



Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

**APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES**

Date of Application:30-08-2024

Department	BIOTECHNOLOGY	Application No.	20240004
Area of Research	SCIENCE	Research Mode	FULL TIME

**Name** :RAJA MARI D  
**Date of Birth / Age** :17-03-2001 / 23 Years  
**Gender** :FEMALE  
**Category** :SC  
**e-Mail ID** :drajamari2001@gmail.com  
**Mobile** :9363467170



<b>Father's/Husband's Name</b>	DURAIRAJ R	<b>Father's/Husband's Occupation</b>	DAILY WAGES
<b>Family Income</b>	150000	<b>Residential Type</b>	RURAL
<b>Birth Place</b>	SIVAKASI	<b>Mother Tongue</b>	TAMIL
<b>Religion</b>	HINDU	<b>Martial Status</b>	SINGLE
<b>Aadhaar No.</b>	775551045032	<b>PAN No.</b>	EZCPR8645R
<b>Physically Challenged</b>	NO	<b>Type of Disability</b>	-
<b>Address for Communication:</b> 3/85 SIVAKAMIPURAM COLONY SIVAKASI VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626189		<b>Permenant Address:</b> 3/85 SIVAKAMIPURAM COLONY SIVAKASI VIRUDHUNAGAR DISTRICT TAMILNADU INDIA Pin-626189	

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
B.SC.,	MICROBIOLOGY	THE STANDARD FIREWORKS RAJARATHNAM COLLEGE FOR WOMEN	2022	140	1ST CLASS	CORRESPOND
M.SC.,	MICROBIOLOGY	THE STANDARD FIREWORKS RAJARATHNAM COLLEGE FOR WOMEN	2023	7.94	1ST CLASS	CORRESPOND

Experience				
Organization	Designation	Experience From	Experience TO	Work Nature

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
20240004_240830194150	ZHD5MVU0084AUS	30-08-2024	600	SUCCESS

**flower extract against the larvae of *Aedes aegypti*.**

## ABSTRACT

This study will aim to investigate the antilarvicidal activity of *Dahlia pinnata* against *Aedes aegypti* through phytochemical screening and *in silico* and *in vitro* larvicidal analysis. The plant samples of *Dahlia pinnata* were collected, identified and processed for extraction. Phytochemical screening tests were performed to detect bioactive compounds. The presence of various secondary metabolites such as alkaloids, flavonoids, phenols, tannins and terpenoids in both extracts which are known to possess insecticidal and antiviral properties. Molecular Docking studies were conducted by virtually docking the bioactive compounds of *Dahlia pinnata* onto the target proteins of the *Aedes aegypti*. *In vitro* larvicidal assays were performed using serial dilution of the plant extract solution and to determine the morphological changes in the mosquito larvae. This study investigated the larvicidal potential of *Dahlia pinnata* flower extract against *Aedes aegypti* larvae through an integrated approach combining computational (*in silico*) and laboratory-based (*in vitro*) methodologies. In the *in silico* phase, molecular docking studies were conducted to predict the potential interactions between cis-10-Nonadecenoic acid and 2-Bromooctadecanal compounds present in *Dahlia pinnata* extract and molecular targets within *Aedes aegypti* larvae. This computational analysis provided insights into the molecular mechanisms underlying the larvicidal activity of the extract, facilitating the identification of key compounds responsible for its efficacy. Subsequently, in the *in vitro* phase, larvicidal assays were performed to validate the predictions from the computational analysis. Mortality rates for both fresh and dry *Dahlia pinnata* extracts were examined at concentrations of 50, 100, 150, and 200 µg/mL, with 12, 24, and 36-hour incubations. At 50 µg/mL, fresh extract rates were 25%, 53.3%, and 100%, while dry extract rates were 20%, 37.5%, and 100%. At 100 µg/mL, fresh extract rates were 25%, 53.3%, and 100%, and dry extract rates were 20%, 43.8%, and 100%. At 150 µg/mL, fresh extract rates were 35%, 53.8%, and 100%, and dry extract rates were 30%, 50%, and 100%. At 200 µg/mL, fresh extract rates were 30%, 42.8%, and 100%, and dry extract rates were 40%, 50%, and 100%. A series of experiments were conducted to evaluate the concentration-dependent effects of *Dahlia pinnata* flower extract on the mortality rate of *Aedes aegypti* larvae. The results confirmed significant larvicidal activity, with increasing concentrations of the extract correlating with higher mortality rates among the larvae.

