mr. K.AKASHRAJ, B.Pharm.**, [Reg. No:**261620507502**] under the guidance and supervision of **Mr. G. MUTHUKUMARAN. M.Pharm., *Ph.D.* Associate Professor.** Department of Pharmacology. This is forwarded to the Tamil Nadu Dr. M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of MASTER OF PHARMACY in Pharmacology (2022-2023).

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

DATE: 14.06.2023

PLACE: Komarapalayam.

EVALUATED ON: 01/09/23

EVALUATOR (1): Chitra.V 01/9/23

Dr. V. CHITRA
SRMCP

EVALUATOR (2): 01/09/23

Dr N SURESH
Professor
JKKMMRFCP

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

DECLARATION

I do hereby declare that the dissertation work entitled **EVALUATION OF ANTI-DEPRESSANT EFFECT OF *EUPHORBIA CYANTHOPHORA* LEAVES IN RESERPINE INDUCED CNS DEPRESSION IN RATS** submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment of requirement for the Degree of **Master of Pharmacy in Pharmacology**, is a bonafide and genuine research work carried out by me, under the guidance of **Mr. G. MUTHUKUMARAN, M. Pharm.,Ph.D** Associate Professor, department of Pharmacology, JKKMMRF'S–Annai JKK Sampoorani Ammal College of Pharmacy, Komarapalayam.

I further declare that this work has not been submitted earlier in part or full for the award of any degree or diploma to this or any other University. The information furnished in this thesis is genuine to the best of our knowledge and belief.

K. AKASHRAJ

(Reg.No:261620507502)

Date: 14.06.2023

Place: Komarapalayam.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ABSTRACT

The Aim is to perform the anti-depressant effect of Ethanolic extract of *euphorbia cyanthopora* leaves. Initially the plant leaves are collected and subjected for drying Extraction is done with ethanol for a period of time and was used to perform preliminary phytochemical tests are to be done with the extraction and then the extract was used for the testing the in-vitro anti-oxidant studies and followed by the behavourial studies are done for the estimation of the drug. Then the in-vivo pharmacological studies are done for the estimation then the invitro studies done by sacrifising the animal then the bio chemical studies are to be done and finally the statistical analysis done for the identification of the activity done by the drug.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ANTI-ALZHEIMER ACTIVITY OF METHANOLIC EXTRACT OF *ENSETE SUPERBUM* CHEESM SEEDS.

Dissertation submitted to

THE TAMILNADU Dr. M.G.R. MEDICAL

UNIVERSITY,

CHENNAI - 600 032

In partial fulfillment of the requirements for the award of theDegree of

MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

DIVYA SHALINI. B

Reg. No. 261620507503

Under the guidance of

Mr. G.THAMOTHARAN, M.Pharm., (Ph.D).,

Associate Professor

Department of Pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION,

ANNAI J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,

KOMARAPALAYAM

APRIL- 2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRF'S ANNAI JKK SAMPOORANI
AMMAL COLLEGE OF PHARMACY,
B. KOMARAPALAYAM,
NAMAKKAL DT-638183
TAMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled **"ANTI-ALZHEIMER ACTIVITY OF METHANOLIC EXTRACT OF *ENSETE SUPERBUM* CHEESM SEEDS"** is the bonafide work carried out by, **Ms. DIVYA SHALINI. B (Reg. No: 261620507503),** under the guidance and supervision of **Mr. G. THAMOTHARAN., M.Pharm., (Ph.D.,)** Associate Professor, Department of Pharmacology.

This is forwarded to the Tamil Nadu Dr. M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (April 2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 14.06.2023

EVALUATED ON: 01/09/23.

EVALUATOR (1): 01/9/23

DR. V. CHITRA
SRMCP

EVALUATOR (2): 01/09/23.

Dr. Y. SURESH
Professor.
JKKMMRFCP.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, Tamilnadu, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.

DECLARATION

I hereby declare that this dissertation entitled **"ANTI-ALZHEIMER ACTIVITY OF METHANOLIC EXTRACT OF *ENSETE SUPERBUM* CHEESM SEEDS"** is based on the original work carried out by me under the guidance and supervision of **Mr. G. THAMOTHARAN, M.Pharm.,(Ph.D).**, for submission to The Tamilnadu Dr. M.G.R Medical University, Chennai in the partial fulfillment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part or full for the award of any degree or diploma to this or any other university.

