



# SS INSTITUTE OF PHARMACY

*(A unit of VS Educational & Charitable Trust)*

Approved by Tamilnadu Government & Pharmacy Council of India, New Delhi.  
Affiliated to the Tamilnadu Dr. M.G.R. Medical University,  
and The Directorate of Medical Education, Chennai.

**B.Pharm Students Undertaking Project Work/ Field Work/ Internship**  
For The Academic Year 2023 – 2024

S.NO	DESCRIPTION
1	Certificate of Head of institution
2	List of <b>B.Pharm</b> Students Undertaking Project Work/ Field Work/ Internship- HOI
3	List of Students Undertaking Project Work/ Field Work/ Internship

**NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India**

Phone : 04283 241080 | E-mail : [ssip1718@gmail.com](mailto:ssip1718@gmail.com) | Website : [www.ssip.edu.in](http://www.ssip.edu.in)



# SS INSTITUTE OF PHARMACY

*(A unit of VS Educational & Charitable Trust)*

Approved by Tamilnadu Government & Pharmacy Council of India, New Delhi.  
Affiliated to the Tamilnadu Dr. M.G.R. Medical University,  
and The Directorate of Medical Education, Chennai.

---

## Certificate Of Head Of Institution

---

**NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India**

Phone : 04283 241080 | E-mail : [ssip1718@gmail.com](mailto:ssip1718@gmail.com) | Website : [www.ssip.edu.in](http://www.ssip.edu.in)



# SS INSTITUTE OF PHARMACY

*(A unit of VS Educational & Charitable Trust)*

Approved by Tamilnadu Government & Pharmacy Council of India, New Delhi.  
Affiliated to the Tamilnadu Dr. M.G.R. Medical University,  
and The Directorate of Medical Education, Chennai.

---

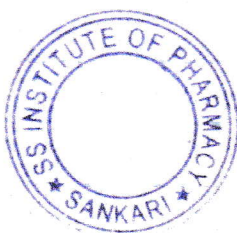
Dr.C.Jothimanivannan.,M.Pharm.,Ph.D.

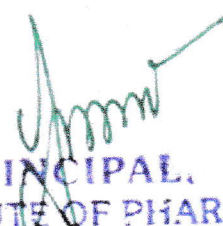
Principal

## **TO WHOMSOEVER IT MAY CONCERN**

Number of students under taking **Project Work/ Field Work/ Internship** for the academic year 2023 - 2024 is 55.

The student participated in more than one activity has been counted as **one** only.



  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**

---

**NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India**

Phone : 04283 241080 | E-mail : [ssip1718@gmail.com](mailto:ssip1718@gmail.com) | Website : [www.ssip.edu.in](http://www.ssip.edu.in)





# SS INSTITUTE OF PHARMACY

(A unit of VS Educational & Charitable Trust)

Approved by Tamilnadu Government & Pharmacy Council of India, New Delhi.  
Affiliated to the Tamilnadu Dr. M.G.R. Medical University,  
and The Directorate of Medical Education, Chennai.

Dr.C.Jothimanivannan.,M.Pharm.,Ph.D.

Principal

## To whomsoever it may concern

This Is To Certify That The List Of **B.Pharm** Students Under Taking **Project Work/**  
**Field Work/ Internship** For The Academic Year 2023 – 2024 Are Given Below.

S. No	Register No	Name Of The Student	Year	Project Work Topic	Guide
1	561997227	PRADEEP .B	IV	PHARMACOGNOSTICAL, PHYTOCHEMICAL & INVITRO ANTI- LICE ACTIVITY OF ETHANOLIC EXTRACT OF CITRUS HYSTRIX	Mr.T. SAMPATH KUMAR., M.PHARM
	561997234	SANTHOSHKUMAR.N	IV		
	561997236	SHALINI .M	IV		
	561997238	SREEJITH .S	IV		
	561997247	VIJAYAKUMAR .A	IV		
2	561997235	SARANKUMAR.T	IV	IN-VITRO ACTIVITY OF ETHANOLIC EXTRACT OF ALBIZIA AMARA IN INDIAN ADULT EARTH WORMS (PHERETIMA POSTHUMA)	Mrs. M. VANITHA., M.PHARM.
	561997237	SHANMUGAM.G	IV		
	561997239	SRINIVASAN.M	IV		
	561997240	SRITHER.R	IV		
	561997244	TAMILSELVAN.R	IV		
3	561997208	DEEPASREE. M	IV	FORMULATION & EVALUATION OF FAST DISSOLVING ORAL THIN FILMS OF ATORVASTATIN CALCIUM	Mrs.K.Sowndarya., M.PHARM
	561997216	HEMAVATHI. D	IV		
	561997221	KUMANAN. N.V	IV		
	561997226	PAVENDHARAN .S	IV		
4	561997204	ARUN .S	IV	FORMULATION & EVALUATION OF QUETIAPINE FUMARATE FLOATING TABLETS BY NON EFFERVESCENT TECHNIQUE	Mrs. M GOMATHI M. Pharm
	561997209	DHANASEKARAN .A	IV		
	561997214	GOKUL PRASATH .M	IV		
	561997215	GOKULNATH .M	IV		
	561997217	KAMALESH .S	IV		
5	561997241	SUBASHINI .M	IV	PHYTOCHEMICAL & ANTIMICROBIAL	Dr.C.Jothimanivannan M.PHARM.,PH.D.

NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India

Phone : 04283 241080 | E-mail : [ssip1718@gmail.com](mailto:ssip1718@gmail.com) | Website : [www.ssip.edu.in](http://www.ssip.edu.in)



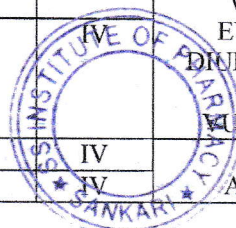


# SS INSTITUTE OF PHARMACY

(A unit of VS Educational & Charitable Trust)

Approved by Tamilnadu Government & Pharmacy Council of India, New Delhi.  
Affiliated to the Tamilnadu Dr. M.G.R. Medical University,  
and The Directorate of Medical Education, Chennai.

	561997243	SURYAPRAKASH .M	IV	ACTIVITY EVALUATION OF ROOT OF ROOT EXTRACT OF VITEX NEGUNDO LINN	
	561997245	THANGAPANDIYAMM ALI	IV		
	561997246	VEERASELVAN .V	IV		
	561997248	VIJAYAKUMAR .M	IV		
6	561997229	PRAMESHWARAN. A	IV	INVITRO EVALUATION OF INVITRO EVALUATION OF ANTIFUNGAL POTENCY OF THE PLANT EXTRACTS OF DIFFERENT PARTS OF CELOSIA ARGENTEA LINN CANDIDA SPECIES	Mrs. M. VANITHA., M.PHARM
	561997230	PRIYANKA. P	IV		
	561997231	RAJAGURU. A	IV		
	561997242	SURESH. M	IV		
	561997249	VINITHA. A	IV		
7	561997203	ARTHI. A	IV	ANALYTICAL METHOD DEVELOPMENT VALIDATION FOR THE DETERMINATION OF NICORANDIL BY UFIC IN ORAL SOLID DOSAGE FORMS	Mr.S.PRAVINKUMAR. M.PHARM
	561997206	ARUNKUMAR. K	IV		
	561997207	AZHAGIRI. T. K	IV		
	561997223	MANIKANDAN. S	IV		
	561997224	MUTHUKANNAN. S	IV		
8	561997202	ANUSUYA. N	IV	FORMULATION & EVALUATION OF HERBAL CREAM BY USING BAUHINIA TOMENTOSA FOR EVALUATION OF ANTI INFLAMMATORY ACTIVITY	Mrs.C.KALAISELVI, M.Pharm., (Ph.D)., Associate Professor
	561997205	ARUNKUMAR. D	IV		
	561997213	ELAVARASAN. E	IV		
	561997218	KARTHICK. D	IV		
	561997219	KARTHIKEYAN. R	IV		
A 9	561997250	VINOTHKUMAR.R	IV	FORMULATION & EVALUATION OF MATRIX TYPE TRANSDERMAL PATCHES OF IBUPROFEN	Mrs. P.NANDHITHA M. PHARM.. Assistant Professor
	560020523560	MYVIZHIKANNAN.R	IV		
	560020523563	PRAKASH.V	IV		
	560020523565	SUGAVARSHAN.C	IV		
	560020523566	VETRIVEL.R	IV		
10	561997228	PRADEEP. T	IV	PHARMACOGNOSTICAL & PHARMACOLOGICAL ANALYSIS OF PHYTOCHEMICALS, WITH IN-VITRO EVALUATION OF DIURETIC ACTIVITIES ON BAMBUSA VULGARIS LEAF IN-VITRO ANTHELMINTIC	Mrs.V.DEEPADHARATHI M.PHARM..
	5600205235 58	GNANAVEL.S	IV		
	5600205235 59	GOKUL. K	IV		
	5600205235 61	NANDHAKUMAR. D	IV		
11	561997210	DHARUN. A	IV		Mr.M.PRAVEEN KUMAR
	561997212	DINESH.T	IV		



PRINCIPAL  
SS INSTITUTE OF PHARMACY  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301

NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India

Phone : 04283 241080 | E-mail : [ssip1718@gmail.com](mailto:ssip1718@gmail.com) | Website : [www.ssip.edu.in](http://www.ssip.edu.in)

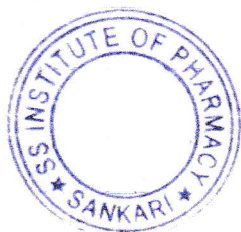


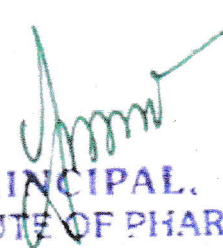
# SS INSTITUTE OF PHARMACY

(A unit of VS Educational & Charitable Trust)

Approved by Tamilnadu Government & Pharmacy Council of India, New Delhi.  
Affiliated to the Tamilnadu Dr. M.G.R. Medical University,  
and The Directorate of Medical Education, Chennai.