KSD 40333731



அறிவியற் புலம்  
FACULTY OF SCIENCE

மதுரை காமராஜர் பல்கலைக்கழக ஆட்சிப்பேரவை

ராஜ மரி. து.

இப்பல்கலைக்கழகத்தில் இணைந்த

தன்னாட்சிக் கல்லூரியான

தி ஸ்டாண்டர்டு பயர் ஓர்க்ஸ் ராஜரத்தினம் மகளிர் கல்லூரி, சிவகாசி

விதித்திருந்த பாடப் பயிற்சியினையும் தேர்வினையும் நன்கு முடித்த பின்னர் ஏப்ரல் 2022 இல் நடைபெற்ற தேர்வில்

முதல் வகுப்பு

பெற்று தேர்வுற்றார் எனக் கல்லூரித் தேர்வு ஏற்புக்குழு பரிந்துரைத்தவாறு.

நுண்ணுயிரியல் பிரிவில் அறிவியல் இளையர் பட்டம்

பெறுதற்கு உரியவர் ஆகின்றார் என இதன்வழி அறிவிக்கின்றது.

பல்கலைக்கழக இலச்சினையுடன் இது வழங்கப்படுகின்றது.

The Senate of the MADURAI KAMARAJ UNIVERSITY

hereby makes known that

RAJA MARI D

has been admitted to the

DEGREE OF BACHELOR OF SCIENCE IN MICROBIOLOGY

he/she having successfully completed the course of studies and examination prescribed therefor by the

THE STANDARD FIREWORKS RAJARATNAM COLLEGE FOR WOMEN, SIVAKASI

(an Autonomous College of this University) and upon the recommendation by the College Awards Committee and

having been placed by them in the

FIRST CLASS

at the Examination held in

APRIL 2022

in the MEDIUM ENGLISH

Register No. : 19UY028

Centre Code : 615

Given under the seal of the University



*[Signature]*

தேர்வாளையர்  
Controller of Examinations

*[Signature]*

பொறுப்பு  
In-charge

பதிவாளர்  
Registrar

துணைவேந்தர்  
Vice-Chancellor

பல்கலைநகர், மதுரை - 625 021  
Palkalai Nagar, Madurai - 625 021  
நாள் Dated 02 November 2023



**THE STANDARD FIREWORKS RAJARATNAM COLLEGE FOR WOMEN (Autonomous)**  
(Affiliated to Madurai Kamaraj University, Re-accredited with 'A+' Grade by NAAC & College with Potential for Excellence by UGC)

SIVAKASI - 626 123, TAMIL NADU, INDIA

(Mentor Institution Under UGC PARAMARSH)