B. Divya Shalini

Ms.Divya Shalini. B

(Reg. No: 261620507503)

Date: 14.06.2023

Place: Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.

ABSTRACT

The aim of the study is to evaluate the Anti-alzheimer activity of *Unsete superbum* seeds. The objective of the study is to carry out *in vivo* tests to evaluate the cognitive enhancing effects of MEES against scopolamine-induced amnesia in rats. The effect on MEES of acetylcholine esterase activity was screened by *in vivo* method. The effect of MEES against scopolamine induced cognitive dysfunction in rats was studied. All the animals were treated with their respective extracts / drug once in a day orally for 14 days and the control animals will receive vehicle (CMC 0.5%). On 14th day, scopolamine (30mg/kg) was injected intraperitonially to all the animals after one hour of extract/drug treatment. Then the animals were subjected to behavioral analysis and then sacrificed for the biochemical analysis. Results were expressed in mean± SEM. Biochemical and behavioral paradigms were analysed by one way ANOVA followed by Dunnett test. P value <0.05 was fixed as significant criterion. MEES produced a dose dependent decrease in AChE activity. The effect of MEES was comparable with that of the reference drug Donepezil. The results of this study clearly indicate that oral administration of MEES to rats increased escape latency time in Passive avoidance test and increase the time spent in target quadrant in Morris water maze. Administration of MEES significantly reversed the scopolamine induced memory impairment in rats. From the above results, it could be posulated that MEES exerts a protective effect against memory impairment induced by scopolamine. These results suggested that MEES might offer a useful therapeutic choice in either the prevention or the treatment of Alzheimer's disease.

Key words: Passive avoidance test, Morris water maze test, Acetyl choline, Escape latency, Memory enhancing.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU. KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ANTIDIABETIC EVALUATION OF ETHANOLIC EXTRACT OF *PHYLLANTHUSRETTICULATUS* IN STZ INDUCED DIABETIC IN RATS

A Dissertation Submitted to

The Tamil Nadu Dr.M.G.R.Medical University,

Chennai – 600032.

In partial fulfilment of the requirements for the award of the degree of

MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

GANESH.S

Reg. No.261620507504

Under the guidance of

Dr.SURESH.V ., M.Pharm.,Ph.D.,

Professor and Head

Department of Pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION,

ANNAI J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,

KOMARAPALAYAM

APRIL-2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRF'SANNAIJKKSAMPOORANI AMMAL COLLEGE OF PHARMACY,B.KOMARAPALYAM, NAMAKKAL DT-638183TAMILNADU

CERTIFICATE

This is to certify that he dissertation work entitled" **ANTIDIABETIC EVALUVATION OF EHANOLIC EXTRACT OF *PHYLLANTHUS RETTICULATUS* IN STZ INDUCED DIABETIC IN RATS"** is the bonafide work carried out by, **Mr.GANESH.S (Reg.No: 261620507504),** under the guidance and supervision of **Dr.V.SURESH.,M.Pharm.,Ph.D.,Head of the department, Department of Pharmacology**. This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai,f or he partial fulfillment of requirements of the Degree of **MASTER OF PHARMACY** in **Pharmacology(2022-2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 16.06.23

EVALUATED ON: 01/09/23

EVALUATOR(1): 01/9/23

Dr. V. CHITRA
SRMCP

EVALUATOR(2): 01/09/23

Dr V SURESH
Professor
JKKMMRFCP

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, Annai J.K.K. Sampoorani Ammal College of Pharmacy, Komarapalayam 638 183. Tamil Nadu, India

DECLARATION

I here by declare that this dissertation entitled "**ANTIDIBETIC EVALUATION OF ETHANOLIC EXTRACT OF *PHYLLANTHUS RETTICULATUS* IN STZ INDUCED DIABETIC IN RATS**" is based on the original work carried out by me under the guidance and supervision of **Dr.V.SURESH.,M.Pharm.,Ph.D., Head of the Department of Pharmacology** ,for submission to The Tamil Nadu Dr. M.G.R Medical University, Chennai in the partial fulfilment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part or full or the award of any degree or diploma to this or any other university.

