

BAPATLACOLLEGEOF PHARMACY

(Sponsored by Bapatla Education Society),(Recognized by A.I.C.T.E & PCI)
(Affiliated to Jawaharlal Nehru Technological University, Kakinada)
Bapatla (Dist),Andhra Pradesh-522101

MOUs established in AY; 2020-2021

Sl.No	Name of Collaborative agency with contract details	Date of Establishment	Duration	Area of collaboration	List of Activities conducted
01	VV Institute of Pharmaceutical Sciences, Gudlavalleru, Krishna Dt, AP- 521356	11/06/2020	1 year	Guest Lectures & Faculty Development Programmes	Faculty Development on 14/12/2020 and 1/02/2021
02	SIMS college of Pharmacy,Guntur-52201	11/06/2020	5 years	Guest Lectures & Faculty Development Programmes	Faculty Development on 14/12/20, 16/09/21, 21/02/2022 and 28/02/2023
03	Joginpally BR Pharmacy College(JBRPC), Amdapur X Road, Yenkapally, Moinabad, Rangareddy, Telangana State- 500075	12/08/2020	5 years	Guest Lectures & Faculty Development Programmes	Faculty Development on 26/9/22, 04/10/2021 and 7/12/2020
04	NRI college of Pharmacy, pothavarappadu, Airipalli mandalam, Krishna Dt, AP- 521212	16/09/2020	1 year	Guest Lectures & Faculty Development Programmes	Guest Lecture on 20/07/2021
05	National Biodiversity Authority, Taramani, Chennai-600113	07/09/2020 16/11/2020 23/11/2020	1 year	Patents Approval	Patents Approval on 30/10/2021, 17/11/2022 and 28/12/2022
06	Natco Pharma Limited, Banjarahills, Hyderabad, Telangana-500034	02/01/2021	1 year	Internships, Industrial Training & Visit	Guest lecture on 26/06/22 and author contribution of NATCO DGM for Pharmaceutical Dosage Technology book publication

T. grealatoushna

PRINCIPAL

Bapatla College of Pharmacy

BAPATLA - 522 101

GSTIN: 37AAATB6795M1Z2



Bapatla College of Pharmacy

(Sponsored by The Bapatla Education Society and Affiliated to JNTU Kakinada)

BAPATLA-522101, Bapatla District (A.P.)

Office: 08643-224144, Principal:08643-221407, Email: bcp.principal@gmail.com

Dr. T.E. GOPALA KRISHNA MURTHY Principal

MEMORANDUM OF UNDERSTANDING

Between

BAPATLA COLLEGE OF PHARMACY

8

V. V. INSTITUTE OF PHARMACEUTICAL SCIENCES

This Memorandum of Understanding (here in after called as the 'MoU') is entered into on this the 11th day of June, 2020, by and between:

BAPATLA COLLEGE OF PHARMACY, Bapatla College Rd, S.N.P. Agraharam, Bapatla, Andhra Pradesh 522101, the first Party represented herein by its Principal Dr. T. E. Gopala Krishna Murthy.

AND

V. V. INSTITUTE OF PHARMACEUTICAL SCIENCES, Gudlavalleru, Krishna Dist, Andhra Pradesh, INDIA. 521356, the second Party represented herein by its Principal Dr. A. Lakshmana Rao.

1. PURPOSE AND SCOPE

This Memorandum of Understanding (MoU) outlines the intentions of the First Party and the Second Party to engage in collaborative activities and initiatives for mutual benefit and advancement of education.



Bapatla College of Pharmacy

(Sponsored by The Bapatla Education Society and Affiliated to JNTU Kakinada)

BAPATLA-522101, Bapatla District (A.P.)

Office: 08643-224144, Principal:08643-221407, Email: bcp.principal@gmail.com

Dr. T.E. GOPALA KRISHNA MURTHY Principal

2. AREAS OF COLLABORATION

The First Party and the Second Party agree to explore opportunities for collaboration in the following areas:

- a. Joint research projects
- b. Faculty and student exchange programs
- c. Sharing of academic resources, including course materials and publications
- d. Joint seminars, workshops, and conferences
- e. Other areas of mutual interest as identified by both parties

3. RESPONSIBILITIES OF THE PARTIES

- 3.1 The First Party shall:
 - a. Provide necessary resources and facilities for agreed-upon activities.
 - Designate a point of contact for coordination and communication.
 - c. Share relevant expertise and knowledge for collaborative initiatives.
- 3.2 The Second Party shall:
 - a. Contribute to the collaborative activities as agreed upon.
 - Allocate resources and facilities as required.
 - c. Appoint a point of contact for coordination and communication.

GSTIN: 37AAATB6795M1Z2



Bapatla College of Pharmacy

(Sponsored by The Bapatla Education Society and Affiliated to JNTU Kakinada)

BAPATLA-522101, Bapatla District (A.P.)

Office: 08643-224144, Principal:08643-221407, Email: bcp.principal@gmail.com

Dr. T.E. GOPALA KRISHNA MURTHY Principal

4. DURATION

This MoU shall come into effect on the date of signing and shall remain in force for One year unless terminated earlier by mutual agreement in writing.

5. CONFIDENTIALITY

The Parties agree to treat all confidential information exchanged during the collaboration as confidential and shall not disclose it to any third party without prior written consent.

6. AMENDMENTS

Any amendments to this MoU shall be made in writing and agreed upon by both Parties.

7. TERMINATION

Either Party may terminate this MoU by providing written notice 30 days in advance. In the event of termination, ongoing collaborative activities shall be completed as agreed upon.

IN WITNESS WHEREOF, the authorized representatives of the First Party and the Second Party have executed this MoU as of the date 11th day of June, 2020.

For and behalf of

Bapatla College Of Pharmacy

Name: Dr. T. E. Gopala Krishna Murthy

Designation: Professor & Principal

Date: 11th day of June 2020

PRINCIPAL College of Pharmacy Bapatla 522 101 For and behalf of

V. V. Institute of Pharmaceutical Sciences

Name: Dr. A. Lakshmana Rao

Designation: Professor & Principal

Date: 11th day of June 2020

Dr. A. Lakshmana Rao

V. V. Institute of Pharmaceutical Sciences Seshadri Rao Knowledge Village GUDLAVALLERU - 521 356.

A. F. A. W. C. Im.

Mr. V.L. Vinod Kumar

Coordinator



CERTIFICATE OF PARTICIPATION

This is to certify that Dr./Mr/	Mrs/Miss N. Bala Krishr	a Associate
professor of Bapa	alla collage of pharmacy	has participated in
One week Faculty development program on "A l	Future of Artificial Intelligence in H	ealthcare System an Advanced
Data Mining Tool" held during 14-12-2020	to 19-12-2020 at V. V. Institute	of Pharmaceutical Sciences,
Gudlavalleru, Andhra Pradesh.		
A la mar		Je T. Gralatoush

Dr. A. Lakshmana Janatla College of Pharmacy
BAPATLA - 522 101



CERTIFICATE OF PARTICIPATION

This is to certify that	Dr./Mr/Mrs/Miss Dr. V. Gree Jonardhan, Associate
professoyof_	Rapalla collage of pharmacy has participated in
One week Faculty development progra	m on "A Future of Artificial Intelligence in Healthcare System an Advanced
Data Mining Tool" held during l	4-12-2020 to 19-12-2020 at V. V. Institute of Pharmaceutical Sciences,
Gudlavalleru, Andhra Pradesh.	8, ,, ,

Mr. V.L. Vinod Kumar Coordinator Dr. A. Lakshmana Rao PRINCIPAL Principal BAPATLA 572 101



CERTIFICATE OF PARTICIPATION

This is to certify that Dr./Mr/Mrs/Miss P Machu labo Assistant

Orofasso of Gopalla college of phormacy has participated in One week Faculty development program on "Gendered Contours of the Pandemic Reinventing Public Policy and Leadership Transformation" held during 01-02-2021 to 05-02-2021 at V. V. Institute of Pharmaceutical Sciences, Gudlavalleru, Andhra Pradesh.