5600205235 62	NANDHAKUMAR. S	IV	ACTIVITY OF VARIOUS EXTRACT OF ABUTILON INDICUM IN INDIAN ADULT EARTHWORMS (PHERETIMA POSTHUMA)	M.PHARM., ASSISTANT PROFESSOR
5600205235 62	NANDHAKUMAR. S	IV		
5600205235 64	SATHISHKUMAR. V	IV		



  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301

NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India

Phone : 04283 241080 | E-mail : [ssip1718@gmail.com](mailto:ssip1718@gmail.com) | Website : [www.ssip.edu.in](http://www.ssip.edu.in)





**“Formulation and Evaluation of Fast Dissolving Oral Thin  
Films Of Atorvastatin Calcium”**

*A Dissertation submitted to*

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

**Chennai-600032**

*In partial fulfillment for the award of degree of*

**BACHELOR OF PHARMACY**

*Submitted by*

**M.DEEPASREE REG.NO: 561997208**

**D.HEMAVATHI REG.NO: 561997216**

**N.V.KUMANAN REG.NO: 561997221**

**S.PAVENDHARAN REG.NO: 561997226**

*Under the Guidance of*

**Mrs.K. SOWNDARYA., M.PHARM.,**

**DEPARTMENT OF PHARMACEUTICS**



**SS INSTITUTE OF PHARMACY**

**SANKARI, SALEM (DT), TAMIL NADU - 637301**

**SEPTEMBER-2023 (Dec-2023)**



*[Signature]*  
**PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301**





## CERTIFICATE

This is to certify that the Project entitled "*Formulation and evaluation of fast dissolving oral film of atorvastatin calcium*" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

**N.V.KUMANAN**

**REG.NO: 561997221**

**S.PAVENDHARAN**

**REG.NO: 561997226**

**D.HEMAVATHI**

**REG.NO: 561997216**

**M.DEEPASREE**

**REG.NO: 561997208**

in partial fulfillment of the degree of Bachelor of Pharmacy under the guidance of **Mrs. K. SOWNDARYA, M.Pharm., Assistant Professor, Dept. of Pharmaceutics, SS Institute of Pharmacy, Sankari, Salem.**

**Dr. C. Jothimanivannan., M.Pharm., Ph.D.,**

Principal,

SS Institute of Pharmacy,

Sankari, Salem - 637301.

Place:SS Institute of Pharmacy, Sankari- 637301.

Date: 30.12.2023.



**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**



### CERTIFICATE

This is to certify that the Project entitled "*Formulation and evaluation of fast dissolving oral film of atorvastatin calcium*" submitted to The Tamilnadu Dr. M.G.R. Medical University, Chennai, is a bonafide project work of

N.V.KUMANAN

REG.NO: 561997221

S.PAVENDHARAN

REG.NO: 561997226

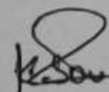
D.HEMAVATHI

REG.NO: 561997216

M.DEEPASREE

REG.NO: 561997208

in partial fulfillment of the Degree of Bachelor of Pharmacy under my guidance and supervision in the Department of Pharmaceutics, SS Institute of Pharmacy, Sankari, Salem.

 30/12/23

**Mrs. K. SOWNDARYA., M.Pharm.,**

Supervisor/guide, Asst. Professor,

Department of Pharmaceutics,

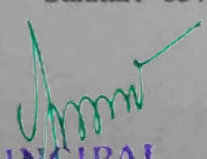
SS Institute of Pharmacy,

Sankari- 637301.

Place :SS Institute of Pharmacy, Sankari- 637301.

Date : 30.12.2023

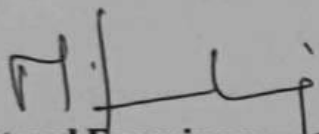


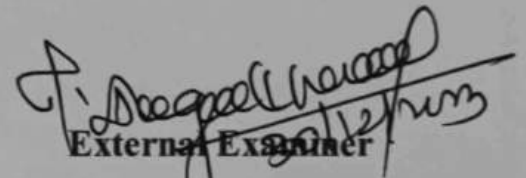
  
**PRINCIPAL,**  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



### DECLARATION

The work presented in this dissertation entitled "*Formulation and evaluation of fast dissolving oral film of atorvastatin calcium*" was carried out by N.V.KUMANAN (REG.NO:561997221), S.PAVENDHARAN(REG.NO:561997226), D.HEMAVATHI(REG.NO:561997216), M.DEEPASREE (REG.NO:561997208) ,to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of Bachelor of Pharmacy was carried out by the candidates at the department of pharmaceutics, under the supervision of Mrs. K. SOWNDARYA, M.Pharm., Assistant Professor, Dept. of Pharmaceutics, SS Institute of Pharmacy, Sankari, during the academic year 2022-23. We further declare that this work is original and has not been submitted in part or full for the award of any other degree or diploma in any other university.

  
Internal Examiner  
30/12/23

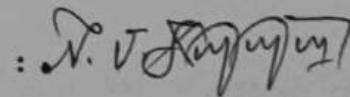
  
External Examiner

### Convener of Examination

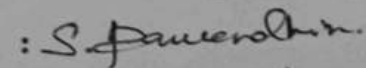
Place : SS Institute of pharmacy, Sankari

Date : 30.12.2023

N.V.KUMANAN (REG.NO: 561997221)

: 

S.PAVENDHARAN (REG.NO: 561997226)

: 

D.HEMAVATHI (REG.NO: 561997216)

: 

M.DEEPASREE(REG.NO: 561997208)

: 

  
PRINCIPAL,

SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301

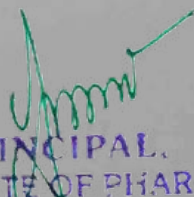




## SUMMARY AND CONCLUSION

- OTFs have emerged as a revolutionary trend and most pharmaceutical companies in this field continue their research and development activities to adapt their drugs in various categories to this technology
- The present study indicates a good orally fast dissolving films containing atorvastatin calcium for systemic delivery with an added advantage of faster drug action.
- Finally, it is concluded that the drug release from the fast dissolving film was increased by using the increased concentration of superdisintegrant, thus assisting in faster disintegration in the buccal cavity.
- As the drug having low solubility, fast disintegration may leads to more drug availability for dissolution, resulting in faster absorption in systemic circulation increased systemic availability of drug may leads to quick onset of action.
- The formulation F4 was found to be best formulation which releases 98.95 % of the drug within 15 min and disintegration time is 168sec which was significantly high when compared to other formulation.



  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



**PHYTOCHEMICAL AND ANTIMICROMICROBIAL ACTIVITY  
EVALUATION OF ROOT EXTRACT OF VITEX NEGUNDO Linn**

A Dissertation submitted to

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

**Chennai-600032**

In partial fulfillment for the award of degree of

**BACHELOR OF PHARMACY**

Submitted by

<b>M.SUBASHINI</b>	<b>REG.NO:561997241</b>
<b>M. SURIYAPRAKASH</b>	<b>REG.NO:561997243</b>
<b>I.THANGAPANDIYAMMAL</b>	<b>REG.NO:561997245</b>
<b>V.VEERASELVAN</b>	<b>REG.NO:561997246</b>
<b>M .VIJAYKUMAR</b>	<b>REG.NO:561997248</b>

Under the Guidance of

**Dr. C. JOTHIMANIVANNAN, M.PHARM., Ph.D**

**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY**

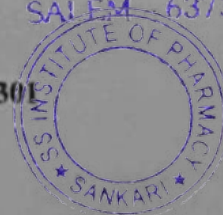


**SSIP INSTITUTE OF PHARMACY**

**SANKARI, SALEM (DT), TAMIL NADU - 637301**

**SEPTEMBER 2023 (MARCH-2023)**

**PRINCIPAL,**  
**SSIP INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**





## SS INSTITUTE OF PHARMACY

216, Manjakkalpatty, NH-47 Kuppanur

Sankari, Salem (DT.), Tamilnadu-637205

Phone : 04282-241080

Email: ssip1718@gamil.com



Principal,  
Dr.C.Jothimanivannan., M.Pharm., Ph.D.,

### CERTIFICATE

This is to certify that the Project entitled "PHYTOCHEMICAL AND ANTIMICROBIAL ACTIVITY EVALUATION OF ROOT EXTRACT OF VITEX NEGUNDO LINN" submitted to the Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

M.SUBASHINI	REG.NO:561997241
M. SURIYAPRAKASH	REG.NO:561997243
L.THANGAPANDIYAMMAL	REG.NO:561997245
V.VEERASELVAN	REG.NO:561997246
M.VIJAYKUMAR	REG.NO:561997248

in partial fulfillment of the degree of Bachelor of Pharmacy under the guidance of Dr. C. JOTHIMANIVANNAN, M. PHARM., Ph.D Department of PHARMACEUTICAL CHEMISTRY SS Institute of Pharmacy, Sankari, Salem.

Place: SS Institute of Pharmacy, Sankari - 637301.

Date:

PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



Dr. C. JOTHIMANIVANNAN, M.PHARM., Ph.D

Principal / Professor / guide,

Department of Pharmaceutical Chemistry

SS Institute of Pharmacy,

Sankari, Salem - 637301.





## SS INSTITUTE OF PHARMACY

216, Manjakkalpatty, NH-47 Kuppanur  
Sankari, Salem (DT.), Tamilnadu-637205

Phone : 04282-241080

Email: ssip1718@gmail.com



### DECLARATION

The work presented in this dissertation entitled "phytochemical and Pharmacological Antimicrobial activity of root extract of vitex negundo linn" was Carried out by **M.SUBASHINI (561997241), V.VEERASELVAN (561997246), I.THANGAMPANDIYAMMAL (561997245), M.SURIYAPRAKESH (561997243)**

**M.VIJAYKUMAR (561997248)**, to the Tamilnadu Dr.MGR.medical university, Chennai, in partial fulfillment for the degree of Bachelor of Pharmacy was carried out by the candidate at the department of pharmacology, under the supervision of **Dr. C. Jothimanivannan, M.Pharm., Ph.D.**, Department of Pharmaceutical Chemistry SS Institute of Pharmacy, Sankari, during the academic year Aug 2023 (March 2023). We further declare that this work is original and has not been submitted in part or full for the award of any other degree in any other university.

Internal Examiner

External Examiner

Convener of Examination

Place: SS Institute of pharmacy, Sankari.

Date:

M.SUBASHINI

M. SURIYAPRAKASH

I.THANGAPANDIYAMMAL

V.VEERASELVAN

M.VIJAYKUMAR

REG.NO:561997241

REG.NO:561997243

REG.NO:561997245

REG.NO:561997246

REG.NO:561997248

PRINCIPAL

SS INSTITUTE OF PHARMACY

SANKARI (TK).