Mr.GANESH.S

(Reg.No: 261620507504)

Date: 16.06.2023

Place:Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.

ABSTRACT

The possible protective effect of ethanolic extract of *P.retticultus* leaves (EEPR) on diabetes and diabetes-induced oxidative stress was evaluated in Streptozotocin (STZ)-induced diabetic male adult wistar albino rats.. Experimental animals were divided into five groups viz., group-1 control normal saline,group-2 diabetic control,group-3 test dose for 200mg,group-4 test EEPR for 200mg/kg body weight,p.o, group-5 standard dose of glibenclamide0.5mg/kg,b.w.p.o. Diabetes mellitus (DM) was induced in groups II and III mice by a single intraperitoneal injection of Streptozotocin (50 mg/kg body wt). Group I (control mice) received an equal volume of normal saline. Group III mice were further treated with EEPR (200 mg/kg body wt, p.o.) for a period of 21 days. Body weight and fasting blood glucose (FBG) levels were measured at periodic intervals during the test period. At the end of treatment period, blood was collected by cardiac puncture under mild ether theo pental sodium and serum was isolated to analyze its lipid profile i.e. serum total cholesterol (TC), triglyceride (TG), high density lipoprotein (HDL), low density lipoprotein (LDL) and very low density lipoprotein (VLDL). The homogenates of hepatic, pancreatic and renal tissues were also analyzed for both enzymatic and non-enzymatic antioxidants, such as superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GSH-Px), reduced glutathione (GSH), thiobarbituric acid reactive substances (TBARS) and total protein (TP).

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

EVALUATION OF ANTI-CONVULSANT EFFECT *OF JATROPHA TANJORENSIS LEAVES* IN ISONIAZID INDUCED CONVULSION IN RATS

Dissertation submitted to

THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY,

CHENNAI-600 032

In partial fulfillment of the requirements for the award of the degree of

MASTER OF PHARMACY
IN
PHARMACOLOGY

Submitted by

HEMAMALINI.B

Reg. No. 261620507505

Under the guidance of

Mr. G.MUTHUKUMARAN., M.PHARM.,Ph.D

Associate Professor
Department of Pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION,
ANNAI J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,
KOMARAPALAYAM
APRIL - 2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRF'S ANNAI JKK SAMPOORANIAMMAL
COLLEGE OF PHARMACY,
B.KOMARAPALYAM,
NAMAKKAL DT-638183,T AMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled " **EVALUATION OF ANTI-CONVULSANT EFFECT *OF JATROPHA TANJORENSIS LEAVES* IN ISONIAZID INDUCED CONVULSION IN RATS "** is the bonafide work carried out by, **Ms. HEMAMALINI.B (Reg.No: 261620507505),** under the guidance and supervision of **Mr. G.MUTHUKUMARAN., M.PHARM., Ph.D ,** Associate Professor, Department of Pharmacology. This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (April 2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 14.06.2023

EVALUATED ON: 01/09/23

EVALUATOR (1): 01/9/23

DR. V. CHITRA
SRMC&P

EVALUATOR (2):

Dr. V. SURESH
JKKMMRFCP.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, T.N. India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.

DECLARATION

I hereby declare that this dissertation entitled **"EVALUATION OF ANTI-CONVULSANT EFFECT *OF JATROPHA TANJORENSIS LEAVES* IN ISONIAZID INDUCED CONVULSION IN RATS "** is based on the original work carried out by me under the guidance and supervision of **Mr.G.MUTHUKUMARAN, M.Pharm., Ph.D** for submission to The Tamilnadu Dr. M.G.R Medical University, Chennai in the partial fulfillment for the degree of MASTER OF PHARMACY in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part or full for the award of any degree or diploma to this or any other university.

Ms. **HEMAMALINI.B**

(Reg.No: 261620507505)

Date: 14.06.2023

Place: Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.