Mr. M. Sai Vishnu Coordinator

PRINCIPAL

BAPATLA - 572 101

Dr. A. Lakshmana Rao Principal



CERTIFICATE OF PARTICIPATION

This is to certify that	Dr./Mr/Mrs	Miss G.	Anitha A	ssociate	
professor					has
participated in One week I					
Reinventing Public Policy					
V. V. Institute of Pharmace					

Mr. M. Sai Vishnu Coordinator

PRINCIPAL PRINCIPAL PRINCIPAL BAPATLA - 522 101

Dr. A. Lakshmana Rao Principal

MS College of Pharmacy

Affiliated to Acharya Nagarjuna University, Approved by AICTE, P.C.I. and Govt. of A.P. Mangaldas Nagar, GUNTUR - 522 001, A.P. India

Tel: .0863-2331527, 2211171, Cell: 9701666637, 9701666648. Fax: 0863-2321686

Site: www.simscollege.ac.in E-mail: simspharmacy.guntur@gmail.com



MEMORANDUM OF UNDERSTANDING

Between

SIMS COLLEGE OF PHARMACY

R,

BAPATLA COLLEGE OF PHARMACY

This Memorandum of Understanding (here in after called as the 'MoU') is entered into on this the 11th of June 2020, by and between:

SIMS College of Pharmacy, Mangaladas Nagar, Guntur, Andhra Pradesh-522001, the First Party represented herein by its Principal Dr. S.Manohar Babu.

AND

Bapatla College of Pharmacy, Bapatla College Rd, S.N.P. Agraharam, Bapatla, Andhra Pradesh 522101, the Second Party represented herein by its Principal Dr. T.E. Gopala Krishna Murthy.

1. PURPOSE AND SCOPE

This Memorandum of Understanding (MoU) outlines the intentions of the First Party and the Second Party to engage in collaborative activities and initiatives for mutual benefit and advancement of education.

2. AREAS OF COLLABORATION

The First Party and the Second Party agree to explore opportunities for collaboration in the following areas:

- a. Joint research projects
- b. Faculty and student exchange programs

Page 1 of 3 SIMS GROUP OF INSTITUTIONS

- c. Sharing of academic resources, including course materials and publications
- d. Joint seminars, workshops, and conferences
- e. Other areas of mutual interest as identified by both parties

3. RESPONSIBILITIES OF THE PARTIES

- 3.1 The First Party shall:
 - a. Provide necessary resources and facilities for agreed-upon activities.
 - b. Designate a point of contact for coordination and communication.
 - c. Share relevant expertise and knowledge for collaborative initiatives.
- 3.2 The Second Party shall:
 - a. Contribute to the collaborative activities as agreed upon.
 - b. Allocate resources and facilities as required.
 - c. Appoint a point of contact for coordination and communication.

4. DURATION

This MoU shall come into effect on the date of signing and shall remain in force for five year unless terminated earlier by mutual agreement in writing.

5. CONFIDENTIALITY

The Parties agree to treat all confidential information exchanged during the collaboration as confidential and shall not disclose it to any third party without prior written consent.

6. AMENDMENTS

Any amendments to this MoU shall be made in writing and agreed upon by both Parties.

7. TERMINATION

Either Party may terminate this MoU by providing written notice 30 days in advance. In the event of termination, ongoing collaborative activities shall be completed as agreed upon.

IN WITNESS WHEREOF, the authorized representatives of the First Party and the Second Party have executed this MoU as of the date 11th day of June 2020.

For and behalf of

SIMS College of Pharmacy

For and behalf of

Bapatla College of Pharmacy

PRINCIPAL SIMS COLLEGE OF PHARMAS

- GUNTUR.

Bapatla 522 101

Mame: Dr. T.E. Gopala Krishna Murthy,

lege o

Name: Dr. S.Manohar Babu

Designation: Professor & Principal GUNTUS Designation: Professor & Principal

Date: 11th day of June 2020 Date: 11th day of June 2020

OLLEGE OF PHARMACY MANGALDAS NAGAR, GUNTUR- 522001 ISSO 9901: 2008 CERTIFIED INSTITUTION APPROVED BY AICTE & PCI, NEW DELHI, INDIA AFFLIATED BY ACHARYA NAGARJUNA UNIVERSITY

CERTIFICATE

OF PARTICIPATION

This certificate is awarded to

This certificate is awarded to
De l'este Michael Philo professor
1 Production of the second of
of
Medicinal Chemistry" held from 28.02.2023 to 04.03.2023 organic
College of Phatmacy.
Contege of the sandonlan

CONVENOR

PRINCIPAL

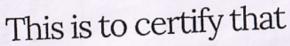


SIMS COLLEGE OF PHARMACY

MANGALDAS NAGAR, GUNTUR-522001, ISSO 9901: 2008 CERTIFIED INSTITUTION

APPROVED BY AICTE &PCI, NEW DELHI, INDIA

AFFILIATED BY ACHARYA NAGARJUNA UNIVERSITY



Convenor

PRINCIPAL

PRINCIPAL

PAPATLA - 522 101

PRINCIPAL



Approved by AICTE &PCI, New Delhi, India Affliated by Acharya Nagarjuna University

Certificate of Participation

This is presented to

Convenor

PRINCIPAL

BAPATLA - 522 101





SIMS COLLEGE OF PHARMACY



MANGALDAS NAGAR, GUNTUR-522001 ISSO 9901 : 2008 CERTIFIED INSTITUTION
APPROVED BY AICTE &PCI, NEW DELHI, INDIA
AFFLIATED BY ACHARYA NAGARJUNA UNIVERSITY

CERTIFICATE OF PARTICIPATION

Presented To

Dr/Mr/	/Mrs/Miss	Ch. Ver	nu babu	M.pharm	. Assistant profe	2650Y
of	Bapatla college	of phan	racy			for his/her
						Development
Progra	am on "Asses	ssmer	nt Str	atergy	for OBE	Mapping held
from 1	4.12.2020 to	19.12.	2020	at SIMS	College o	of Pharmacy.

Convenor

PRINCIPAL
PRINCIPAL
3apatla College of Pharmac)
BAPATLA-572 101



SIMS COLLEGE OF PHARMACY



MANGALDAS NAGAR, GUNTUR-522001 ISSO 9901 : 2008 CERTIFIED INSTITUTION
APPROVED BY AICTE &PCI, NEW DELHI, INDIA
AFFLIATED BY ACHARYA NAGARJUNA UNIVERSITY

CERTIFICATE OF PARTICIPATION

Presented To

Dr/Mr/	/Mrs/Miss	Dr. U.	sai kisho	ise M. phar	m. php. Assoc	iate professor
of	Bopatla college	of phan	macy	•••••••	•••••	for his/her
active	participation	in A	one	week	Faculty	Development
Progra	am on "Asse	essmer	nt Str	atergy	for OBE	Mapping held
from 1	4.12.2020 to	19.12.2	2020	at SIMS	College c	of Pharmacy.

Convenor

PRINCIPAL

Bapatia College of Pharmas

BAPATI A - 522 101

MEMORANDUM OF UNDERSTANDING

Between

BAPATLA COLLEGE OF PHARMACY

and

JOGINPALLY B R PHARMACY COLLEGE (JBRPC)

This Memorandum of Understanding (hereinafter called as the 'MoU') is entered from this 12thof August 2020, by and between:

Bapatla College of Pharmacy, Bapatla College Rd, S.N.P. Agraharam, Bapatla, Andhra Pradesh 522101, which is represented by its principal herein, Dr. T.E. Gopala Krishna Murthy named as first party.

AND

Joginpally B R Pharmacy College (JBRPC), Amdapur X Road, Yenkapally, Moinabad, Ranga Reddy, Telangana State, 500075, Telangana, India, the second party represented herein by its Principal Dr. J V C Sharma.

1. PURPOSE AND SCOPE

This Memorandum of Understanding (MoU) outlines the intentions of the First Party and the Second Party to engage in collaborative activities and initiatives for mutual benefit and advancement of education.