SALEM - 637301



## CHAPTER- VIII

## 8. SUMMARY AND CONCLUSION

Antimicrobial properties of medicinal plants are being increasingly reported from different parts of the world.

The World Health Organization (WHO) estimates the plant extract or active constituents are used as folk medicine in traditional therapies of 80% of the world population.

In the present work the aqueous extract obtained from *Vitex negundo* linn roots showed strong activity against the selected microbial strains.

The result of phytochemical in the present investigation showed that the plant contains effective constituents like alkaloid, glycosides, flavonoids, tannins, amino acids, proteins and reducing sugar.

In this study different concentration of aqueous root extract 25 $\mu$ l, 50 $\mu$ l, 75 $\mu$ l, 100 $\mu$ l. Were used against the different microbial strains shows increase in zone of inhibition was observe on increasing the concentration of aqueous root extract.

Among the different microbial strains a significant inhibitory action was observed against *Staphylococcus* (G+ve), *E.Coli* (G-ve) and a minimal inhibitory action against *Streptococcus* (G-ve). However further studies are needed to better evaluate the potential effectiveness of the crude extract, attempt is worth to isolate a broad spectrum antimicrobial agents.

The present result will form the basis for selection investigation in the potential discovery of new natural bio-active compound.



  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





**FORMULATION AND EVALUATION OF MATRIX TYPE  
TRANSDERMAL PATCHES OF IBUPROFEN**

*Dissertation submitted to*

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY,  
CHENNAI-32**

*In partial fulfillment for the award of degree of  
BACHELOR OF PHARMACY*

*Submitted By*

<b>VINOTH KUMAR .R</b>	<b>REG NO :561997250</b>
<b>MYVIZHIKANNAN .R</b>	<b>REG NO :560020523560</b>
<b>PRAKASH .V</b>	<b>REG NO :560020523563</b>
<b>SUGAVARSAN .C</b>	<b>REG NO :560020523565</b>
<b>VETRIVEL .R</b>	<b>REG NO :560020523566</b>

*Under the guidance of*

**Mrs. P.NANDHITHA M. Pharm.,**

**Assistant Professor,**

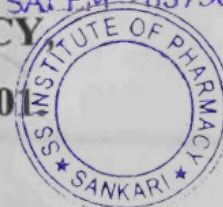
**Department of Pharmaceutics.**



**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**

**SS INSTITUTE OF PHARMACY**  
**SANKARI, SALEM (DT)-637301**

**MAY 2024(MARCH 2024)**



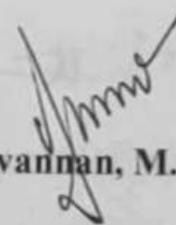




### CERTIFICATE

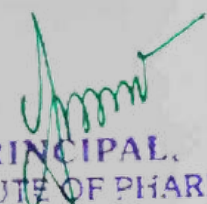
This is to certify that the dissertation entitled "**FORMULATION AND EVALUATION OF MATRIX TYPE TRANSDERMAL PATCHES OF IBUPROFEN**" is the bonafide work carried out by **Mr.VINOTHKUMAR R, Mr.MYVIZHIKANNAN R, Mr.PRAKASH V, Mr.SUGAVARSAN C, Mr.VETRIVEL R**, under the guidance of **Mrs.P.Nandhitha, M.Pharm.**, Assistant Professor, Department of Pharmaceutics, SS Institute of Pharmacy, Sankari, Salem in partial fulfillment of requirements for the award of degree of Bachelor of Pharmacy.

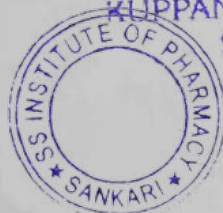
This is forwarded to The Tamilnadu Dr. M.G.R. Medical University, Chennai.

  
**Prof. Dr.C. Jothimanivannan, M.Pharm, Ph.D.,**  
**Principal,**  
**SS Institute of pharmacy,**  
**Sankari,**  
**Salem - 637301**

Date: 19/06/24

Place: Sankari

  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**





### CERTIFICATE

This is to certify that the dissertation entitled **"FORMULATION AND EVALUATION OF MATRIX TYPE TRANSDERMAL PATCHES OF IBUPROFEN"** is the bonafide work carried out **Mr.VINOTH KUMAR R, Mr.MYVIZHIKANNAN R, Mr.PRAKASH V, Mr.SUGAVARSAN C, Mr.VETRIVEL R,** under my guidance and supervision. This is forwarded to The Tamilnadu Dr. M.G.R. Medical University, Chennai in a partial fulfillment of requirements for the award of degree of Bachelor of Pharmacy.

### DECLARATION

*N. Nandhitha P.*

**Mrs.P.NANDHITHA,M.Pharm,**  
**Assistant Professor,**  
**Department of Pharmaceutics,**  
**SS Institute of Pharmacy,**  
**Sankari,Salem -637301.**

Date: 19. 06. 2024.

Place: Sankari

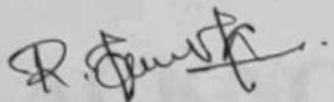


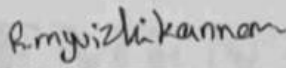
*[Signature]*  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**

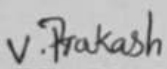


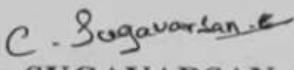
### DECLARATION


We hereby declare that this dissertation entitled "**FORMULATION AND EVALUATION OF MATRIX TYPE TRANSDERMAL PATCHES OF IBUPROFEN**" has been carried out by us under the Guidance and supervision of **Mrs.P.Nandhitha, M.Pharm, Assistant professor**, SS Institute of Pharmacy, Sankari. In a partial fulfillment of requirements for the Bachelor of Pharmacy Degree Course. We further declare that we have not submitted this dissertation previously for the award of any degree or diploma.

  
**Mr. VINOTH KUMAR.R**  
(561997250)

  
**Mr.MYVIZHIKANNAN. R**  
(560020523560)

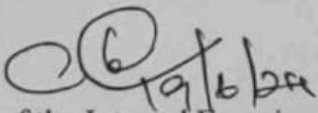
  
**Mr. PRAKASH. V**  
(560020523563)

  
**Mr. SUGAVARSAN .C**  
(560020523565)

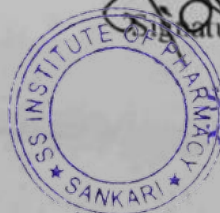
  
**Mr. VETRIVEL. R**  
(560020523566)

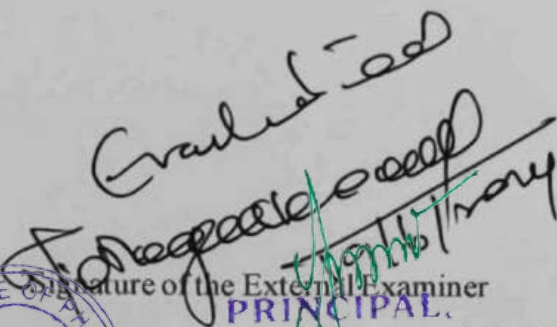
Date: 19/06/24

Place: Sankari

  
Signature of the Internal Examiner

Date of Examination 19/06/24.



  
Signature of the External Examiner  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**



## CHAPTER XI

## SUMMARY AND CONCLUSION

In the present work an attempt has been made to formulate and evaluate the transdermal patches of Ibuprofen using various types of polymers (Methylcellulose, Hydroxy propyl methyl cellulose, & Polyvinyl pyrrolidone).

The results of compatibility studies by Fourier transform infrared spectroscopy and showed no interaction between the drug and polymers.

The polymers Hydroxypropyl methyl cellulose & Polyvinyl pyrrolidone in 1:2 ratio used for the formulation of transdermal patches showed good film forming property when compared to other polymer ratios.

The patches prepared by using Polyvinyl pyrrolidone were thin, flexible, smooth and transparent whereas the patches prepared by without using Polyvinyl pyrrolidone were thin, flexible, smooth and opaque.

The weight variation test showed less variation in weight and suggesting uniform distribution of drug and polymer.

The thickness of the transdermal patches showed less variation among all the polymers with different ratios.

PRINCIPAL,

SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



Polymer patches with methyl cellulose, HPMC & PVP of ratio 3:7:7, & HPMC & PVP of ratio 2:1 & 1:1 showed good flexibility and folding endurance properties when compared to other patches.

All the formulations showed 100% flatness which indicating that all patches could maintain a smooth surface when applied on to the skin.

The moisture content in the patches were found to low and the formulations containing polymers are hydrophillic polymer so it should be carefully packed along with dessicant.

The drug content analysis showed minimum variations suggesting uniform distribution of drug. *In vitro* release studies showed that drug release of the formulations containing 2:1 ratio of HPMC & PVP (F<sub>6</sub>) shows best results.

Hence it was concluded that solvent casting method was useful for successful development of matrix type transdermal patches of Ibuprofen. The controlled release of drug from the transdermal patches suggested that the frequency of administration can be reduced.

The transdermal patches can improve the bioavailability of the Ibuprofen by avoiding hepatic first pass metabolism. The present investigation suggested that the matrix type transdermal patches of Ibuprofen could be explored for the management of fever, pain, Inflammatory response.



PRINCIPAL  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



**"ANALYTICAL METHOD DEVELOPMENT AND  
VALIDATION FOR THE DETERMINATION OF  
NICORANDIL BY UFLC IN ORAL SOLID DOSAGE  
FORMS"**

*A Dissertation submitted to*

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

**Chennai-600032**

*In partial fulfillment for the award of degree of*

**BACHELOR OF PHARMACY**

*Submitted by*

<b>A.ARTHI</b>	<b>REG.NO: 561997203</b>
<b>K.ARUNKUMAR</b>	<b>REG.NO: 561997206</b>
<b>T.K.AZHAGIRI</b>	<b>REG.NO: 561997207</b>
<b>S.MANIKANDAN</b>	<b>REG.NO: 561997223</b>
<b>S.MUTHUKANNAN</b>	<b>REG.NO: 561997224</b>

*Under the Guidance of*

**Mr.S.PRAVINKUMAR., M.PHARM.,**

**DEPARTMENT OF PHARMACEUTICAL ANALYSIS**



**SS INSTITUTE OF PHARMACY**

**SANKARI, SALEM (DT), TAMIL NADU – 637301**

**SEPTEMBER-2023 (Dec-2023)**

*[Signature]*  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**







### CERTIFICATE

This is to certify that the Project entitled "ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR THE DETERMINATION OF NICORANDIL BY UFLC IN ORAL SOLID DOSAGE FORMS" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

A.ARTHI	REG.NO: 561997203
K.ARUNKUMAR	REG.NO: 561997206
T.K.AZHAGIRI	REG.NO: 561997207
S.MANIKANDAN	REG.NO: 561997223
S.MUTHUKANNAN	REG.NO: 561997224

in partial fulfillment of the degree of Bachelor of Pharmacy under the guidance of Mr.S.PRAVINKUMAR, M.Pharm., Assistant Professor, Dept. of Pharmaceutical Analysis, SS Institute of Pharmacy, Sankari, Salem.