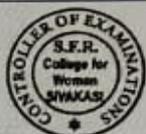
M.Sc., DEGREE EXAMINATIONS, APRIL 2024



CSFR : 514278

**STATEMENT OF MARKS AND GRADES (CBCS) under OBE**

NAME : RAJA MARI D		CENTRE CODE AA615		REGISTER No.: 22PX008								
MAJOR : MICROBIOLOGY				DATE OF PUBLICATION : 23/05/2024								
MEDIUM OF INSTRUCTION : ENGLISH												
CODE	TITLE OF THE COURSE	CREDITS	MAXIMUM			MARKS SECURED			GRADE POINT	GRADE	RESULT	MONTH & YEAR
			INT	EXT	TOTAL	INT	EXT	TOTAL				
<b>CORE COURSES</b>												
<b>SEMESTER - I:</b>												
MDMB11	BACTERIOLOGY	4	40	60	100	37	41	78	7.8	D	P	N22
MDMB12	CHEMISTRY OF BIOMOLECULES	4	40	60	100	31	51	82	8.2	D+	P	N22
MDMB13	ESSENTIALS OF BIOTECHNOLOGY	4	40	60	100	35	29	64	6.4	A	P	N22
MDMB1L1	PRACTICAL I	3	50	50	100	47	38	85	8.5	D++	P	N22
MDMB1L2	PRACTICAL II	2	50	50	100	44	46	90	9.0	O	P	N22
<b>SEMESTER - II:</b>												
MDMB21	CLINICAL IMMUNOLOGY	4	40	60	100	36	27	63	6.3	A	P	A23
MDMB22	INTERMEDIARY METABOLISM	4	40	60	100	38	45	83	8.3	D+	P	A23
MDMB23	FERMENTATION TECHNOLOGY	4	40	60	100	32	45	77	7.7	D	P	A23
MDMB2L1	PRACTICAL III	3	50	50	100	42	47	89	8.9	D++	P	A23
MDMB2L2	PRACTICAL IV	2	50	50	100	50	42	92	9.2	O	P	A23
<b>SEMESTER - III:</b>												
MDMB31	AQUATIC MICROBIOLOGY	4	40	60	100	33	47	80	8.0	D+	P	N23
MDMB32	MICROBIAL GENETICS & MOLECULAR BIOLOGY	4	40	60	100	36	32	68	6.8	A+	P	N23
MDMB33	AGRO-TECHNOLOGY	4	40	60	100	36	45	81	8.1	D+	P	N23
MDMB3L1	PRACTICAL V	3	50	50	100	44	46	90	9.0	O	P	N23
MDMB3L2	PRACTICAL VI	2	50	50	100	50	46	96	9.6	O+	P	N23
<b>SEMESTER - IV:</b>												
MDMB41	DIAGNOSTIC MICROBIOLOGY	5	40	60	100	30	45	75	7.5	D	P	A24
MDMB42	COMPUTATIONAL BIOLOGY	5	40	60	100	37	44	81	8.1	D+	P	A24
MDMB4L	PRACTICAL VII	4	50	50	100	47	49	96	9.6	O+	P	A24
MDMB4P	PROJECT AND VIVA VOCE	5		100	100		95	95	9.5	O+	P	A24
<< END OF STATEMENT >>												
<b>ELECTIVE COURSES</b>												
MDMB1E1	DEVELOPMENTAL BIOLOGY	5	40	60	100	38	45	83	8.3	D+	P	N22
MDEN2E	CAREER ENGLISH	5	40	60	100	32	33	65	6.5	A+	P	A23
MDMB3E1	ECOLOGY & BIOREMEDIATION	5	40	60	100	33	47	80	8.0	D+	P	N23
MDMB4E1	RESEARCH METHODOLOGY & BIOSTATISTICS	5	40	60	100	36	44	80	8.0	D+	P	A24
<< END OF STATEMENT >>												
SIGNATURE OF THE CANDIDATE	COURSES	CGPA	CREDITS	GRADE	CLASS				CREDITS			
	CORE	8.13	70	D+	FIRST				Earned	Required		
	ELECTIVE		20						90	90		



OFFICE SEAL

*Dr. D. Rajamani*  
Dr.D. Rajamani  
CONTROLLER OF EXAMINATIONS



*R. Sudha Periam*  
Dr.R. Sudha Periathal  
PRINCIPAL

# THE STANDARD FIREWORKS RAJARATNAM COLLEGE FOR WOMEN (Autonomous)

(Affiliated to Madurai Kamaraj University, Re-accredited with 'A+' GRADE by NAAC,  
College with Potential for Excellence by UGC and Mentor Institution under UGC PARAMARSH)