ABSTRACT

The aim of the study is to evaluate the Anti-convulsant activity of *Jatropha tanjorensis* leaves. The objective of the study is to carry out invitro and invivo tests to evaluate the effect of Ethanolic extract of *Jatropha tanjorensis* against Isoniazid induced Convulsion in rats. Initially the plant leaves are collected and subjected for drying under shade. Extraction is done with Ethanol for a period of time and was used to perform preliminary phytochemical tests are to be done with the extraction and then the extract was used for the testing the invitro antioxidant studies. All the animals were treated with their respective extracts/drug once in a day for 14 days and the control animals will receive normal drinking water. Then followed by the behavioral studies are done for the estimation of drug. Then the in vivo pharmacological studies are done by assessing GABA levels and Glutamate levels. Results were expressed by one way ANOVA followed by Dunnett test. P value <0.05 was fixed as significant criterion. Ethanolic extract produced a dose dependent increase in GABA activity. The effect of Ethanolic extract was comparable with that of the reference drug Diazepam. The results of this study clearly indicates that oral administration of EEJT produces Anti-convulsant effect.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

HEPATOPROTECTIVE EVALUVATION OF *GALANGA GALPIN* (COLEUS ARIOMATICUS) RHIZOME EXTRACT AGAINST PARACETAMOL INDUCED HEPATOTOXICITY IN RATS

A Dissertation Submitted to

The Tamil Nadu Dr.M.G.R. Medical University,

Chennai – 600032.

In partial fulfilment of the requirements for the award of the degree of

MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

KAMAL.G

Reg. No.261620507506

Under the guidance of

Dr. SURESH.V .. M.Pharm., Ph.D..

Professor and Head

Department of Pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION,

ANNAI J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,

KOMARAPALAYAM

APRIL-2017

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRF's ANNAI JKK SAMPOORANI
AMMAL COLLEGE OF PHARMACY,
B.KOMARAPALYAM,

NAMAKKAL DT-638183
TAMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled **"HEPATOPROTECTIVE EVALUVATION OF *GALANGA (ALPINIA OFFICINARUM)* RHIZOME EXTRACT AGAINST PARACETAMOL INDUCED HEPATOTOXICITY IN RATS"** is the bonafide work carried out by, **Mr. KAMAL.G (Reg.No: 261620507506),** under the guidance and supervision of **Dr. V. SURESH., M.Pharm., Ph.D., Professor and Head,** Department of Pharmacology.

This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (2020-2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 15.06.23

EVALUATED ON: 01/09/23

EVALUATOR (1): 01/9/23
Dr. V. CHITRA
SRMCP

EVALUATOR (2): 01/09/23
Dr. V. SURESH
Professor
JKKMMRFCP

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

DECLARATION

I hereby declare that this dissertation entitled **"HEPATOPROTECTIVE EVALUVATION OF *GALANGA (ALPINIA OFFICINARUM)* RHIZOME EXTRACT AGAINST PARACETAMOL INDUCED HEPATOTOXICITY IN RATS"** is based on the original work carried out by me under the guidance and supervision of **Dr. V. SURESH., M.Pharm., Ph.D., Professor and Head,** for submission to The Tamil Nadu Dr. M.G.R Medical University, Chennai in the partial fulfilment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part orfull for the award of any degree or diploma to this or any other university.

Mr. KAMAL.G
(Reg.No: 261620507506)

Date: 15.06.2023
Place: Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ABSTRACT

Herbal drugs classification system represent as an important system of medicine for the treatment of a wide array of diseases. The medicinal plants from India provide a diverse source for health care moieties in order to prevent different pathological states. *Alpinia officinarum*, known as lesser galangal. *Alpinia officinarum*, a plant from ginger family.The paracetamol 640mg/kg BW P.O induced injuries of liver in animal are mostly used to screen out the hepatoprotective effect of extract. In the present study total phenolic and flavonoid contents, *in vitro* antioxidant, and *in vivo* hepatoprotective (on paracetamol induced intoxication in experimental male Sprague Rats) Potentials of the *Alpinia officinarum* rhizome ethanolic extract were determined. For the identification of possible phytochemical test. Glycoside, Phenol, Tannins, Steroids. Flavonoids were identified *Alpinia officinarum* extract at dose of 200mg/kg BW P.O and 400 mg/kg BW P.O were given for 14days to paracetamol intoxicated rats and observed results were compared with standard silymarin 50 mg/kg. The level of lever enzymes like aspartate aminotransferase, alanine aminotransferase, alkaline phosphate, total protein and total bilirubin. Furthermore histopathological analysis of the liver tissues of control and treated groups also confirmed hepatoprotective effect of the *Alpinia officinarum* which was most probably due to its high antioxidant phenolic and flavonoids phytoconstituents.