**Dr. C. Jothimanivannan, M.Pharm., Ph.D.,**

Principal,

SS Institute of Pharmacy,

Sankari, Salem - 637301.

Place: SS Institute of Pharmacy, Sankari- 637301.

Date: 30.12.2023

PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





### CERTIFICATE

This is to certify that the Project entitled "ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR THE DETERMINATION OF NICORANDIL BY UFLC IN ORAL SOLID DOSAGE FORMS" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

A.ARTHI	REG.NO: 561997203
K.ARUNKUMAR	REG.NO: 561997206
T.K.AZHAGIRI	REG.NO: 561997207
S.MANIKANDAN	REG.NO: 561997223
S.MUTHUKANNAN	REG.NO: 561997224

in partial fulfillment of the Degree of Bachelor of Pharmacy under my guidance and supervision in the Department of Pharmaceutical Analysis, SS Institute of Pharmacy, Sankari, Salem.

Mr. S.PRAVINKUMAR., M.Pharm.,

Supervisor/guide, Asst. Professor,

Department of Pharmaceutical Analysis,

SS Institute of Pharmacy,

Sankari- 637301.

Place : SS Institute of Pharmacy, Sankari- 637301

.Date : 30/12/2023



PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





### DECLARATION

The work presented in this dissertation entitled "ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR THE DETERMINATION OF NICORANDIL BY UFLC IN ORAL SOLID DOSAGE FORMS" was carried out by A.ARTHI (REG.NO:561997203), K.ARUNKUMAR (REG.NO:561997206), T.K.AZHAGIRI (REG.NO:561997207), S.MANIKANDAN (REG.NO:561997223) S.MUTHUKANNAN (REG.NO:561997224), to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of Bachelor of Pharmacy was carried out by the candidates at the department of pharmaceutical analysis, under the supervision of Mr. S.PRAVINKUMAR, M.Pharm., Assistant Professor, Dept. of Pharmaceutical Analysis, SS Institute of Pharmacy, Sankari, during the academic year 2022-23. We further declare that this work is original and has not been submitted in part or full for the award of any other degree or diploma in any other university.

Internal Examiner

External Examiner

Convener of Examination

Place : SS Institute of pharmacy, Sankari

Date :

A.ARTHI (REG.NO: 561997203)

: A. Arthi

K.ARUNKUMAR (REG.NO: 561997206)

: K. Arunkumar

T.K.AZHAGIRI (REG.NO: 561997207)

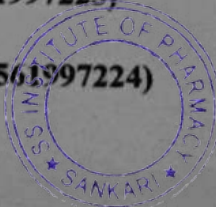
: T. K. Azhagiri

S.MANIKANDAN (REG.NO: 561997223)

: S. Manikandan  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANURIPOL, SANKARI (TK),  
SALEM - 637301

S.MUTHUKANNAN (REG.NO: 561997224)

: S. Muthukannan





# ANALYTICAL MEHOD DEVELOPMENT AND VALIDATION FOR THE DETERMINATION OF NICORANDIL BY UFLC IN ORAL SOLID DOSAGE FORMS

## 7. SUMMARY AND CONCLUSION

Parameters		Nicorandil	LIMIT
<b>Linearity:</b> Regression equation( $Y=mx+c$ )		$y = 0.0000x - 5.2442$ ( $r^2 = 0.9993$ )	$r^2$ not less than 0.99
<b>Assay</b> (% mean assay)		100.78%	98%-102%
<b>Specificity</b>		Complies	No interference of any peak
<b>Method precision %RSD</b>		0.51 %	RSD NMT 2.0%
<b>Intermediate precision day-01</b> %RSD		0.66%	RSD NMT 2.0%
<b>Intermediate precision day-02</b> %RSD		0.71%	RSD NMT 2.0%
<b>Accuracy %</b>		99.18% to 100.91%	98-102%
<b>Robustness</b>	FM	0.82%	%RSD NMT 2.0
	FP	0.48%	
	WM	0.48%	
	WP	0.68%	

### Conclusion:

A simple, Accurate, precise method was developed for the simultaneous estimation of the Nicorandil in solid dosage form. Retention time of Nicorandil was found 2.173min. %RSD of the Nicorandil found 0.13%. %Assay was obtained as 100.78% for Nicorandil. Regression equation of Nicorandil is  $y=0.0000x-5.2442$  &  $r^2 = 0.9993$ . Retention times were decreased and that run time was decreased, so the method developed was simple and economical that can be adopted in regular Quality control test in Industries.



PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



**FORMULATION AND EVALUATION OF HERBAL CREAM BY USING  
BAUHINIA TOMENTOSA FOR EVALUATION OF ANTI INFLAMMATORY  
ACTIVITY**

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY  
Chennai-600032  
In partial fulfilment for the award of degree of**

**BACHELOR OF PHARMACY**

**Submitted by**

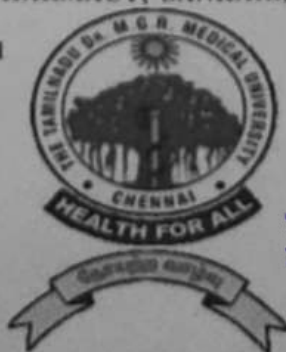
<b>N. ANUSUYA</b>	<b>REG.NO: 561997202</b>
<b>D. ARUNKUMAR</b>	<b>REG.NO: 561997205</b>
<b>E. ELAVARASAN</b>	<b>REG.NO: 561997213</b>
<b>D. KARTHICK</b>	<b>REG.NO: 561997218</b>
<b>R. KARTHIKEYAN</b>	<b>REG.NO: 561997219</b>

**Under the Guidance of**

**Mrs. C. KALAISELVI, M.Pharm.,(Ph.D),Associate Professor**

**DEPARTMENT OF PHARMACEUTICS**

**SS INSTITUTE OF PHARMACY, SANKARI, SALEM DISTRICT,  
TAMIL NADU - 637301**



**SEP 2023 (DEC 2023)**

**PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301**







## SS INSTITUTE OF PHARMACY

216, Manjakkalpatty, NH-47 Kuppanur,  
Sankari, Salem (DT.), Tamilnadu-637205.

Phone: 04283-241080

Email: ssip1718@gmail.com

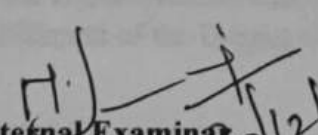


### EVALUATION CERTIFICATE

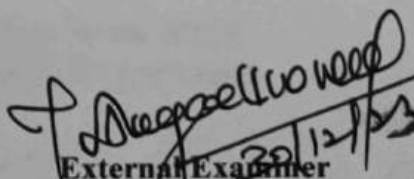
This is to certify that the Dissertation entitled "**FORMULATION AND EVALUATION OF HERBAL CREAM BY USING BAUHINIA TOMENTOSA FOR EVALUATION OF ANTI INFLAMMATORY ACTIVITY**" submitted by

N.ANUSUYA	REG.NO: 561997202
D.ARUNKUMAR	REG.NO: 561997205
E.ELAVARASAN	REG.NO: 561997213
D.KARTHICK	REG.NO: 561997218
R.KARTHIKEYAN	REG.NO: 561997219

to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of BACHELOR OF PHARMACY was carried out by the candidates at the department of pharmaceutics, SS Institute of pharmacy, under the guidance of and supervision of Mrs. C. KALAISELVI, M.Pharm.,(Ph.D) Associate Professor, SS Institute of pharmacy during the academic year of 2022-2023.

  
Internal Examiner 30/12/23

Convener of examination

  
External Examiner 30/12/23

Examination center : SS Institute of Pharmacy, Sankari- 637301.

Date

: 30/12/23



  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





## SS INSTITUTE OF PHARMACY

216, Manjakkalpatty, NH-47 Kuppanur,  
Sankari, Salem (DT.), Tamilnadu-637205.

Phone: 04283-241080

Email: ssip1718@gmail.com



**Mrs. C. KALAISELVI, M.Pharm., (Ph.D.), Associate Professor**


Supervisor/Guide, Department of pharmaceutics

### CERTIFICATE

This is to certify that the Dissertation entitled "**FORMULATION AND EVALUATION OF HERBAL CREAM BY USING BAUHINIA TOMENTOSA EVALUATION OF ANTI INFLAMMATORY ACTIVITY**" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

N.ANUSUYA	REG.NO: 561997202
D.ARUNKUMAR	REG.NO: 561997205
E.ELAVARASAN	REG.NO: 561997213
D.KARTHICK	REG.NO: 561997218
R.KARTHIKEYAN	REG.NO: 561997219

in the Department of Pharmaceutics, SS Institute of Pharmacy, Sankari, for the partial fulfillment of the Degree of Bachelor of Pharmacy under my guidance and supervision.

  
Mrs. C. KALAISELVI, M.Pharm.,(Ph.D) Associate Professor

Supervisor/guide

PRINCIPAL.

SS INSTITUTE OF PHARMACY  
KUPPANUR (PO), SANKARI (TK).  
SALEM - 637301





## SS INSTITUTE OF PHARMACY

216, Manjakkalpatty, NH-47 Kuppanur,

Sankari, Salem (DT.), Tamilnadu-637205.