2. AREAS OF COLLABORATION

The First Party and the Second Party agree to explore opportunities for collaboration in the following areas:

- · Joint research projects
- Faculty and student exchange programs
- Sharing of academic resources, including course materials and publications
- · Joint seminars, workshops, and conferences
- Other areas of mutual interest as identified by both parties

3. RESPONSIBILITIES OF THE PARTIES

3.1 The First Party shall:

- Provide necessary resources and facilities for agreed-upon activities.
- Designate a point of contact for coordination and communication.
- Share relevant expertise and knowledge for collaborative initiatives.

3.2 The Second Party shall:

- Contribute to the collaborative activities as agreed upon.
- Allocate resources and facilities as required.
- Appoint a point of contact for coordination and communication.

4. DURATION

This MoU shall come into effect on the date of signing and shall remain in force for five year unless terminated earlier by mutual agreement in writing.

5. CONFIDENTIALITY

The Parties agree to treat all confidential information exchanged during the collaboration as confidential and shall not disclose it to any third party without prior written consent

6. AMENDMENTS

Any amendments to this MoU shall be made in writing and agreed upon by both Parties.

7. TERMINATION

Either Party may terminate this MoU by providing written notice 30 days in advance. In the event of termination, ongoing collaborative activities shall be completed as agreed upon.

IN WITNESS WHEREOF, the authorized representatives of the First Party and the Second Party have executed this MoU as of the date 12th of August 2020.

For and behalf of

Bapatla College of Pharmacy

Name: Dr. T.E. Gopala Krishna Murthy.
Designation: Professor & Principal

Date: 12th of August 2020

PRINCIPAL

Bapatla College of Pharman,

Bapatta 522 101

For and behalf of Joginpally B R Pharmacy College (JBRPC),

Name: Dr. JVC Sharma Designation: Professor & Principal

Date: 12th of August 2020

PRINCIPAL

OGINPALLY B.R. PHAMACY COLLEGE Yenkapally (V), Moinabad (M) R.R. Dist., Hyderabad-500 075





Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr. B. Sninivasa Rao	of
Bapatla College of Pharmacy	has participated and
successfully completed One Week Faculty Development Program	on "WRITING AND
PUBLISHING RESEARCH AND REVIEW ARTICLES" Organized	by Joginpally B.R.
Pharmacy College, Moinabad, from 26th - 30th September, 2022.	

Convener

PRINCIPAL

Bapatla College of Pharmacy

BAPATLA - 522 101

Dung Principal

(1.





Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr. M. Vasavi	Chandrika of
Bapatla College of Pharmacy	has participated and
Bapatla College of Pharmacy successfully completed One Week Faculty Development	nent Program on "WRITING AND
PUBLISHING RESEARCH AND REVIEW ARTICI	ES" Organized by Joginpally B.R.
Pharmacy College, Moinabad, from 26th - 30th Septem	ber, 2022.

Coordinator

Convener

B.0

PRINCIPAL PRINCIPAL BAPATLA - 572 101

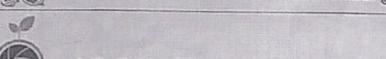




Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr. P. Snidevi	of
Bapatla College of Pharmacy	has participated and
Bapatla College of Pharmacy successfully completed One Week Faculty Development	Program on "WRITING AND
PUBLISHING RESEARCH AND REVIEW ARTICLES"	
Pharmacy College, Moinabad, from 26th - 30th September, 2	2022.

Makewari Convener





Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr. R. Venkata Krishna	of
Bapatla College of Pharmacy	_ has participated and
successfully completed One Week Faculty Development Program	on "WRITING AND
PUBLISHING RESEARCH AND REVIEW ARTICLES" Organize	d by Joginpally B.R.
Pharmacy College, Moinabad, from 26th - 30th September, 2022.	

JBRPC

Convener

Principal

Muy

PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101





Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr. Ch. Venu Babu	of
Bapatla college of Phaemacy	has participated and
Bapatla college of Phaemacy successfully completed One Week Faculty Development Program	on "STATISTICAL
METHODS REQUIRED FOR RESEARCH" Organized by Joginpa	ally B.R. Pharmacy
College, Moinabad, from $04^{th} - 08^{th}$ October, 2021.	

Galini Coordinator

Convener

000

PRINCIPAL PRINCIPAL PRINCIPAL SOLIEGE OF Pharmac)

BAPATLA 572 101







Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr. B. Sudher Choudas	of
successfully completed One Week Faculty Development Program	on "STATISTICAL
METHODS REQUIRED FOR RESEARCH" Organized by Joginpa	lly B.R. Pharmacy
College, Moinabad, from 04th – 08th October, 2021.	

بينغلو Coordinator

Convener

PRINCIPAL

Bapatla College of Pharman

BAPATLA - 522 104

Principal

(B)



Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr. K. Polinachandra Rao	of
Bapatta college of Phaemacy has participated	and
successfully completed One Week Faculty Development Program on "TEACH	ING
METHODOLOGIES DURING AND AFTER PANDEMIC PERIOD - BUILDIN	G e-
CONTENT" Organized by Joginpally B.R. Pharmacy College, Moinabad, from 07th -	- 11 th
December, 2020.	
11. Mil-	

Mull

College of Pharmacy Principal



Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr.	Neelam Be	gumof		
Bapatta collège	of Pharmacy	has participated and		
successfully completed One Week	Faculty Development	Program on "TEACHING		
METHODOLOGIES DURING ANI	O AFTER PANDEMI	C PERIOD – BUILDING e-		
CONTENT" Organized by Joginpally B.R. Pharmacy College, Moinabad, from 07th - 11th				
December, 2020.				
Coordinator	Convener Bapat	PRINCIPAL ALLING PRINCIPAL ACOUNTS OF Pharmacy Principal APATLA - 522 101		



Certificate of Participation

This is to certify that Mr./Mrs./M	s./Dr. K. Ranjoth	of
	of Phaemacy	has participated and
successfully completed One W	eek Faculty Development	Program on "TEACHING
METHODOLOGIES DURING	AND AFTER PANDEMI	C PERIOD – BUILDING e-
CONTENT" Organized by Joginpally B.R. Pharmacy College, Moinabad, from 07th - 11th		
December, 2020.		
7.14	11 William I.	goralet good
Coordinator	Convener gapa	PRINCIPASIA Alluly Principal



Certificate of Participation

This is to certify that Mr./Mrs./Ms./Dr	. M. Poonghuzh	ali of	
Bapatla college of	Pharmacy.	has participated and	
successfully completed One Week	Faculty Development	Program on "TEACHING	
METHODOLOGIES DURING AN	D AFTER PANDEMI	C PERIOD – BUILDING e-	
CONTENT" Organized by Joginpally B.R. Pharmacy College, Moinabad, from 07th - 11th			
December, 2020.			
Coordinator	Convener	PRINCIPAL AULIUS Principal	



Bapatla College of Pharmary

(Sponsored by The Bapatla Education Society and Affiliated to JNTU Kakinada)

BAPATLA-522101, Bapatla District (A.P.)

Office: 08643-224144, Principal:08643-221407, Email: bcp.principal@gmail.com

Dr. T.E. GOPALA KRISHNA MURTHY Principal

MEMORANDUM OF UNDERSTANDING

This memorandum of understanding is (hereinafter called as the 'MOU') IS ENTERED into on this 16th day of September Two Thousand Twenty.

BY AND BETWEEN

Bapatla College of Pharmacy, Kothapalem, GBC Road, Bapatla, Guntur (Dist.), Andhra Pradesh-522101, which is represented herein by its principal Prof. & Dr. T. E. Gopala Krishna Murthy (herein after referred as First party, the Institution which expression, unless excluded by or repugnant to the subject or context shall include its successors- in office, administrators and assigns).

AND

NRI College of pharmacy, Pothavarappadu, Agiripalli Mandal, Krishna District, Andhra Pradesh-521212, Affiliated to JNTUK, KAKINADA the second Party represented herein by its principal Dr.Y.Ankamma Chowdary referred as second party.

The objectives of the MOU are:

- To promote and enhance academic interest between two institutions.
- To promote research and continuing education activities between institutions.
- To encourage students to participate in conference, workshops and short term courses.
- To utilize the expertise of senior faculty as Resource Persons.
- e. To plan a joint research and collaborative activity on mutual benefits.
- To facilitate usage of academic infrastructure for students and faculty members on mutual basis.