KEY WORDS: *Alpinia officinarum*, , Hepatoprotective, Pharacetamol, Silymarin.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K. Sampooarni Ammal College of Pharmacy
Komarapalayam
638 183.

"EVALUATION OF ANTI-PSYCHOTIC EFFECT OF *MENTHA ARVENSIS* LEAVES IN APOMORPHINE INDUCED PSYCHOSIS IN RATS"

Dissertation submitted to

THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY, CHENNAI-600 032

In partial fulfillment of the requirements for the award of the degree of

MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

R.KRISHNAN

Reg. No. 261620507509

Under the guidance of

Mr. G. MUTHUKUMARAN, M. Pharm., Ph.D.,

Associate Professor

Department of Pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION,

ANNAI J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,

KOMARAPALAYAM

APRIL-2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, T.N. India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

JKKMMRF'S ANNAI JKK SAMPOORANI AMMAL
COLLEGE OF PHARMACY,
B.KOMARAPALYAM,
NAMAKKAL DT-638183,T AMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled "**EVALUATION OF ANTI-PSYCHOTIC EFFECT OF *MENTHA ARVENSIS* L LEAVES IN APOMORPHINE INDUCED PSYCHOSIS IN RATS**" the bonafide work carried out by, **Mr. R. KRISHNAN (Reg: 261620507509),** under the guidance and supervision of **Mr.G.MUTHUKUMARAN., M.PHARM., Ph.D** , Associate Professor, Department of Pharmacology. This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (April 2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 14.06.2023

EVALUATED ON: 01/09/23

EVALUATOR (1): 01/9/23

Dr. V. CHITRA
SRMCP

EVALUATOR (2): 01/09/23

Dr. V. SURESH
Professor
JKKM MRFCP.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
IKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

IKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

DECLARATION

I hereby declare that this dissertation entitled "**EVALUATION OF ANTI-PSYCHOTIC EFFECT OF MENTHA ARVENSIS L LEAVES IN APOMORPHINE INDUCED PSYCHOSIS IN RATS**" is based on the original work carried out by me under the guidance and supervision of **Mr.G.MUTHUKUMARAN, M.Pharm., Ph.D.**, for submission to The Tamilnadu Dr. M.G.R Medical University, Chennai in the partial fulfillment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part orfull for the award of any degree or diploma to this or any other university.

Mr. R. KRISHNAN

(Reg: 261620507509),

Date: 14-06-23

Place: Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ABSTRACT

This study aimed to evaluate the antipsychotic effect of ethanolic extract of *Mentha arvensis* L. leaves through apomorphine induced psychosis in rats. The ethanol extract was prepared and subjected to phytochemical analysis, nitric oxide radicle scavenging assay, and superoxide anion scavenging assay. The anti-psychotic effects of the standard drug and the ethanol extract were studied by the pole climbing and catatonic tests. Phytochemicals such as alkaloids, flavonoids, triterpenoids, tannins, glycosides, and phenol were present. At 100 g/ml the ethanol extract showed the highest NO radical scavenging activity of 60.42 ± 0.18 % (IC_{50}-7.15 µg/ml). Similarly, in superoxide anion scavenging activity it showed 58.72 ± 0.16 % (IC_{50}-9.15 µg/ml). The pole climbing test revealed that the group receiving the combination of apomorphine and 200 mg/kg of extract displayed a decrease in avoidance/escape latency from 33.96 ± 1.43 seconds at 0 minutes to 26.97 ± 1.34 seconds at 60 minutes compared to the standard. The extract fed group (1.8) in catatonic test had a lower catatonia score compared to control group (2.5), indicating that the extract may be more effective in reducing catatonic symptoms. After the pharmacological evaluations the rats were sacrificed and subjected to biochemical estimation of dopamine and MAO levels in brain homogenate. The data from the dopamine estimation indicate that apomorphine administration reduces dopamine levels. However, the addition of chlorpromazine hydrochloride or the extract shows a tendency to restore dopamine levels towards normal. Likewise, the levels of MAO-A and MAO-B were found to be decreased significantly in the extract treated group compared to the control group. These data suggest that the ethanol extract of leaves of *Mentha arvensis* has anti-psychotic potential.