Phone: 04283-241080

Email: ssip1718@gmail.com



**Dr. C. Jothimanivannan., M.Pharm., Ph.D.,**

Principal,

### CERTIFICATE

This is to certify that the Dissertation entitled "**FORMULATION AND EVALUATION OF HERBAL CREAM BY USING BAUHINIA TOMENTOSA FOR EVALUATION OF ANTI INFLAMMATORY ACTIVITY**" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

**N.ANUSUYA**

**REG.NO: 561997202**

**D.ARUNKUMAR**

**REG.NO: 561997205**

**E.ELAVARASAN**

**REG.NO: 561997213**

**D.KARTHICK**

**REG.NO: 561997218**

**R.KARTHIKEYAN**

**REG.NO: 561997219**

in partial fulfillment of the degree of Bachelor of Pharmacy under the guidance of **Mrs. C. KALAISELVI, M.Pharm.,(Ph.D), Associate Professor, Department of Pharmaceutics, SS Institute of Pharmacy, Sankari, Salem.**

**Dr. C. Jothimanivannan., M.Pharm., Ph.D.,**  
Principal,

SS Institute of Pharmacy,  
Sankari, Salem.



**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**

Place: SS Institute of Pharmacy, Sankari- 637301.  
Date:





## SS INSTITUTE OF PHARMACY

216, Manjakkalpatty, NH-47 Kuppanur,  
Sankari, Salem (DT.), Tamilnadu-637205.

Phone: 04283-241080

Email: ssip1718@gmail.com



### DECLARATION

The work presented in this dissertation entitled "**FORMULATION AND EVALUATION OF HERBAL CREAM BY USING BAUHINIA TOMENTOSA FOR EVALUATION OF ANTI INFLAMMATORY ACTIVITY**" was carried out by N.ANUSUYA(561997202), D.ARUNKUMAR(561997205), E.ELAVARASAN(561997213), D.KARTHICK(561997218), R.KARTHIKEYAN(561997219) to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of BACHELOR OF PHARMACY was carried out by the candidates at the department of pharmacology, under the supervision of **Mrs. C. KALAISELVI, M.Pharm.,(Ph.D), Associate Professor,,** department of pharmaceutics, **SS Institute of Pharmacy, Sankari**, during the academic year 2022-2023.

*N. Anusuya*

Name: N.ANUSUYA

(Register No : 561997202)

*E. Elavarasan*

Name: E. ELAVARASAN

(Register No: 561997213)

*D. Arunkumar*

Name: D.ARUNKUMAR

(Register No : 561997205)

*D. Karthick*

Name: D.KARTHICK

(Register No: 561997218)

*R. Karthikeyan*

Name: R.KARTHIKEYAN

(Register No: 561997219)

Place: **SS Institute of Pharmacy, Sankari- 637301.**

Date:



*[Signature]*  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**



## CHAPTER X

## 10. SUMMARY AND CONCLUSION

## 10.1 SUMMARY AND CONCLUSION

The topic of our research work is "**FORMULATION AND EVALUATION OF HERBAL CREAM BY USING BAUHINIA TOMENTOSA FOR EVALUATION OF ANTI INFLAMMATORY ACTIVITY**"

Herbal medicines are the oldest form of health care known to mankind. Though there are several allopathic medicines available, many people still rely on nature which has blessed human kind with abundant medicinal plants for prevention and cure of disease.

The risk of inflammation is still increasing world-wide. Many synthetic drugs are commonly used to treat the different types of inflammation conditions. Even though there is an availability of different synthetic drugs to treat inflammation, an exploration of herbal medicine is essential to meet out the cure for the same. Herbs that are having potential anti-inflammation activity are used to further develop novel drugs nowadays. Among those, two particular plants especially medicinal herbs are

The plants have flavanoids which may be responsible for their potential anti-inflammatory properties as mentioned in the traditional claim. In the present research work, an unique combination of active extracts of the herbs are chosen to formulate a herbal CREAM for the treatment of inflammation. Thus, the study is an attempt to evaluate the anti- inflammation activity of herbal CREAM containing active extracts of Bauhinia Tomentosa . The review of literature showed that the formulation of herbal CREAM containing combined active extracts of Bauhinia Tomentosa and evaluation of anti- inflammation activity has not been reported so far

The project entitled "**FORMULATION AND EVALUATION OF HERBAL CREAM BY USING BAUHINIA TOMENTOSA FOR EVALUATION OF ANTI INFLAMMATORY ACTIVITY**" has been achieved with the following results.

The above findings helps to standardize both morphology and anatomical characters. The Physicochemical parameters like Ash values and Extractive values are



**PRINCIPAL**  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



**"Pharmacognostical , Phytochemical and Invitro Anti-Lice  
activity of Ethanolic extract of *Citrus hystrix*"**

*A Dissertation submitted to*

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

**Chennai-600032**

*In partial fulfillment for the award of degree of*

**BACHELOR OF PHARMACY**

*Submitted by*

<b>B.PRADEEP</b>	<b>REG.NO: 561997227</b>
<b>N.SANTHOSHKUMAR</b>	<b>REG.NO: 561997234</b>
<b>M.SHALINI</b>	<b>REG.NO: 561997236</b>
<b>S.SREEJITH</b>	<b>REG.NO: 561997238</b>
<b>A.VIJAYAKUMAR</b>	<b>REG.NO: 561997247</b>

*Under the Guidance of*

**Mr.T. SAMPATH KUMAR., M.PHARM.,  
DEPARTMENT OF PHARMACOGNOSY**



**SS INSTITUTE OF PHARMACY**

**SANKARI, SALEM (DT), TAMIL NADU - 637301**

**SEPTEMBER-2023 (Dec-2023)**



*[Signature]*  
**PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301**



### CERTIFICATE

This is to certify that the Project entitled "**Pharmacognostic , Phytochemical and Invitro Anti-Lice activity of Ethanolic extract of *Citrus hystrix***" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

<b>B.PRADEEP</b>	<b>REG.NO: 561997227</b>
<b>N.SANTHOSHKUMAR</b>	<b>REG.NO: 561997234</b>
<b>M.SHALINI</b>	<b>REG.NO: 561997236</b>
<b>S.SREEJITH</b>	<b>REG.NO: 561997238</b>
<b>A.VIJAYAKUMAR</b>	<b>REG.NO: 561997247</b>

in partial fulfillment of the degree of Bachelor of Pharmacy under the guidance of **Mr. T. SAMPATH KUMAR, M.Pharm., Assistant Professor, Dept. of Pharmacognosy, SS Institute of Pharmacy, Sankari, Salem.**

**Dr. C. Jothimanivannan., M.Pharm., Ph.D.,**

Principal,

SS Institute of Pharmacy,

Sankari, Salem - 637301.

Place: SS Institute of Pharmacy, Sankari- 637301.

Date:



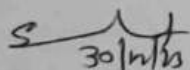
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**



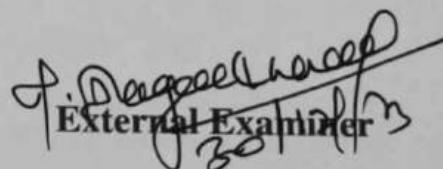


### DECLARATION

The work presented in this dissertation entitled "**Pharmacognostic , Phytochemical and Invitro Anti-Lice activity of Ethanolic extract of *Citrus hystrix***" was carried out by **B.Pradeep (REG.NO:561997227), N.SANTHOSHKUMAR (REG.NO:561997234), M.SHALINI (REG.NO:561997236), S.SREEJITH (REG.NO:561997238) A.VIJAYAKUMAR (REG.NO:561997247)**, to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of Bachelor of Pharmacy was carried out by the candidates at the department of pharmacognosy, under the supervision of **Mr. T. SAMPATH KUMAR, M.Pharm., Assistant Professor, Dept. of Pharmacognosy, SS Institute of Pharmacy, Sankari**, during the academic year 2022-23. We further declare that this work is original and has not been submitted in part or full for the award of any other degree or diploma in any other university.

  
30/12/23

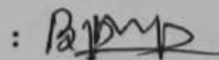
**Internal Examiner**

  
30/12/23  
**External Examiner**

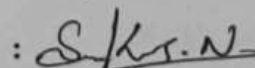
### Convener of Examination

**Place : SS Institute of pharmacy, Sankari      Date : 30/12/23**

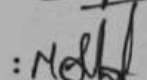
**B.PRADEEP (REG.NO: 561997227)**

: 

**N.SANTHOSHKUMAR (REG.NO: 561997234)**

: 

**M.SHALINI (REG.NO: 561997236)**

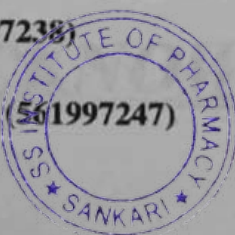
: 

**S.SREEJITH (REG.NO: 561997238)**

: 

**A.VIJAYAKUMAR REG.NO: (561997247)**

: 



**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**

### Summary

The project on the antilice activity of *Citrus hystrix* involved comprehensive investigations, including pharmacognostical studies, phytochemistry studies, and in vitro anti-lice studies.

The pharmacognostical studies provided valuable insights into the botanical characteristics and identification of *Citrus hystrix*.

Phytochemistry studies revealed the presence of bioactive compounds in the plant, contributing to its medicinal properties.

The in vitro anti-lice studies involved the introduction of lice across different concentrations, demonstrating notable activity.

### Conclusion:

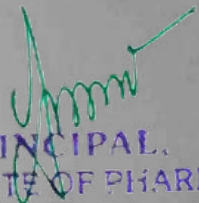
In conclusion, the collective findings of the project underscore the potential of *Citrus hystrix* as a promising candidate for anti-lice treatments.

The integration of pharmacognostical and phytochemistry studies enriched our understanding of the plant's composition.

The in vitro anti-lice studies further affirmed its efficacy, albeit with variations in activity levels across concentrations.

This research lays the foundation for future exploration and development of *Citrus hystrix*-based formulations for combating lice infestations.