Terms and conditions:

- This MOU will be in force from the date up to One year it is signed by representatives of two institutions.
- This agreement does not involve any financial transactions between the two parties.
- c. The agreement will be in legitimacy for a period of One year from the day of signing of this agreement, until it is expressed terminated by either party on mutually agreed terms, as the case may be, will take effective steps for implementation of this MOU.
- d. Both the parties may terminate this MOU upon 30 calendar days notice in writing. In the event of termination, both parties have to discharge their obligations.

AGREED

Authorized signatory with seal

T. goldstoughn

PRINCIPAL Bapatla College of Pharmacy Bapatla 522 101 College of Agiripani (M)

Agiripani (M)

Krishna Oist.

Agiripani (M)

Agiripani (M)

Agiripani (M)

Agiripani (M)

Agiripani (M)

Authorized signatory with scal
PRINCIPAL
NRI College of Pharmacy
POTHAVARAPPADU (V)
Agiripelli (M), Krishna District

(yd Classony

Address of Party One:

Bapatla College of Pharmacy, Kothapalem, GBC Road, Bapatla-522101 Bapatla (Dist), Andhra PradeshAddress of Party Two:

NRI College of pharmacy, Pothavarappadu village, Agiripalli Mandal, Krishna District, Andhra Pradesh-521212





National Biodiversity Authority

राष्ट्रीय जैव विविधता प्राधिकरण

(Statutory dody of Ministry of Environment, Prinset and Clarate Change, Government of India)



J. Justin Mohan, IFS Secretary

雪 - 91 44 2254 1071

長 =91 44 2254 1074 図 sceretary@nba.nic.in ⊕ www.nbaindia.org 5⁸ Floor, CSIR Road, TICEL Bio Park, Tommani, Chennai - 600 113, Tamil Nadu, India. 5 वां तल, शीएकआईआर रोड. टाइयल बायो चर्क. लस्पणि, केनाई-600113 वरित नाडू शास्त्र.

NBA/IPR Appl/3964/20-21/3403

24.12.2020

To Dr. T. E. Gopala Krishnan Murthy, Principal, Bapatla College of Pharmacy, Bapatla - 522 101, Guntur District, Andhra Pradesh.

Sir,

Sub: Approval for applying for IPR as per Section 6 of the Biological Diversity Act, 2002 read with Rule 18 of the Biological Diversity Rules, 2004 – reg.

Ref: Application in Form - III received by this office on 09.03.2020.

With reference to your application cited in reference on the subject cited above to facilitate for IPR (4504/CHE/2014) on the invention titled "Statin impregnated collagen based dermal scaffolds made of cow urine" using the biological resources mentioned in the Schedule B, Annex A of the Agreement has been approved by the National Biodiversity Authority subject to the conditions laid down in the agreement.

In this regard, I am enclosing herewith one mutually signed stamp paper agreement executed between National Biodiversity Authority and the applicant for the applicant's reference and compliance. It is also to inform you that breach of the terms of agreement and provisions of the Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 made thereunder will invite imposition of penalties as per Section 55, 56 & 57 of the Biological Diversity Act, 2002.

Please acknowledge receipt of this communication.

Yours faithfully,

(J. Justin Mohan)

2. 2mhis strhay

Secretary, NBA

Encl.: as above.

Copy to: Member Secretary, Andhra Pradesh Biodiversity Board, Flat No.210 Walnut Block, Raintree Park, Nagarjuna Nagar, Opp. Nagarjuna University, NH-5, Guntur District, Andhra Pradesh – 522 508.



हा.No. ၁ ရှင်း ညရန် အမြဲ အမြဲ အမြဲ Rs.20/-

Sold to:- T.E GOPAL KRISHNA MURTHY S/o SUBBA RAO, BAPATLA
For Whom:- PRINICIPAL BAPATLA COLLAGE OF PHARAMACY, BAPATLA

72AA 766188

PERLI PRA SANJAMBEEVENA KUMAR LICENSED STAMP VENDOR RL.No. 07-20-003-2020 R.L.No. 07-20-002/2017, L.No. 07-20-001/2011 NANDIRAJUTHOTA, BAPATLA (M) Cell: 9440453430

AGREEMENT FOR ACCESS AND BENEFIT SHARING

(Form-III - For filing applications for obtaining any Intellectual Property Right)

(Under the Biological Diversity Act, 2002 and Rules, 2004 and Guidelines on ABS Regulations, 2014)

This Agreement is made and entered on this 7th day of September- 2020 at Chennai, India

Between

National Biodiversity Authority, a statutory body established under the Biological Diversity Act, 2002, having its head office at 5th Floor, TICEL Bio Park, Taramani, Chennai-600 113, Tamil Nadu, India (hereafter "NBA"), acting through and represented by the Secretary, NBA/authorized signatory of NBA, being the person authorised to execute this Agreement.

Dr. Talasila E Gobala Krishna Murthy, citizen of India, having address at Bapatla College of Pharmacy, Bapatla, Guntur District, Andhra Pradesh - 522101., hereafter the "Applicant".

Hereafter referred to as the "Parties" and individually as a "Party"

Bapatla College of Pharmacy BAPATLA - 522 101, WHEREAS the NBA is the authority established under the Biological Diversity Act, 2002 (hereafter "the Act") authorised to grant approval for the purpose set forth herein and to determine terms and conditions to secure fair and equitable sharing of benefits arising out of the use of biological resources, knowledge and practices associated with their use;

WHEREAS the Applicant has submitted an application in Form III (Appl.no 3964 dated 09.03.2020) under the Biological Diversity Rules, 2004 (hereafter the "Rules, 2004") to seek prior approval from NBA;

WHEREAS under the Rules and the guidelines on access to biological resources and/or associated knowledge and benefit sharing regulations, 2014 made under the Act, the approval shall be in the form of a written agreement duly executed between the Parties (hereafter the "Agreement");

AND the Parties have entered into this Agreement for access and benefit sharing according to the terms and conditions set out below.

NOW the Parties agree as follows:

1. Definition

For the purpose of this Agreement, the expression "Effective Date" shall meanthe date on which both the parties sign this Agreement. In case the parties sign on different dates, the effective date shall be the date signed by NBA;

2. Terms and Conditions of the Agreement

2.1 Grant of approval

The NBA hereby grants approval forfiling applications for obtaining Intellectual Property Right ("IPR") over the invention as described in Annex B, only in the countries mentioned in Annex D subject to such other terms and conditions set forth in this Agreement.

2.2 Scope and extent

2.3 Period

The approval is limited to the extent and for the purpose for which it is accorded under the appropriate Annexures.

Period of Agreement -This Agreement shall remain in force from the effective date of this Agreement till the subsistence of the IPR for which approval was granted.

2 Notwithstanding the above, this Agreement shall remain in force until the applicant fulfils all the obligations as required under this Agreement.

Bapatla College of Pharmacy BAPATLA - 522 101.

2.4 Transfer to third party or by operation of law

In the event that the IPR of the Applicant is transferred by way of an assignment, licensing or by operation of law (including in cases of death or bankruptcy or dissolution of a company), all rights and obligations under this Agreement shall be binding upon the assignee or licensee or legal representative or the person to whom the IPR devolves as the case may be.

In the case of above eventuality, the legal representative or the assignee or licensee or the person to whom the IPR has devolved shall intimate and submit such relevant documents to NBA within **sixty days** of the happening of such event. Upon receiving such intimation, NBA may amend the agreement under clause 13 of this Agreement so as to ensure fair and equitable benefit sharing.

3. Obligations of the Applicant

- 3.1. The Applicant shall share benefits as stipulated under Schedule A.
 - 3.2 The permission granted to the Applicant is limited to that granted by the NBA in Annex-B of Schedule B of this Agreement. All other activities of the Applicant which require NBA's prior approval will need to be applied separately in the concerned Form under Rules, 2004. Further, the Applicant shall intimate to the NBA in the event of seeking IPR in other territories and thereafter the Agreement's annex will be suitably amended.
- 3.3 The Applicant shall abide by all the terms and conditions of the Agreement and other related legislations in force including any clearances required from the concerned authorities, such as the Chief Wildlife Warden in protected areas and forest authorities in other forest areas.
- 3.4 The Applicant shall, in the event that the Applicant forms a body corporate, association or organization under section 3(2)(c), intimate the same and submit all the related documents to NBA within 90 days from the completion of that event. Subsequent to the said intimation, NBA shall decide whether this Agreement shall be amended as per clause 13 or a fresh approval is required. NBA's decision in this regard shall be final.