SIVAKASI - 626 123



## TRANSFER CUM CONDUCT CERTIFICATE

Serial No. : 4756

Roll No. : 2216106

UMIS No. : 9000660029

Admission No. : 14067

1. Name of the Student (in Block Letters)  
(as entered in +2 or equivalent Certificate) : **RAJA MARI D**
2. Name of the Father : DURAIRAJ R
3. Name of the Mother : AYYAMMAL D
4. Nationality : INDIAN
5. Religion, Community & Caste : REFER COMMUNITY CERTIFICATE
6. Mother Tongue : TAMIL
7. Gender : **FEMALE**
8. Date of Birth as entered in the Admission Register : 17/03/2001  
SEVENTEENTH MARCH TWO THOUSAND ONE
9. Personal Marks of Identification a) A mole on the right hand palm  
b) A scar on the left leg
10. Date of admission and Class in which admitted : 13/07/2022, I M.Sc. Microbiology
11. Class in which the Student was studying at the time of leaving the College : II M.Sc. Microbiology
12. Whether the student has paid the fees due to the College : YES
13. Whether the student is in receipt of any scholarship : NIL
14. Date on Which the student actually left the college : 17/04/2024
15. The Student's Conduct and Character : GOOD
16. Date of the Transfer Certificate : 10/05/2024

17.	Academic Year	Class Studied	First Language	Medium of Instruction
	2022 - 2024	M.Sc. Microbiology	NIL	ENGLISH

\* Erasures and unauthenticated or fraudulent alternations in the certificate will lead to its cancellation.

*D. Raja Mari*  
Signature of the Student

*D. H. W. W. W. W. W. W.*  
Signature of the Parent / Guardian

*R. Sudha Periyathai*  
Signature of the Principal  
**Dr. R.SUDHA PERIATHAI**  
PRINCIPAL  
The Standard Fireworks Rajaratnam  
College for Women (Autonomous),  
SIVAKASI.

आयकर विभाग

INCOME TAX DEPARTMENT



सत्यमेव जयते

भारत सरकार

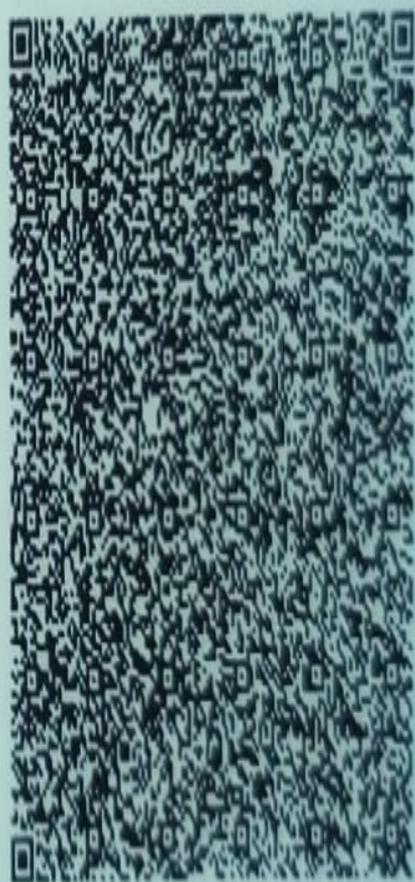
GOVT. OF INDIA



स्थायी लेखा संख्या कार्ड

Permanent Account Number Card

EZCPR8645R



नाम / Name

RAJA MARI D

पिता का नाम / Father's Name

DURAIRAJ

जन्म की तारीख /

Date of Birth

17/03/2001

*D. Raja Mari*

हस्ताक्षर / Signature

10112020

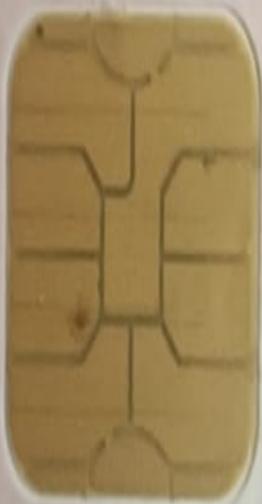


# UNION OF INDIA Driving Licence (Tamil Nadu)



DL. No. **TN95 20200002938**

(NT)