  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



**IN-VITRO ACTIVITY OF ETHONOLIC EXTRACT OF *ALBIZIA AMARA*  
IN INDIAN ADULT EARTH WORMS (*PHERETIMA POSTHUMA*)**

*A Dissertation submitted to*

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

**Chennai-600032**

*In partial fulfillment for the award of degree of*

**BACHELOR OF PHARMACY**

*Submitted by*

<b>T. SARANKUMAR</b>	<b>REG.NO: 561997235</b>
<b>G. SHANMUGAM</b>	<b>REG.NO: 561997237</b>
<b>M.SRINIVASAN</b>	<b>REG.NO: 561997239</b>
<b>R. SRITHER</b>	<b>REG.NO: 561997240</b>
<b>R. TAMILSELVAN</b>	<b>REG.NO: 561997244</b>

*Under the Guidance of*

**Mrs. M. VANITHA., M.PHARM.,**

**DEPARTMENT OF PHARMACOLOGY**



**SS INSTITUTE OF PHARMACY**

**SANKARI, SALEM (DT), TAMIL NADU - 637301**

**SEPTEMBER-2023 (DECEMBER - 2023)**

**PRINCIPAL,**

**SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301**







### CERTIFICATE

This is to certify that the Project entitled "**IN-VITRO ACTIVITY OF ETHANOLIC EXTRACT OF *ALBIZIA AMARA ROXB* IN INDIAN ADULT EARTHWORMS (*PHERETIMA POSTHUMA*)**" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

<b>T. SARANKUMAR</b>	<b>REG.NO: 561997235</b>
<b>G. SHANMUGAM</b>	<b>REG.NO: 561997237</b>
<b>M.SRINIVASAN</b>	<b>REG.NO: 561997239</b>
<b>R. SRITHER</b>	<b>REG.NO: 561997240</b>
<b>R. TAMILSELVAN</b>	<b>REG.NO: 561997244</b>

in partial fulfillment of the degree of Bachelor of Pharmacy under the guidance of **Mrs.M ,VANITHA M.Pharm., Assistant Professor, Dept. of Pharmacology, SS Institute of Pharmacy, Sankari, Salem.**

**Dr. C. Jothimanivannan., M.Pharm., Ph.D.,**

Principal,

SS Institute of Pharmacy,

Sankari, Salem - 637301.

Place:SS Institute of Pharmacy, Sankari- 637301.

Date: 30/12/23



**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**



## CERTIFICATE

This is to certify that the Project entitled "*IN-VITRO* ACTIVITY OF ETHANOLIC EXTRACT OF *ALBIZIA AMARA ROXB* IN INDIAN ADULT EARTHWORMS (*PHERETIMA POSTHUMA*)" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

T. SARANKUMAR

REG.NO: 561997235

G. SHANMUGAM

REG.NO: 561997237

M.SRINIVASAN

REG.NO: 561997239

R. SRITHER

REG.NO: 561997240

R. TAMILSELVAN

REG.NO: 561997244

in partial fulfillment of the Degree of Bachelor of Pharmacy under my guidance and supervision in the Department of Pharmacology, SS Institute of Pharmacy, Sankari, Salem.

M. Vanitha 30/12/2020  
Mrs.M. VANITHA., M.Pharm.,

Supervisor/guide, Asst. Professor,

Department of Pharmacology,

SS Institute of Pharmacy,

Sankari- 637301.

Place: SS Institute of Pharmacy, Sankari- 637301.

Date : 30/12/23



PRINCIPAL,

SS INSTITUTE OF PHARMACY,  
UPPANUR (PO), SANKARI (TK),  
SALEM - 637301

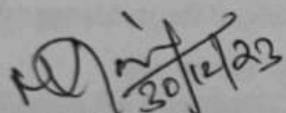


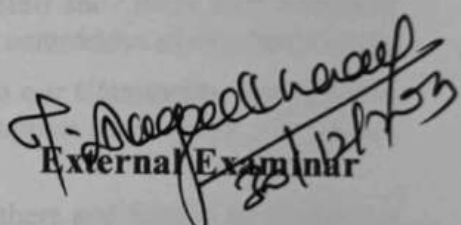


## DECLARATION



The work presented in this dissertation entitled "*IN-VITRO* ACTIVITY OF ETHANOLIC EXTRACT OF *ALBIZIA AMARA ROXB* IN INDIAN ADULT EARTHWORMS (*PHERETIMA POSTHUMA*)" was carried out by T.SARANKUMAR (REG.NO:561997235), G.SHANMUGAM (REG.NO:561997237), M.SRINIVASAN (REG.NO:561997239), R.SRITHER (REG.NO:561997240) R.TAMILSELVAN (REG.NO:561997244), to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of Bachelor of Pharmacy was carried out by the candidates at the department of Pharmacology, under the supervision of Mrs.M. VANITHA, M.Pharm., Assistant Professor, Dept. of Pharmacology, SS Institute of Pharmacy, Sankari, during the academic year 2022-23. We further declare that this work is original and has not been submitted in part or full for the award of any other degree or diploma in any other university.

  
Internal Examiner

  
External Examiner

Convener of Examination

Place: SS Institute of pharmacy, Sankari Date: 30/12/23

T. SARANKUMAR

REG.NO: 561997235 : T. Sarankumar

G. SHANMUGAM

REG.NO: 561997237 : G. Shanmugam

M.SRINIVASAN

REG.NO: 561997239 : M. Srinivasan

R. SRITHER

REG.NO: 561997240 : R. Sritheer

R. TAMILSELVAN

REG.NO: 561997244 : R. Tamilselvan



PRINCIPAL  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



## 8. DISCUSSION

*Albizia Amara* worldwide growing plant exhibits potent diabetic, anti inflammatory, anti oxidant and antihypertensive activity, anti oxidant (Tamaki Hajime b, et al., 2008), Anti ulcer (Thamotharan G et al., 2012). In the present study, we have tested the anti-hyperglycemic potency of *Albizia Amara* ethanolic extract in Alloxan induced diabetic rats as well as anti- hyperlipidemic activity. It is suggested that the anti-hyperglycemic and anti-hyperlipidemic activities of the plant is due to the active principles of plant source. The phytochemical screening of the ethanolic leaf extract shown that isolation and identification of four flavanoids glycosides such as Rutin, apigenin 6-neohesperidose, kaempferol 3-robinobioside and kaempferol 3-rutinoside (Rakesh kumar gupta *et al.*, 2012) and alkaloids, carbohydrates, glycosides, tannins, and triterpens. (Wollenweber *et al.*, 1988).

Phytochemical screening of the crude extracts revealed the presence of flavonoids and polyphenolic compound as one of the major chemical constituents. Polyphenolic compounds shown activity; chemically tannins are polyphenolic compounds. (Bate-Smith E.C. 1962) Some synthetic phenolic s e.g., niclosamide, oxyclozanide and bithionol are shown to interfere with energy generation in helminth parasites by uncoupling oxidative phosphorylation. (Martin R.J. 1997).

It is possible that tannins contained in the extracts of *Albizia Amara* produced similar effects. Another possible effect of tannins is that they can bind to free protein in the gastrointestinal tract of host animal or glycoprotein on the cuticle of the parasite and cause death. (Mali R.G. et al., 2008)

Ethanolic leaves extracts of the *Albizia Amara* showed better activity in dose





**PHARMACOGNOSTICAL AND PHARMACOLOGICAL  
ANALYSIS OF PHYTOCHEMICALS, WITH *IN-VITRO*  
EVALUATION OF DIURETIC ACTIVITIES ON BAMBUSA  
VULGARIS LEAVES**

*A Dissertation submitted to*

**THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY  
Chennai-600032**

*In partial fulfillment for the award of degree of*

**BACHELOR OF PHARMACY**

*Submitted by*

<b>T.PRADEEP</b>	<b>REG NO: 561997228</b>
<b>S.GNANAVEL</b>	<b>REG NO: 560020523558</b>
<b>K.GOKUL</b>	<b>REG NO: 560020523559</b>
<b>D.NANDHAKUMAR</b>	<b>REG NO: 560020523561</b>

*Under the Guidance of*  
**Mrs.V.DEEPABHARATHI, M.PHARM.,**

**ASSISTANT PROFESSOR,  
DEPARTMENT OF PHARMACY PRACTICE.**

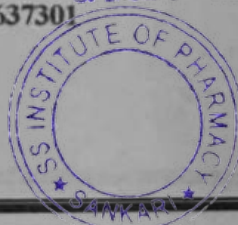


**SS INSTITUTE OF PHARMACY**

**SANKARI, SALEM (DT), TAMIL NADU – 637301**

**MAY-2024 (March-2024)**

**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**







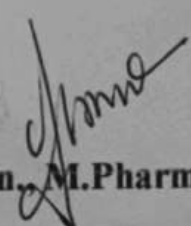
## CERTIFICATE



This is to certify that the Project entitled **"PHARMACOGNOSTICAL AND PHARMACOLOGICAL ANALYSIS OF PHYTOCHEMICALS, WITH *IN-VITRO* EVALUATION OF DIURETIC ACTIVITIES ON BAMBUSA VULGARIS LEAVES"** submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

<b>T.PRADEEP</b>	<b>REG NO: 561997228</b>
<b>S.GNANAVEL</b>	<b>REG NO: 560020523558</b>
<b>K.GOKUL</b>	<b>REG NO: 560020523559</b>
<b>D.NANDHAKUMAR</b>	<b>REG NO: 560020523561</b>

in partial fulfillment of the Degree of Bachelor of Pharmacy under my guidance and supervision of Mrs.V.Deepabharathi, M.Pharm., Assistant professor, Department of Pharmacy practice, SS Institute of Pharmacy, Sankari, Salem.

  
**Dr.C. Jothimanivannan, M.Pharm.,ph.D.,**

principal,

SS Institute of Pharmacy,  
Sankari, Salem- 637301.

Date : 19/06/24

Place: SS Institute of pharmacy, Sankari



  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**





## CERTIFICATE



This is to certify that the Project entitled **"PHARMACOGNOSTICAL AND PHARMACOLOGICAL ANALYSIS OF PHYTOCHEMICALS, WITH *IN-VITRO* EVALUATION OF DIURETIC ACTIVITIES ON BAMBUSA VULGARIS LEAVES"** submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

<b>T.PRADEEP</b>	<b>REG NO: 561997228</b>
<b>S.GNANAVEL</b>	<b>REG NO: 560020523558</b>
<b>K.GOKUL</b>	<b>REG NO: 560020523559</b>
<b>D.NANDHAKUMAR</b>	<b>REG NO: 560020523561</b>

in partial fulfillment of the Degree of Bachelor of Pharmacy under my guidance and supervision of Mrs.V.Deepabharathi, M.Pharm., Assistant professor, Department of Pharmacy practice, SS Institute of Pharmacy, Sankari, Salem.