3.5 The Applicant shall have India as its first source of supply and/or cultivation of biological resources for the commercialization of IPR as the case may be.

The Applicant shall in the event of any breach of this Agreement pay such compensation commensurate with the damage incurred to the Republic of India or to the benefit claimers as decided by the appropriate forum.

Bapatla College of Pharmacy BAPATLA - 522 101.

enna'

- 3.7 The Applicant shall keep all the relevant records that serve as a proof of the monetary benefits shared by the Applicant with NBA or the concerned benefit claimers as the case may be, together with supporting documents. This may be submitted to NBA as specified from time to time and such records shall be retained for at least three (3) years after the termination of this Agreement.
- 3.8 NBA shall have the right to regulate /monitor the activities approved under this Agreement, by itself or through any appropriate agency as it may deem fit.
- 3.9 Whenever the Applicant requires to access biological resources for commercial utilization of the IPR for which approval is granted under this Agreement, the Applicant shall take prior approval of NBA under Form I of the Rules, 2004 or the respective form of the concerned State biodiversity rules.
- 3.10 The Applicant shall notify in writing to the NBA about the grant of IPR and the assignment or licensing of such IPR, if any, in each of the countries/territories as specified in Annex D, within60 days from the date of grant of the said IPR.
- 3.11 The Applicant shall, in case of any modification or improvement or commercialization of the invention/ product/process of the IPR, intimate to NBA within 45 days of the happening of such event. Based on such intimation, NBA may decide to review the earlier approval and its decision shall be final.
- 3.12 The Applicant, in the event of decision to withdraw or abandon the patent application, shall intimate to NBA within 45 days of the happening of such event.

3.13 Status Reports

- 3.13.1 The Applicant shall submit a status report for each reporting year not later than two months of the end of each reporting year in the prescribed format of NBA.
- 3.13.2 During the subsistence of this Agreement, the Applicant shall submit separate status reports in relation to each of the countries/territories mentioned in Annex D for each reporting year in the prescribed format of NBA. This shall be submitted not later two months of the end of each reporting year.

3.13.3 Non-submission of the status reports within the stipulated time period in relation to any of the countries/territories mentioned in Annex D will be construed as a breach for which penalty may be imposed by NBA under clause 6.0f.this Agreement.

3.13.4 The Applicant shall submit a copy of Form 27 of the Indian Patent Rales, 2015 within one month of submitting the same to the Patent Office.

PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

Theletowshin

4. Fair and Equitable Benefit Sharing

- 4.1 The Applicant shall share benefits as per Schedule A in monetary and/or non-monetary mode.
- 4.2 The Applicant shall make the payment preferably by way of demand draft or any other approved mode of payment and the same shall be drawn in the name of "National Biodiversity Fund".

5. Written Notice

m

5.1 Any communication including serving notices under this Agreement, shall be in writing and communicated by Registered post with acknowledgement due or email or fax in the address mentioned hereunder.

If to NBA:

The Secretary, NBA, 5th Floor, TICEL Bio Park, Taramani, Chennai-600 113, Tamil Nadu, India. secretary@nba.nic.in

If to the Applicant

Dr. Talasila E Gopala Krishna Murthy, Principal, Bapatla College of Pharmacy, Bapatla, Guntur District, Andhra Pradesh – 522101. Mobile - +91-9912342094. Email: bcp.principal@gmail.com

- 5.2 Notice is deemed to have been given if duly communicated in accordance with the Indian Contract Act, 1872 and the Information Technology Act, 2000 and related Indian legislations.
- 5.3 Any change in the address/email address/fax of the Parties shall be notified to the other Party within 15 days of such change by way of a notice.

6. Procedure for imposing penalty in case of breach.

6.1 If NBA has prima facie evidence to the effect that the Applicant has committed a breach of any of the terms of this Agreement, NBA shall send a written notice to the Applicant communicating the default or details of the breach within 30 days of the discovery of that event, giving an opportunity to be heard to the Applicant.

The Applicant shall within 30 days from the date of serving of such notice appond in writing to NBA.

- 6.3 Upon receiving such explanation from the Applicant, NBA shall take into account the explanation and decide if there is a breach committed by Applicant or not. In the event that the NBA does not receive such explanation from the Applicant, NBA shall send final notice to the Applicant. If the Applicant responds within 30 days, NBA shall be taken into account the explanation and decide on the breach. If the Applicant does not respond within 30 days, the Applicant will be deemed to be in breach of this Agreement.
- 6.4 In the event that the Applicant does not respond to the final opportunity given by NBA or in the event that NBA decides that there is a breach of this Agreement, NBA has the power to issue any order executable under section 53 of the Act including imposition of penalty of a sum which may extend to one lakh rupees as determined by NBA from time to time and in addition direct the Applicant to pay such compensation commensurate with the damage incurred by the Republic of India or the benefit claimers.
- 6.5 Penalties imposed by NBA under this clause shall be in addition to any recovery of any monetary benefits due, compliance with directions or orders issued by NBA and without prejudice to any other rights under this Agreement.
- 6.6 Notwithstanding any of the clauses above, in addition to imposition of penalty, if the breach or default committed by the Applicant amounts to violation of any of the provisions of the Act, appropriate legal proceedings shall be initiated under Section 61 of the Act.

7. Termination and Revocation

- 7.1 Subject to clause 2.3, the Agreement shall stand automatically terminated on the completion of the period agreed to between the Parties including the period of extension agreed to, if any. On termination, the Applicant shall comply with obligation under clause 7.3.
- 7.2 During the subsistence of this Agreement, the Applicant shall have an option to initiate termination of this Agreement by sending a request to NBA in the form of a notice stating valid reasons for the same. On receipt of the same, it shall be the discretion of NBA to accept the reasons specified by the Applicant or not. In the event of its decision to terminate, NBA shall intimate to the applicant by way of a notice within 90 days of making the decision. On receipt of such a notice from NBA, the applicant shall comply with clause 8.3.
- 7.3 Upon termination of the Agreement, the Applicant shall pay all outstanding dues including the benefit sharing amount and submit status report dues, if any, and the applicant within 45 days of the date of termination of this Agreement.

NBA may withdraw the approval granted and revoke this Agreement in case of occurrence of any of the conditions mentioned in Rule 15 of the Rules, 2004 or the applicant performs activities contrary to any restriction or prohibition imposed by NBA or under the Act and Rules, 2004.

8. Liabilities and Indemnification

- 8.1 NBA shall not be liable for any loss or damage whatsoever caused to the Applicant due to revocation of approval for access and/or termination of this Agreement on any grounds whatsoever.
- 8.2 The Applicant shall be solely responsible for any claims by third parties arising from the Applicant's acts or omissions in the course of performing this Agreement and under no circumstances shall the NBA be held responsible or liable for any claims by such third parties.
- 8.3 The Applicant shall pay such sum for breach committed by the Applicant as determined by NBA under clause 6 of this Agreement which is in addition to the compensation commensurate with the damage incurred by the Republic of India or the benefit claimers that the Applicant is liable to pay as decided by the appropriate forum.
- 8.4 The Applicant shall indemnify and save NBA and its employees, members and officers, from and against all claims, demands, losses, damages, costs (including attorney fees), actions, suits or other proceedings, all in any manner based upon, arising out of, related to, occasioned by or attributable to, any acts or conduct of the Applicant, its employees or agents, (whether by reason of negligence or otherwise) in the performance by or on behalf of the Applicant of the provisions of this Agreement or any activity undertaken or purported to be undertaken under the authority or pursuant to the terms of this Agreement.

9. Confidentiality

- 9.1 Upon request from the Applicant, NBA shall keep as confidential that information which is desired to be kept as confidential by the Applicant.
- 9.2 Notwithstanding the above, confidential information may be disclosed by NBA to the extent required by any law or regulation or order of any authority established by law having jurisdiction over any of the Parties or in the opinion of NBA such disclosure becomes necessary to deal with any emergency situations, or national or public interest.