Date of Issue

Valid Till

09-11-2020

(NT)

16-03-2041



Date of Birth

Blood Group

17-03-2001

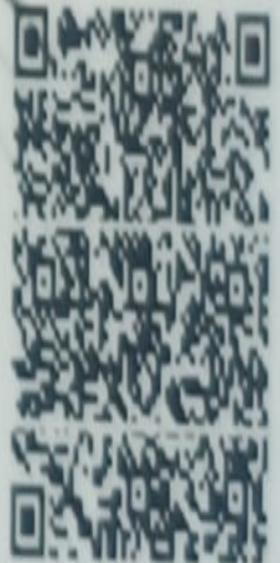
O+

Name

**RAJA MARI D**

Son/Daughter/Wife of

**DURAIRAJ**



SC



மாவட்டக் குறியீடு எண் / District Code	: 26
வட்டக் குறியீடு எண் / Taluk Code	: 04
கிராமக் குறியீடு எண் / Village Code	: 028

**வகுப்புச் சான்றிதழ்**  
**Community Certificate**



சான்றிதழ் எண் / Certificate No: TN-5202204297193

நாள் / Date: 30-04-2022

விருதுநகர் மாவட்டம், சிவகாசி வட்டம், விஸ்வநத்தம் கிராமம் / நகரம், கதவு எண் 3/85, சிவகாமிபுரம் காலனி என்ற முகவரியில் வசித்துவரும் செல்வி ராஜு மாரி து தந்தையின் பெயர் திரு துரைராஜ் ரா என்பவர், அரசியலமைப்பு (ஆதி திராவிடர்) ஆணை (திருத்தம்) சட்டம், 2021 (மத்திய சட்டம் 18, 2021) வரிசை எண் 17 ன்படி தேவேந்திரகுல வேளாளர் என்ற பட்டியல் இன வகுப்பைச் சேர்ந்தவர் எனச் சான்றளிக்கப்படுகிறது.

This is to certify that Selvi Raja Mari D daughter of Thiru Durairaj R residing at Door No. 3/85, Sivakampuram colony, of Viswanatham Village / Town of Sivakasi Taluk of Virudhunagar District of the State of Tamil Nadu belongs Devendrakula Velalar Community, which is recognized as a Scheduled Caste as per The constitution (scheduled castes) order (amendment) Act, 2021 (Central Act 18 of 2021) vide Serial No. 17.

Signature valid

Digitally signed by RAJAKUMAR SHAMUGAM  
Date: 30/04/2022 10:49:03 IST

மாவட்டம் / District : Virudhunagar  
வட்டம் / Taluk : Sivakasi

பதவி / Designation : வட்டாட்சியர் / Tahsildar

குறிப்பு / Remarks :

இச்சான்றிதழ் மின்கையொப்பம் இடப்பட்டதால், கையொப்பம் அல்லது முத்திரை தேவையில்லை /  
This certificate is digitally signed and does not require any seal or signature.



ஆவண விவரங்களை உறுதி செய்ய:

(அ) TN-5202204297193 என்ற தனிப்பட்ட சான்றிதழ் எண்ணை <https://tnedistrict.tn.gov.in/tneda/VerifyCerti.xhtml> ல் உள்ளீடு செய்து சரிபார்க்கவும்.

(அல்லது)

(ஆ) கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் இணையதளத்தில் சரிபார்க்கவும்.

Genuineness of the certificate can be verified by.

(a) Keying in the unique certificate number TN-5202204297193 in the URL <https://tnedistrict.tn.gov.in/tneda/VerifyCerti.xhtml>.

(or)

(b) Reading the 2D barcode with mobile barcode reader and verify through online.