**Mrs.V.DEEPABHARATHI., M.Pharm,**

**Assistant Professor,**

**Department of pharmacy practice,**

**SS Institute of Pharmacy, Sankari, -637301.**

Date : 19.6.2024

Place: SS Institute of pharmacy, Sankari



**PRINCIPAL.**

**SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301**



## DECLARATION



The work presented in this dissertation entitled "PHARMACOGNOSTICAL AND PHARMACOLOGICAL ANALYSIS OF PHYTOCHEMICALS, WITH IN-VITRO EVALUATION OF DIURETIC ACTIVITIES ON BAMBUSA VULGARIS LEAVES" has been carried out by us under the Guidance and supervision of Mrs.V. DEEPABHARATHI, M.Pharm., Assistant Professor, Dept. of Pharmacy practice, SS Institute of Pharmacy, Sankari, during the academic year 2022-23. We further declare that this work is original and has not been submitted in part or full for the award of any other degree or diploma in any other university.

*T. Pradeep*

**Mr.PRADEEP.T**  
(561997228)

*S. Gnanaavel*  
**Mr.GNANAVEL.S**  
(560020523558)

*K. Gokul*  
**Mr.GOKUL K**  
(560020523559)

*D. Nandhakumar*  
**Mr.NANDHAKUMAR.D**  
(560020523561)

Date : 19.6.2024

Place : SS Institute of pharmacy, Sankari

*[Signature]*  
Signature of the Internal Examiner

19.6.2024  
Date of examination

*[Signature]*  
Signature of the Internal Examiner

**PRINCIPAL,**

**SS INSTITUTE OF PHARMACY,**  
UPPANUR (PO), SANKARI (TK),  
SALEM - 637301





## CONCLUSIONS

### Pharmacognostical studies

The pharmacognostical studies of the leaves *Bambusa vulgaris* was carried out to confirm its unique features. This study reveals the following,

- The macroscopical studies showed the characteristics features of *Bambusa vulgaris* leaves are green colored, smooth surface, faint characteristics, astringent taste and other morphological characters has been well established. Microscopic investigations are the diagnostic features of the plant and its powder analysis helps to distinguish this particular plant (leaves) in whole form and in crude powder form, Microscopical analysis of *Bambusa vulgaris* leaves showed the pre Physiochemical constants were determined for the leaves of *Bambusa vulgaris* such as Ash values, Extractive values, loss on drying. This helps in confirming the identity and purity of this plant and to detect adulterants and its nature.
- The qualitative analysis were carried out to identify inorganic elements present in the plant.

### Phytochemical Studies:

- The phytochemical studies on the leaves of *Bambusa vulgaris* were carried out to bring its importance as valuable medicinal plant.
- The leaves were extracted with ethanol using soxhlet apparatus and the percentage yield was found to be 3.076% W/W
- The plant powder and extracted were subjected to preliminary phytochemical analysis. The preliminary screening analysis reveals the presence of glycosides, saponins, terpenoids, tannins and phenols, steroids, fixed oils and fats, flavonoids.
- TLC analysis of all the extracts was carried out to identify the presence of phytoconstituents.



PRINCIPAL,  
SANKARI INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





**IN-VITRO ANTHELMINTIC ACTIVITY OF VARIOUS  
EXTRACT OF *ABUTILON INDICUM* IN INDIAN  
ADULT EARTHWORMS (*PHERETIMA POSTHUMA*)**

*A Dissertation submitted to*

**THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY  
Chennai-600032**

*In partial fulfillment for the award of degree of  
BACHELOR OF PHARMACY*

*Submitted by*

<b>A.DHARUN</b>	<b>REG.NO:561997210</b>
<b>T.DINESH</b>	<b>REG.NO:561997212</b>
<b>S.NANDHAKUMAR</b>	<b>REG.NO:560020523562</b>
<b>V.SATHISHKUMAR</b>	<b>REG.NO:560020523564</b>

*Under the Guidance of*

**Mr.M.PRAVEEN KUMAR,M.PHARM.,  
ASSISTANT PROFESSOR  
DEPARTMENT OF PHARMACOLOGY**



**SS INSTITUTE OF PHARMACY  
SANKARI, SALEM (DT), TAMIL NADU - 637301  
MARCH-2024 (MAY-2024)**



*[Signature]*  
**PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301**



## CERTIFICATE

This is to certify that the Project entitled "*IN-VITRO* ANTHELMINTIC ACTIVITY OF VARIOUS EXTRACT OF *ABUTILON INDICUM* IN INDIAN ADULT EARTHWORMS (*PHERETIMA POSTHUMA*)" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

A.DHARUN

REG.NO:561997210

T.DINESH

REG.NO:561997212

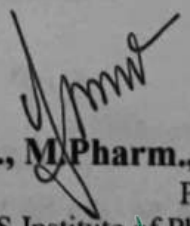
S.NANDHAKUMAR

REG.NO:560020523562

V.SATHISHKUMAR

REG.NO:560020523564

in partial fulfillment of the degree of Bachelor of Pharmacy under the guidance of Mr.M.PRAVEEN KUMAR, M.Pharm., Assistant Professor, Dept. of Pharmacology, SS Institute of Pharmacy, Sankari, Salem.

  
Dr. C. Jothimanivannan., M.Pharm., Ph.D.,  
Principal,  
SS Institute of Pharmacy,  
Sankari, Salem - 637301.

  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301

Place:SS Institute of Pharmacy, Sankari- 637301.

Date: 19.6.24





### CERTIFICATE

This is to certify that the Project entitled "*IN-VITRO* ANTHELMINTIC ACTIVITY OF VARIOUS EXTRACT OF *ABUTILON INDICUM* IN INDIAN ADULT EARTHWORMS (*PHERETIMA POSTHUMA*)" submitted to The Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

A.DHARUN

REG.NO:561997210

T.DINESH

REG.NO:561997212

S.NANDHAKUMAR

REG.NO:560020523562

V.SATHISHKUMAR

REG.NO:560020523564

in partial fulfillment of the Degree of Bachelor of Pharmacy under my guidance and supervision in the Department of Pharmacology, SS Institute of Pharmacy, Sankari, Salem.

**Mr.M. PRAVEEN KUMAR, M.Pharm.,**

Assistant Professor,  
Department of pharmacology,  
SS Institute of Pharmacy,  
Sankari- 637301.

Place :SS Institute of Pharmacy, Sankari- 637301.

Date : 19.6.24



**PRINCIPAL,**  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



## DECLARATION

The work presented in this dissertation entitled "*IN-VITRO* ANTHELMINTIC ACTIVITY OF VARIOUS EXTRACT OF *ABUTILON INDICUM* IN INDIAN ADULT EARTHWORMS(*PHERETIMA POSTHUMA*)" was carried out by S.NANDHAKUMAR(REG.NO:560020523562), V.SATHISHKUMAR(REG.NO:560020523564), T.DINESH (REG.NO:561997212), A.DHARUN (REG.NO:561997210), M.ANANTHKUMAR (REG.NO:560020523557), to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of Bachelor of Pharmacy was carried out by the candidates at the department of pharmacognosy, under the supervision of Mr. M. PRAVEEN KUMAR, M.Pharm., Assistant Professor, Dept. of Pharmacology,, SS Institute of Pharmacy, Sankari, during the academic year 2022-23. We further declare that this work is original and has not been submitted in part or full for the award of any other degree or diploma in any other university.

*A. Dharun*

A.DHARUN  
REG.NO:561997210

*T. D. Dinesh*

T.DINESH  
REG.NO:561997212

*S. Nandhakumar*

S.NANDHAKUMAR  
REG.NO:560020523562

*V. Sathish Kumar*

V.SATHISHKUMAR  
REG.NO:560020523564

*M. Dharithy*

Internal Examiner

*Evaluated*  
*P. Sathish Kumar*  
External Examiner  
*19/06/2024*

Place : SS Institute of pharmacy, Sankari

Date : 19/06/2024

PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



## CONCLUSION

The plant *Abutilon indicum* proves the Anthelmintic activity in the seeds, Malvaceae family. From the results, the ethanolic extract has potent Anthelmintic activity on *Pherethima posthuma*., compared with the standard albendazole drug. When the easy availability of the plant, it is suggested to conducting further *In vivo* studies.

The plants activity is comparable to that of standard anthelmintic drug (albendazole), making it a potential natural alternative for treating intestinal worm infestations.

Further studies are needed to isolate and characterize the specific bioactive compounds responsible for the anthelmintic activity and to evaluate the plants safety and efficacy in human clinical trials.

Overall, the studies suggest that *Abulilon indicum* has promising anthelmintics properties, making it a valuable resource for the development of natural and sustainable treatment for intestinal worm infection.



  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





**FORMULATION AND EVALUATION OF QUETIAPINE  
FUMARATE FLOATING TABLETS BY NON EFFERVESCENT  
TECHNIQUE**

*Dissertation submitted to*  
**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY,  
CHENNAI-32**

*In partial fulfillment for the award of degree of*  
**BACHELOR OF PHARMACY**

*Submitted By*

<b>ARUN.S</b>	<b>Reg No:561997204</b>
<b>DHANASEKARAN.A</b>	<b>Reg No:561997209</b>
<b>GOKUL PRASATH.M</b>	<b>Reg No:561997214</b>
<b>GOKULNATH.M</b>	<b>Reg No:561997215</b>
<b>KAMALESH.S</b>	<b>Reg No:561997217</b>

*Under the guidance of*  
**Mrs. M.GOMATHI M. Pharm.,**  
**Associate Professor,**  
**Department of Pharmaceutics.**



*[Signature]*  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**

**SS INSTITUTE OF PHARMACY,**  
**SANKARI, SALEM (DT)-637301.**  
**DECEMBER-2023 (SEPTEMBER -2023)**








### **CERTIFICATE**

This is to certify that the dissertation entitled "**FORMULATION AND EVALUATION OF QUETIAPINE FUMARATE FLOATING TABLETS BY NON EFFERVESCENT TECHNIQUE**" is the bonafide work carried out by **Mr.Arun S, Mr.Dhanasekaran A, Mr.Gokul prasath.M, Mr.Gokulnath M, Mr.Kamalesh.S** under the guidance of **Mrs.M.Gomathi, M.PHARM., Associate Professor, Department of Pharmaceutics, SS Institute of Pharmacy, Sankari,Salem** in partial fulfillment of requirements for the award of degree of Bachelor of Pharmacy.

This is forwarded to The Tamilnadu Dr. M.G.R. Medical University, Chennai.