10. Arbitration

Incase any dispute or difference arises out of the interpretation of any clauses of the Agreement, either of the Parties may give the other Party a notice clearly identifying and providing details of the dispute. On receipt of such notice by the other Party, the Parties shall try to settle such dispute/difference amicably between them by negotiating in good faith within 30 days of the receipt of such

10.2 If the dispute or difference is not resolved by such negotiations within the period mentioned, the dispute or difference shall be referred to the sole arbitrator appointed by NBA.

- 10.3 The arbitration shall be governed by the Arbitration and Conciliation Act, 1996 and the rules framed thereunder. The place of arbitration shall be Chennai, India.
- 10.4 The award of the Arbitrator shall be final, conclusive and binding on the Parties. The Arbitrator shall be competent to decide whether any matter or dispute or difference referred to him falls within the purview of arbitration.

11. Governing Law and Jurisdiction

- 11.1 This Agreement is governed by and is to be construed in accordance with the laws of India without regard to the principles of conflicts of laws subject to the provisions of arbitration clauses to this Agreement.
- 11.2 In the event of a dispute or difference not settled through arbitration as specified in clause 11, the Parties shall irrevocably and unconditionally submit to the appropriate court of jurisdiction in Chennai.
- 11.3 As regards all other aspects and the terms and conditions not provided for this in this Agreement, they shall be governed by the provisions of the Act read with Rules and Regulations made thereunder.
- 11.4 This Agreement shall not in any way constitute or be presumed to constitute a partnership or a joint venture or a joint enterprise in any way or for any purpose between the Parties hereto or make the parties in any way liable as partners of or as agents for one another.

12. Severability

- 12.1 If any part of this Agreement is declared or held improper or unjustifiable or invalid by a Court of Law for any reason, the deficiency or invalidity of that part shall not affect the validity of the remainder which will continue in full force and effect and be construed as if the Agreement had been executed without the invalid portion.
- 12.2 However the remainder of the Agreement shall not come into force unless the remainder is consistent with the declaration or order or judgment of the Court.

13. Amendment

No amendment to this Agreement shall be valid or binding upon the Parties, unless of each Party by their duly and legally authorized persons and such amendment shall be made as a supplementary agreement along with Annexes, as applicable.

negotiations, understanding, representations and commitments and sets down the complete terms and conditions of Agreement between the parties as to the subject

15. Annex and Schedules

- a. The Schedules and their Annexes attached to this Agreement or Schedule that may be added subsequently by way of an amendment under the provisions of this Agreement, shall form an integral part of this Agreement and shall be binding on the Parties.
- b. This Agreement has been executed in duplicate, each of which shall be deemed to be original; one shall be retained by the NBA and other by the Applicant and both shall constitute one and the same instrument.

IN WITNESS WHEREOF the parties hereto have signed in this Agreement on the day month and the year aforesaid in this Agreement.

(S/d with date)

Signed by the Authorized person of the

T. Bolakoaslan

(S/d with date)

Signed by the Applicants
PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

For National Biodiversity Authority

Witnesses

1. Signature

Name

Address

ऑ. नरेन्द्रन टी / pr Narendran T तजनीजी जयविवरी (अर्थुमीजार) / Technical OfficentPR)

तापुर्तीस जैव बहितिका प्रायुक्तिकाल / Nethonal Blodiversity Authority भारत कारकार / Gomernment of India

Sai तान, टायसान बागोपास्क / 5° Floor, TICEL Bio Park, तारमार्गा, चेन्तई / Taramani, Chemiel-600113

10.6

2. Signature

Name

Address

K. CHITRARASU

Advisor (Law)
National Biodiversity Authority,
Govt. of India
TICEL Bio Park, 5th Floor,
CSIR Road, Taramani,
Chennai - 600 113.

For the Applicant

Witnesses

1. Signature

Name: Y. Sushma

Address: Asst. Professor, Bapatla College of Pharmacy, Bapatla-522101, Guntur Dist., A.P.

Signature

Name: T. Vijay Sekhar

Address: Jr. Assistant, Bapatla College of Pharmacy, Bapatla-522101, Guntur Dist., A.P.

T. Erysy Servar

SCHEDULE A - BENEFIT SHARING COMPONENT

- (i) Where the applicant himself commercializes the process/product/innovation, the monetary benefit sharing shall be 0.2% on the annual gross ex-factory sale minus government taxes.
- (ii) Where the applicant assigns/licenses the process/product/innovation to a third party for commercialization, the applicant shall pay to NBA 3.0% of the fee received (in any form including the license/assignee fee) and 2.0% of the royalty amount received annually from the assignee/licensee.

SCHEDULE B - ANNEXES TO BE ATTACHED

- ANNEX A -Details of biological resources and/or knowledge associated thereto and geographical locations
- ANNEX B Title, Details of the invention and the patent application number in case patent has been filed
- ANNEX C Authorisation made by the Applicant (if any) for signing the Agreement and/or filing IPR

ANNEX D - Name of the countries/territories where IPR over the invention is sought to be taken

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

2. 2mhis Mohay

Biodiversi

Annexure-A

Details of biological resources and/or knowledge associated thereto and geographical locations

Collagen is extracted from the animal bones as per standard established procedure. The animal bones were collected from the slater house located at Rajivgandhi Colony, Railpet, Bapatla.

PRINCIPAL patta College of Pharmacy

Wellowers it of the control of the c

ANNEX - B

Title, Details of the invention and the patent application number in case patent has been filed





Controller General of Patonts, Designs and Trademarks Department of Industrial Policy and Promotion Ministry of Commerce and Industry

	Application Details	
APPLICATION NUMBER	4504/CHE/2014	
APPLICATION TYPE	ORDINARY APPLICATION	
DATE OF FILING	16/09/2014	
APPLICANT NAME	TALASILA ESWARA GOPALA KRISHNA MURTHY	
TITLE OF INVENTION	STATIN IMPREGNATED COLLAGEN BASED DERMAL SCAFFOLDS MADE OF COW URINE	
FIELD OF INVENTION	BIOTECHNOLOGY	
E-MAIL (As Per Record)		
ADDITIONAL-EMAIL (As Per Record)	gopalakrishnatalasila@yahoo.com	
E-MAIL (UPDATED Online)		
PRIORITY DATE		
REQUEST FOR EXAMINATION DATE	11/04/2017	
PUBLICATION DATE (U/S 11A)	01/07/2016	
FIRST EXAMINATION REPORT DATE	17/10/2019	
REPLY TO FER DATE	23/04/2020	



ANNEX - C

Authorisation made by the Applicant (if any) for signing the Agreement and/or filing IPR

Answer: --- Not Applicable ---

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

Chenna Chenna

ANNEX - D

Name of the countries/territories where IPR over the invention is sought to be taken

Answer: India

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

A diodiversity Puthority Ch. anal.



National Biodiversity Authority

राष्ट्रीय जैव विविधता प्राधिकरण

(Statutory body of Ministry of Environment, Forest and Climate Change, Government of India)



J. Justin Mohan, IFS Secretary

Secretary@nba.nic.in @ www.nbaindia.org

5° Floor, CSIR Road, TICEL Bio Park, Turumani, Chennai - 600 113, Tamil Nadu, India. 5 वा तल, शीएकआईआर तंत्र, टाइकल बायों कर्फ, टाइमिंग, केमई - 600115 वर्निश नाह, पाला.

NBA/IPR Appl/3888/20-21/ 2892

16 .11.2020 19

To
Dr. Talasila E Gopala Krishna Murthy
Principal,
Bapatla College of Pharmacy, Bapatla,
Guntur District, Andhra Pradesh - 522101
Mobile - +91-9912342094
Email: bcp.principal@gmail.com

Sir/Madam,

Sub: Approval for applying for IPR as per Section 6 of the Biological Diversity Act, 2002 read with Rules 18 of the Biological Diversity Rules, 2004 – reg.