Keywords: psychosis; dopamine, monoamino-oxidase; Mentha arvensis; apomorphine

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ANXIOLYTIC AND ANTICONVULSANT ACTIVITY OF METHANOLIC EXTRACT OF *ENSETE SUPERBUM* CHEESM SEEDS

Dissertation submitted to

THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY,CHENNAI-600 032

In partial fulfillment of the requirements for the award of thedegree of

MASTER

OF

PHARMACOLOGY

Submitted by

LATHA.S

Reg. No.261620507510

Under the guidance of

Mr.G.THAMOTHARAN, M.Pharm., (Ph.D).,

Associate Professor

Department of Pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION, ANNAI

J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,

KOMARAPALAYAM
APRIL - 2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRF'S ANNAI JKK SAMPOORANI
AMMAL COLLEGE OF PHARMACY,
B.KOMARAPALYAM,
NAMAKKAL DT-638183
TAMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled " **ANXIOLYTIC AND ANTICONVULSANT ACTIVITY OF METHANOLIC EXTRACT OF *ENSETE SUPERBUM* CHEESM SEEDS.**" is the bonafide work carried out by, **Ms. Latha.S (Reg.No:261620507510),**under the guidance and supervision of **Mr. G. Thamotharan., M.Pharm., (Ph.D.,)** Associate Professor, Department of Pharmacology. This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (2022-2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 14.06.2023

EVALUATED ON: 01/09/23

EVALUATOR (1): 01/9/23

DR. V. CHITRA
SRMCP

EVALUATOR (2): 01/09/23

DR. V. SURESH
Professor
JKKMMRF&CP.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

DECLARATION

I hereby declare that this dissertation entitled "**ANXIOLYTIC AND ANTICONVULSANT ACTIVITY OF METHANOLIC EXTRACT OF *ENSETE SUPERBUM* CHEESM SEEDS**" is based on the original work carried out by me under the guidance and supervision of **Mr.G.Thamotharan, M.Pharm.,(Ph.D).**, for submission to The Tamilnadu Dr. M.G.R Medical University, Chennai in the partial fulfillment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part orfull for the award of any degree or diploma to this or any other university.

Ms. Latha.S

(Reg.No:261620507510)

Date: 14.06.2023

Place: Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ABSTRACT

The objective of the present study was to evaluate the anxiolytic and anticonvulsant activity of the methanolic extract of *Ensete superbum* (MEES). After preliminary phytochemical evaluation, acute oral toxicity test, anxiolytic activity of methanolic extract of *Ensete superbum* at doses of 200 and 400 mg/kg was assessed using elevated-plus-maze (EPM) and open field test (OFT) models and anticonvulsant effect was assessed using maximal electroshock (MES) and pentylenetetrazol (PTZ) induced seizure models. Oral administration of MEES for seven days significantly increased number of entries and time spent in open arms in EPM model and number of squares crossed and rearing in OFT.

Further, MEES (200 and 400 mg/kg) showed significant reduction in the duration of tonic hind limb flexion; tonic hind limb extension; clonus; stupor in electroshock convulsions; protected the rat against the PTZ induced convulsions.

Keywords: *Ensete superbum*, Anxiolytic, Anticonvulsant, elevated-plus-maze, open field test.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

ANTI-PARKINSONIASM EFFECT OF *SYZYGIUM CUMINI FRUIT* ATTENUATES MPTP INDUCED PARKINSONISM IN MICE

A Dissertation submitted to

The Tamil Nadu Dr.M.G.R. Medical university ,

Chennai – 600032.