  
**Prof. Dr.C. Jothimanivannan, M.Pharm, Ph.D.,**  
**Principal,**  
**SS Institute of pharmacy,**  
**Sankari,**  
**Salem - 637301.**

Date:

Place: Sankari



  
**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**



## **CERTIFICATE**

This is to certify that the dissertation entitled "**FORMULATION AND EVALUATION OF QUETIAPINE FUMARATE FLOATING TABLETS BY NON EFFERVESCENT TECHNIQUE**" is the bonafide work carried out by **Mr.Arun S, Mr.Dhanasekaran A, Mr.Gokul prasath.M, Mr.Gokulnath M, Mr.Kamalesh.S** under my guidance and supervision. This is forwarded to The Tamilnadu Dr. M.G.R. Medical University, Chennai in a partial fulfillment of requirements for the award of degree of Bachelor of Pharmacy.

**Mrs.M. Gomathi, M.Pharm,**

**Associate Professor,**

**Department of Pharmaceutics,**

**SS Institute of Pharmacy,**

**Sankari,**

**Salem -637301.**

Date: 30/12/2023.

Place: Sankari



**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**



### DECLARATION

We hereby declare that this dissertation entitled "**FORMULATION AND EVALUATION OF QUETIAPINE FUMARATE FLOATING TABLETS BY NON EFFERVESCENT TECHNIQUE**" has been carried out by us under the Guidance and supervision of **Mrs.M. Gomathi, M.Pharm, Associate professor, SS Institute of Pharmacy, Sankari**. In a partial fulfillment of requirements for the Bachelor of Pharmacy Degree Course. We further declare that we have not submitted this dissertation previously for the award of any degree or diploma.

Mr. ARUN.S

(561997204)

Mr. DHANASEKARAN.A

(561997209)

Mr. GOKUL PRASATH.M

(561997214)

Mr. GOKULNATH.M

(561997215)

Mr. KAMALESH.S

(561997219)

Date: 30.12.2023.

Place: Sankari



PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301

Signature of the Internal Examiner

Signature of the External Examiner  
30/12/23

Date of Examination 30/12/2023



## CHAPTER XII

## SUMMARY AND CONCLUSION

- Gastro retentive Floating drug delivery system offers a simple and practical approach to achieve increased gastric residence time (GRT)
- Quetiapine Fumarate is preferentially absorbed in the proximal small intestine (narrow absorption window), the drug displays oral bioavailability problems in conventional dosage forms.
- The objective of the present investigation was to develop gastroretentive floating matrix tablet of quetiapine fumarate to achieve controlled release and improve the absorption, by retaining the drug in stomach for a prolonged period of time.
- FT-IR and DSC studies indicated that there was no interaction between drug and excipients.
- Floating matrix tablets were prepared by Non-effervescent technique using different concentrations of gel forming hydrophilic polymers.
- The formulated tablets were analysed for precompression & post compression parameters, in vitro drug release, etc.
- The precompression parameter of all the formulations were within the required limit that was suitable for formulation of the tablets.
- The postcompression parameters such as hardness, friability, uniformity in weight, & drug content of all the formulated tablets were within the acceptable limits.
- The floating lag time and duration of buoyancy were found to be satisfactory.



PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



**INVITRO EVALUATION OF ANTIFUNGAL POTENCY OF THE PLANT EXTRACTS  
OF DIFFERENT PARTS OF *CELOSIA ARGENTEA LINN* AGAINST CANDIDA SPECIES**

*A Dissertation submitted to*

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

**Chennai-600032**

*In partial fulfillment for the award of degree of*

**BACHELOR OF PHARMACY**

*Submitted by*

<b>A.PRAMESHWARAN</b>	<b>REG.NO : 561997229</b>
<b>P. PRIYANKA</b>	<b>REG.NO : 561997230</b>
<b>A.RAJAGURU</b>	<b>REG.NO : 561997231</b>
<b>M.SURESH</b>	<b>REG.NO : 561997242</b>
<b>A.VINITHA</b>	<b>REG.NO : 561997249</b>

*Under the Guidance of*

**Mrs. M. VANITHA. M.PHARM.,**

**Assistant Professor.,**

**DEPARTMENT OF PHARMACOLOGY**



**PRINCIPAL,**  
**SS INSTITUTE OF PHARMACY,**  
**KUPPANUR (PO), SANKARI (TK),**  
**SALEM - 637301**

**SS INSTITUTE OF PHARMACY**

**SANKARI, SALEM (DT), TAMIL NADU - 637301**

**SEPTEMBER - 2023 (DECEMBER - 2023)**





## CERTIFICATE

This is to certify that the Project entitled "INVITRO EVALUATION OF ANTI-FUNGAL POTENCY OF THE PLANT EXTRACTS OF DIFFERENT PARTS OF CELOSIA ARGENTEA LINN CANDIDA SPECIES" submitted to the Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

A.PRAMESHWARAN	REG.NO: 561997229
P. PRIYANKA	REG.NO: 561997230
A.RAJAGURU	REG.NO: 561997231
M.SURESH	REG.NO: 561997242
A.VINITHA	REG.NO: 561997249

in partial fulfilment of the degree of Bachelor of Pharmacy under the guidance of Mrs. M.Vanitha., M.Pharm., Assistant Professor, Department of Pharmacology, SS Institute of Pharmacy, Sankari, Salem.

Dr. C. JOTHIMANIVANNAN, M.PHARM., Ph.D

Principal ,

SS Institute of Pharmacy,

Sankari, Salem - 637301.

Place: SS Institute of Pharmacy, Sankari- 637301.

Date: 30/12/23



PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





## CERTIFICATE

This is to certify that the Project entitled "INVITRO EVALUATION OF ANTI-FUNGAL POTENCY OF THE PLANT EXTRACTS OF DIFFERENT PARTS OF CELOSIA ARGENTEA LINN CANDIDA SPECIES" submitted to the Tamilnadu Dr. M.G.R Medical University, Chennai, is a bonafide project work of

A.PRAMESHWARAN	REG.NO: 561997229
P. PRIYANKA	REG.NO: 561997230
A.RAJAGURU	REG.NO: 561997231
M.SURESH	REG.NO: 561997242
A.VINITHA	REG.NO: 561997249

in partial fulfilment of the degree of Bachelor of Pharmacy under my guidance and supervision in the Department of Pharmacology, SS Institute of Pharmacy, Sankari, Salem.

  
Mrs.M.VANITHA.,M.PHARM.,

Guide, Assistant Professor,

SS Institute of Pharmacy,

Sankari, Salem - 637301.



Place: SS Institute of Pharmacy, Sankari- 637301.

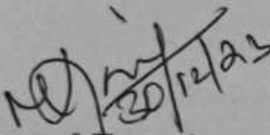
Date: 30/12/23

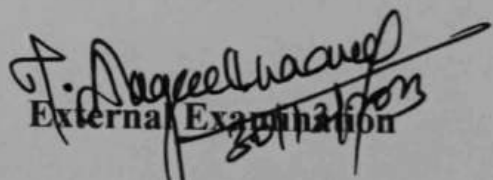
  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301



### DECLARATION

The work presented in this dissertation entitled "INVITRO EVALUATION OF ANTI-FUNGAL POTENCY OF THE PLANT EXTRACTS OF DIFFERENT PARTS OF CELOSIA ARGENTEA LINN CANDIDA SPECIES" was carried out by A.PRAMESHWARAN (REG.NO:561997229), P.PRIYANKA (REG.NO:561997230), A.RAJAGURU (REG.NO:561997231), M.SURESH(REG.NO:561997242) A.VINITHA (REG.NO:561997249), to The Tamilnadu Dr. M.G.R. Medical University, Chennai, in partial fulfillment for the degree of Bachelor of Pharmacy was carried out by the candidates at the department of pharmacognosy, under the supervision of Mrs.M.VANITHA.,M.PHARM., Assistant Professor, Department of Pharmacology, SS Institute of Pharmacy, Sankari, during the academic year 2022-23. We further declare that this work is original and has not been submitted in part or full for the award of any other degree or diploma in any other university.

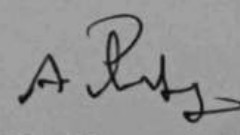
  
Internal Examiner

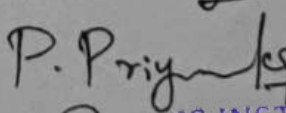
  
External Examiner

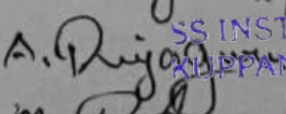
Convener of Examination

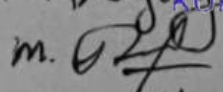
Place : SS Institute of pharmacy, Sankari

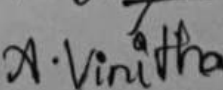
Date : 30/12/23


A.PRAMESHWARAN (REG.NO: 561997229) : 

P.PRIYANKA (REG.NO: 561997230) : 

A.RAJAGURU (REG.NO: 561997231) : 

M.SURESH (REG.NO: 561997242) : 

A.VINITHA (REG.NO: 561997249) : 

  
PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301





## CHAPTER X

### 10. SUMMARY AND CONCLUSION

The dried plant of *Celosia argentea* belonging to the family *Amaranthaceae* has been examined to gain an insight of its phytochemical and pharmacological behaviors.

The phytochemical investigation of ethanolic extract of *Celosia argentea* plant showed the presence of Flavonoids, Alkaloids, Saponins, Steroids, Triterpenoides, Glycosides, Tannins .

The ethanolic extract of dried *Celosia argentea* plant was also tested for its in vitro antifungal activity against the *candida aspergillus* , the extract also showed significant anti-fungal activity.

In conclusion, ethanolic extracts of *Celosia argentea* showed significant antifungal activity against the fungal species *candida aspergillus* by Invitro studies.

The findings of the present study concluded that the ethanolic extracts of *Celosia argentea* can effectively control the growth of fungi by invitro studies.

These plant extracts showed excellent inhibitory activity against the fungal species, *Candida aspergillus*.

Among these ethanolic extracts possessed superior antifungal activity extract of *Celosia argentea*

The present study justified the claimed used of plants in the traditional system of medicines to treat various fungal infections caused by the *Candida* species.

However, further studies are needed to better evaluate the potential effectiveness of the crude extracts as the Antifungal agents.



PRINCIPAL,  
SS INSTITUTE OF PHARMACY,  
KUPPANUR (PO), SANKARI (TK),  
SALEM - 637301