Ref: Application in Form-III No. 3888

With reference to your application cited in reference on the subject cited above to facilitate for IPR on patent application no. (201641014417) the invention titled "Pharmaceutical compositions comprising rutin isolated from Dactyloctenium aegyptium" using the biological resource Dactyloctenium aegyptium has been approved by the National Biodiversity Authority subject to the conditions laid down namely in the agreement.

In this regard, I am enclosing herewith one mutually signed stamp paper agreement executed between National Biodiversity Authority and the applicant for the applicant's reference and compliance. It is also to inform you that breach of the terms of agreement and provisions of the Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 made thereunder will invite imposition of penalties as per Section 55, 56 & 57 of the Biological Diversity Act, 2002.

Please acknowledge receipt of this communication.

Yours faithfully,

(J. Justin Mohan) Secretary, NBA

Encl.: As above.

Copy to:

Member Secretary, Andhra Pradesh Biodiversity Board, Flat No.210 Walnut Block, Raintree Park, Nagarjuna Nagar, Opp. Nagarjuna University, NH-5, Guntur District, Andhra Pradesh - 522508



ಆಂದ್ರ್ಯವರ್ಷ आंध्र प्रदेश ANDHRA PRADESH Sold to: T.E. 8 2008 of and of along the grant of grant o R.L.No.07-20-004/2020 To 31-12-2022 D.No. 11-7-3, Kalidas Street, Birpatla Guntur Dt. A.P. Pin No-522101

AGREEMENT FOR ACCESS AND BENEFIT SHARING

(Form-III - For filing applications for obtaining any Intellectual Property Right)

(Under the Biological Diversity Act, 2002 and Rules, 2004 and Guidelines on ABS Regulations, 2014) November

This Agreement is made and entered on this day of Sopt.-2020 at Chennai, India

Between

National Biodiversity Authority, a statutory body established under the Biological Diversity Act, 2002, having its head office at 5th Floor, TICEL Bio Park, Taramani, Chennai-600 113, Tamil NBA/a And And Tamil Nadu, India (hereafter "NBA"), acting through and represented by the Secretary, BA/authorized signatory of NBA, being the person authorised to execute this Agreement.

Talas le Gopala Krishna Murthy, citizen of India, having address at Bapatla College of armacy, Rapatla, Guntur District, Andhra Pradesh - 522101., hereafter the "Applicant".

referred to as the "Parties" and individually as a "Party".

T. Galatoust: Bapatla College of Pharmacy BAPATLA - 522 101.

No.: 8555033344.

WHEREAS the NBA is the authority established under the Biological Diversity Act, 2002 (hereafter "the Act") authorised to grant approval for the purpose set forth herein and to determine terms and conditions to secure fair and equitable sharing of benefits arising out of the use of biological resources, knowledge and practices associated with their use;

WHEREAS the Applicant has submitted an application in Form III (Appl.no 3888 dated 13.05.2020) under the Biological Diversity Rules, 2004 (hereafter the "Rules, 2004") to seek prior approval from NBA;

WHEREAS under the Rules and the guidelines on access to biological resources and/or associated knowledge and benefit sharing regulations, 2014 made under the Act, the approval shall be in the form of a written agreement duly executed between the Parties (hereafter the "Agreement");

AND the Parties have entered into this Agreement for access and benefit sharing according to the terms and conditions set out below.

NOW the Parties agree as follows:

1. Definition

For the purpose of this Agreement, the expression "Effective Date" shall meanthe date on which both the parties sign this Agreement. In case the parties sign on different dates, the effective date shall be the date signed by NBA;

2. Terms and Conditions of the Agreement

2.1 Grant of approval

The NBA hereby grants approval forfiling applications for obtaining Intellectual Property Right ("IPR") over the invention as described in Annex B,only in the countries mentioned in Annex D subject to such other terms and conditions set forth in this Agreement.

2.2 Scope and extent

The approval is limited to the extent and for the purpose for which it is accorded under the appropriate Annexures.

Biodiversity 3 Period

3.1 Period of Agreement –This Agreement shall remain in force from the effective date of this Agreement till the subsistence of the IPR for which approval was granted.

2 Notwithstanding the above, this Agreement shall remain in force until the applicant fulfils all the obligations as required under this Agreement.

PRINCIPAL BAPATLA - 522 101.

2.4 Transfer to third party or by operation of law

In the event that the IPR of the Applicant is transferred by way of an assignment, licensing or by operation of law (including in cases of death or bankruptcy or dissolution of a company), all rights and obligations under this Agreement shall be binding upon the assignee or licensee or legal representative or the person to whom the IPR devolves as the case may be.

In the case of above eventuality, the legal representative or the assignee or licensee or the person to whom the IPR has devolved shall intimate and submit such relevant documents to NBA within sixty days of the happening of such event. Upon receiving such intimation, NBA may amend the agreement under clause 13 of this Agreement so as to ensure fair and equitable benefit sharing.

3. Obligations of the Applicant

- The Applicant shall share benefits as stipulated under Schedule A.
 - 3.2 The permission granted to the Applicant is limited to that granted by the NBA in Annex-B of Schedule B of this Agreement. All other activities of the Applicant which require NBA's prior approval will need to be applied separately in the concerned Form under Rules, 2004. Further, the Applicant shall intimate to the NBA in the event of seeking IPR in other territories and thereafter the Agreement's annex will be suitably amended.
 - 3.3 The Applicant shall abide by all the terms and conditions of the Agreement and other related legislations in force including any clearances required from the concerned authorities, such as the Chief Wildlife Warden in protected areas and forest authorities in other forest areas.
 - 3.4 The Applicant shall, in the event that the Applicant forms a body corporate, association or organization under section 3(2)(c), intimate the same and submit all the related documents to NBA within 90 days from the completion of that event. Subsequent to the said intimation, NBA shall decide whether this Agreement shall be amended as per clause 13 or a fresh approval is required. NBA's decision in this regard shall be final.

The Applicant shall have India as its first source of supply and/or cultivation of iological resources for the commercialization of IPR as the case may be.

the Applicant shall in the event of any breach of this Agreement pay such compensation commensurate with the damage incurred to the Republic of India or to the benefit claimers as decided by the appropriate forum.

PRINCIPAL PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

3.6

- 3.7 The Applicant shall keep all the relevant records that serve as a proof of the monetary benefits shared by the Applicant with NBA or the concerned benefit claimers as the case may be, together with supporting documents. This may be submitted to NBA as specified from time to time and such records shall be retained for at least three (3) years after the termination of this Agreement.
- 3.8 NBA shall have the right to regulate /monitor the activities approved under this Agreement, by itself or through any appropriate agency as it may deem fit.
- 3.9 Whenever the Applicant requires to access biological resources for commercial utilization of the IPR for which approval is granted under this Agreement, the Applicant shall take prior approval of NBA under Form I of the Rules, 2004 or the respective form of the concerned State biodiversity rules.
- 3.10 The Applicant shall notify in writing to the NBA about the grant of IPR and the assignment or licensing of such IPR, if any, in each of the countries/territories as specified in Annex D, within60 days from the date of grant of the said IPR.
- 3.11 The Applicant shall, in case of any modification or improvement or commercialization of the invention/ product/process of the IPR, intimate to NBA within 45 days of the happening of such event. Based on such intimation, NBA may decide to review the earlier approval and its decision shall be final.
- 3.12 The Applicant, in the event of decision to withdraw or abandon the patent application, shall intimate to NBA within 45 days of the happening of such event.

3.13 Status Reports

3.13.1 The Applicant shall submit a status report for each reporting year not later than two months of the end of each reporting year in the prescribed format of NBA.

3.13.2 During the subsistence of this Agreement, the Applicant shall submit separate status reports in relation to each of the countries/territories mentioned in Annex D for each reporting year in the prescribed format of NBA. This shall be submitted not later two months of the end of each reporting year.

3.13.3 Non-submission of the status reports within the stipulated time period in relation to any of the countries/territories mentioned in Annex D will be construed as a breach for which penalty may be imposed by NBA under clause 6 of this Agreement.

3.13.4 The Applicant shall submit a copy of Form 27 of the Indian Patent Rules, 2015 within one month of submitting the same to the Patent Office.