In partial fulfilment of the requirements for the award of the degree of

MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

D.PAVITHRA

Reg. No.261620507513

Under the guidance of

Dr. SURESH.V ., M.PHARM,Ph.D

Department of pharmacology

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION,

ANNAI J.K.K.SAMPOORANI AMMAL COLLEGE OF PHARMACY,

KOMARAPALAYAM

APRIL -2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKKMMRF'S ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY, B.KOMARAPALAYAM,

NAMAKKAL DT-638183TAMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled " **ANTIPARKINSONIASM EFFECT OF *SYZYGIUM CUMINI FRUIT* ATTENUATES MPTP INDUCED PARKINSONISM IN MICE** " is the bonafide work carried out by, **Ms. D.PAVITHRA(Reg.No: 261620507513)**, under the guidance and supervision of **Dr. V.SURESH., M.Pharm., Ph.D.**, Professor and Head, Department of Pharmacology.

This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (2022-2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place: Komarapalayam

Date: 14.06.2023

EVALUATED ON: 01/09/23

EVALUATOR (1): 01/9/23

DR. V. CHITRA
M.Pharm

EVALUATOR (2): 01/09/23

Dr. V. SURESH
Professor
JKKMMRFCP.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

DECLARATION

I hereby declare that this dissertation entitled "**ANTIPARKINSONIASM EFFECT OF *SYZGIUM CUMINI FRUIT* ATTENUATES MPTP INDUCED PARKINSONISM IN MICE** " is based on the original work carried out by me under the guidance and supervision of **Mr.V.SURESH, M.Pharm.,(Ph.D).,** for submission to The Tamilnadu Dr. M.G.R Medical University, Chennai in the partial fulfillment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part orfull for the award of any degree or diploma to this or any other university.

Ms. D.PAVITHRA

(Reg.No: 261620507513)

Date: 14.06.2023
Place: Komarapalayam

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.
India

ABSTRACT

While Parkinson disease is the most common movement disorder, other movement disorders exist such as multiple system atrophy, progressive supranuclear palsy, chorea, ataxia and dystonia. Some movement disorders have similar symptoms to PD such as tremor, slow movement and rigidity. A number of studies have shown that environmental factors, including pesticides, air pollution and industrial solvents could increase the risk of PD. The present investigation has been undertaken as study the anti-Parkinson activity of ethanolic extract of *Syzygium cumini fruit*. The plant *Syzygium cumini* of family Myrtaceae an ayurvedic herb which is known for its significant medical properties. Experiments were conducted following standard procedures. The ethanolic extract of *Syzygium cumini* were evaluated for their *in-vivo* antioxidant and anti-Parkinson properties and neurotransmitters level. The anti-Parkinson activity of EESC was evaluated using MPTP induced Parkinson models. Levodopa was used as standard. Extract treated groups showed higher in vivo antioxidant and anti-Parkinson activities. They also showed higher activity in neurotransmitters level. EESC exhibited better anti-Parkinson activity that of standard. The result may be attributed to the chemical constituents such as cyanidin, di-glycosides present in it which may be due to their individual or cumulative effect that enhanced anti-Parkinson activity and provided scientific evidence of the ethnomedicinal futures of *Syzygium cumini fruit*. These findings could justify the inclusion of this plant in the management of Parkinson's disease.

Keywords: Anti-Parkinson, MPTP, Phyto-constituents, Glutamate, Dopamine, Serotonin

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai JKK Sampoorani Ammal College of Pharmacy
Komarapalayam
638 183.

EFFECT OF ETHANOLIC EXTRACT OF CATHARANTHUS ROSEUS FLOWER ON SCOPOLAMINE INDUCED AMNESIA

A Dissertation submitted to

The Tamil Nadu Dr.M.G.R. Medical University ,

Chennai – 600032.

In partial fulfilment of the requirements for the award of the degree of

MASTER OF PHARMACY
IN
PHARMACOLOGY

Submitted by

SANKAR N

Reg. No. 261620507514

Under the guidance of

Dr. V. SURESH ., M.Pharm.,Ph.D.,

Professor and Head,
Department of Pharmacology

J.K.K. MUNIRAJAH MEDICAL RESEARCH FOUNDATION,
ANNAI J.K.K. SAMPOORANI AMMAL COLLEGE OF PHARMACY,
B.KOMARAPALAYAM-638183,

APRIL 2023

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

Munirajah Medical Research Foundation, Annai J.K.K. Sampoorani Ammal College of Pharmacy, Komarapalayam 638 183, India

JKKMMRF'S ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY, B.KOMARAPALYAM,

NAMAKKAL DT-638183,TAMILNADU

CERTIFICATE

This is to certify that the dissertation work entitled **"EFFECT OF ETHANOLIC EXTRACT OF CATHARANTHUS ROSEUS FLOWER ON SCOPOLAMINE INDUCED AMNESIA"** is the bonafide work carried out by, **Mr.SANKAR N (Reg.No: 261620507514)**, under the guidance and supervision of **Dr.V.SURESH., M.Pharm.,Ph.D.,**Professor and Head, Department of Pharmacology.

This is forwarded to the Tamil Nadu Dr.M.G.R Medical University, Chennai, for the partial fulfillment of requirements for the Degree of **MASTER OF PHARMACY** in **Pharmacology (2022-2023).**

PRINCIPAL **HEAD OF THE DEPARTMENT** **GUIDE**

Place:B.Komarapalayam

Date: 16/06/23.

EVALUATED ON: 01/09/23.

EVALUATOR (1): 01/9/23

DR. V. CHITRA

EVALUATOR (2): 04/09/23

Dr. V. SURESH

JKKMMRF'S CP

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, Annai J.K.K. Sampoorani Ammal College of Pharmacy, Komarapalayam 638 183, India

DECLARATION

I hereby declare that this dissertation entitled "**EFFECT OF ETHANOLIC EXTRACT OF CATHARANTHUS ROSEUS FLOWER ON SCOPOLAMINE INDUCED AMNESIA**" is based on the original work carried out by me under the guidance and supervision of **Dr.V.SURESH ., M.Pharm.,Ph.D.**, for submission to The Tamilnadu Dr.M.G.R Medical University, Chennai in the partial fulfillment for the degree of **MASTER OF PHARMACY** in Pharmacology. This work is original and has not been submitted in part or full for the award of any other degree or diploma of any other university. The information furnished in this dissertation is genuine to the best of my knowledge and belief. I further declare that this work has not been submitted earlier in part or full for the award of any degree or diploma to this or any other university

N. Sankar

Mr. SANKAR N

(Reg.No:261620507514

Place:B.Komarapalayam

Date: 16/6/23

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU. KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

JKK Munirajah Medical Research Foundation, TN, India
Annai J.K.K. Sampoorani Ammal College of Pharmacy
Komarapalayam 638 183.

ABSTRACT

Amnesia is a memory loss disorder due to brain injury, shock, fatigue, repression or illness. *Catharanthus roseus* is one plant recognized well in Ayurveda. It is known for its antitumour, anti-diabetic, anti-microbial, anti-oxidant and anti mutagenic effects. It is an evergreen plant first originated from islands of Madagascar.. It produces nearly 130 alkaloids mainly ajmalcine, vinceine, resperine, vincristine, vinblastine and raubasin. Vincristine and vinblastine are used for the treatment of various types of cancer such as Hodgkin's disease, breast cancer, skin cancer and lymphoblastic leukemia. The present investigation has been undertaken to investigate the effect of ethanolic extract of *Catharanthus roseus* flower on Scopolamine induced amnesia.C roseus flower were extracted with various solvents like n-hexane,ethyl acetate and ethanol based on its polarity by continuous hot percolation method. The ethanolic solvents given more percentage of yields and ethanolic extract only chosen for *in vivo* method. In the present study,*C roseus* administered orally for 15 days improved the memory of mice as reflected by diminished escape latency and percentage alteration values as compared to control animals. There is an increase in escape latency in negative control group when compared with the control group ($P<0.001$) of the four groups of amnesia induced animals, both showed decreased time to the escape platform. Epidemiological studies have almost confirmed that non-steroidal anti-inflammatory drugs reduce the incidence of Amnesia. *Catharanthus roseus* has been shown to produce anti-inflammatory action of mice. Oxygen free-radicals are implicated in the process of age-related decline in cognitive performance and may be responsible for the development of Amnesia in elderly persons. The study results conclude the significant increase effect of *Catharanthus roseus* flower extract on memory also.

Keywords:, catharanthus roseus, alkaloids,amnesia.

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.