4. Fair and Equitable Benefit Sharing

- The Applicant shall share benefits as per Schedule A in monetary and/or nonmonetary mode.
- The Applicant shall make the payment preferably by way of demand draft or any other approved mode of payment and the same shall be drawn in the name of "National Biodiversity Fund".

5. Written Notice

Any communication including serving notices under this Agreement, shall be in writing and communicated by Registered post with acknowledgement due or e-mail or fax in the address mentioned hereunder.

If to NBA:

The Secretary, NBA, 5th Floor, TICEL Bio Park, Taramani, Chennai-600 113, Tamil Nadu, India. secretary@nba.nic.in

If to the Applicant

Dr. Talasila E Gopala Krishna Murthy, Principal, Bapatla College of Pharmacy, Bapatla, Guntur District, Andhra Pradesh - 522101. Mobile - +91-9912342094. Email: bcp.principal@gmail.com

- 5.2 Notice is deemed to have been given if duly communicated in accordance with the Indian Contract Act, 1872 and the Information Technology Act, 2000 and related Indian legislations.
- Any change in the address/email address/fax of the Parties shall be notified to the other Party within 15 days of such change by way of a notice.

Procedure for imposing penalty in case of breach.

If NBA has prima facie evidence to the effect that the Applicant has committed a breach of any of the terms of this Agreement, NBA shall send a written notice to the Applicant communicating the default or details of the breach within 30 days of Biodivers; the discovery of that event, giving an opportunity to be heard to the Applicant.

> Applicant shall within 30 days from the date of serving of such notice respond naviting to NBA.

> > PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

Nationa

- 6.3 Upon receiving such explanation from the Applicant, NBA shall take into account the explanation and decide if there is a breach committed by Applicant or not. In the event that the NBA does not receive such explanation from the Applicant, NBA shall send final notice to the Applicant. If the Applicant responds within 30 days, NBA shall be taken into account the explanation and decide on the breach. If the Applicant does not respond within 30 days, the Applicant will be deemed to be in breach of this Agreement.
- 6.4 In the event that the Applicant does not respond to the final opportunity given by NBA or in the event that NBA decides that there is a breach of this Agreement, NBA has the power to issue any order executable under section 53 of the Act including imposition of penalty of a sum which may extend to one lakh rupees as determined by NBA from time to time and in addition direct the Applicant to pay such compensation commensurate with the damage incurred by the Republic of India or the benefit claimers.
- 6.5 Penalties imposed by NBA under this clause shall be in addition to any recovery of any monetary benefits due, compliance with directions or orders issued by NBA and without prejudice to any other rights under this Agreement.
- 6.6 Notwithstanding any of the clauses above, in addition to imposition of penalty, if the breach or default committed by the Applicant amounts to violation of any of the provisions of the Act, appropriate legal proceedings shall be initiated under Section 61 of the Act.

7. Termination and Revocation

- 7.1 Subject to clause 2.3, the Agreement shall stand automatically terminated on the completion of the period agreed to between the Parties including the period of extension agreed to, if any. On termination, the Applicant shall comply with obligation under clause 7.3.
- 7.2 During the subsistence of this Agreement, the Applicant shall have an option to initiate termination of this Agreement by sending a request to NBA in the form of a notice stating valid reasons for the same. On receipt of the same, it shall be the discretion of NBA to accept the reasons specified by the Applicant or not. In the event of its decision to terminate, NBA shall intimate to the applicant by way of a notice within 90 days of making the decision. On receipt of such a notice from NBA, the applicant shall comply with clause 8.3.

Upon termination of the Agreement, the Applicant shall pay all outstanding dues including the benefit sharing amount and submit status report dues, if any, due until then by the Applicant within 45 days of the date of termination of this Agreement.

MBA may withdraw the approval granted and revoke this Agreement in case of occurrence of any of the conditions mentioned in Rule 15 of the Rules, 2004 or if the applicant performs activities contrary to any restriction or prohibition imposed by NBA or under the Act and Rules, 2004.

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

7.3 Biodiversing 7.4

8. Liabilities and Indemnification

- 8.1 NBA shall not be liable for any loss or damage whatsoever caused to the Applicant due to revocation of approval for access and/or termination of this Agreement on any grounds whatsoever.
- 8.2 The Applicant shall be solely responsible for any claims by third parties arising from the Applicant's acts or omissions in the course of performing this Agreement and under no circumstances shall the NBA be held responsible or liable for any claims by such third parties.
- 8.3 The Applicant shall pay such sum for breach committed by the Applicant as determined by NBA under clause 6 of this Agreement which is in addition to the compensation commensurate with the damage incurred by the Republic of India or the benefit claimers that the Applicant is liable to pay as decided by the appropriate forum.
- 8.4 The Applicant shall indemnify and save NBA and its employees, members and officers, from and against all claims, demands, losses, damages, costs (including attorney fees), actions, suits or other proceedings, all in any manner based upon, arising out of, related to, occasioned by or attributable to, any acts or conduct of the Applicant, its employees or agents, (whether by reason of negligence or otherwise) in the performance by or on behalf of the Applicant of the provisions of this Agreement or any activity undertaken or purported to be undertaken under the authority or pursuant to the terms of this Agreement.

9. Confidentiality

- 9.1 Upon request from the Applicant, NBA shall keep as confidential that information which is desired to be kept as confidential by the Applicant.
- 9.2 Notwithstanding the above, confidential information may be disclosed by NBA to the extent required by any law or regulation or order of any authority established by law having jurisdiction over any of the Parties or in the opinion of NBA such disclosure becomes necessary to deal with any emergency situations, or national or public interest.

10. Arbitration

Nationa

In case any dispute or difference arises out of the interpretation of any clauses of the Agreement, either of the Parties may give the other Party a notice clearly identifying and providing details of the dispute. On receipt of such notice by the other Party, the Parties shall try to settle such dispute/difference amicably between them by negotiating in good faith within 30 days of the receipt of such notice.

- 10.2 If the dispute or difference is not resolved by such negotiations within the period mentioned, the dispute or difference shall be referred to the sole arbitrator appointed by NBA.
- 10.3 The arbitration shall be governed by the Arbitration and Conciliation Act, 1996 and the rules framed thereunder. The place of arbitration shall be Chennai, India.
- 10.4 The award of the Arbitrator shall be final, conclusive and binding on the Parties. The Arbitrator shall be competent to decide whether any matter or dispute or difference referred to him falls within the purview of arbitration.

11. Governing Law and Jurisdiction

- 11.1 This Agreement is governed by and is to be construed in accordance with the laws of India without regard to the principles of conflicts of laws subject to the provisions of arbitration clauses to this Agreement.
- 11.2 In the event of a dispute or difference not settled through arbitration as specified in clause 11, the Parties shall irrevocably and unconditionally submit to the appropriate court of jurisdiction in Chennai.
- 11.3 As regards all other aspects and the terms and conditions not provided for this in this Agreement, they shall be governed by the provisions of the Act read with Rules and Regulations made thereunder.
- 11.4 This Agreement shall not in any way constitute or be presumed to constitute a partnership or a joint venture or a joint enterprise in any way or for any purpose between the Parties hereto or make the parties in any way liable as partners of or as agents for one another.

12. Severability

- 12.1 If any part of this Agreement is declared or held improper or unjustifiable or invalid by a Court of Law for any reason, the deficiency or invalidity of that part shall not affect the validity of the remainder which will continue in full force and effect and be construed as if the Agreement had been executed without the invalid portion.
- 12.2 However the remainder of the Agreement shall not come into force unless the remainder is consistent with the declaration or order or judgment of the Court.

Riodila Amendment No amendment to this Agreement shall be valid or binding upon the Parties, unless agreed upon by the Parties, in writing, and signed on behalf of each Party by their duly and legally authorized persons and such amendment shall be made as a supplementary agreement along with Annexes, as applicable. 1. Gebelatoushne

13. Amendment

No amendment to this Agreement shall be valid or binding upon the Parties, unless agreed upon by the Parties, in writing, and signed on behalf of each Party by their duly and legally authorized persons and such amendment shall be made as a supplementary agreement along with Annexes, as applicable.

14. Entirety of Agreement

This Agreement constitutes the culmination of all prior negotiations, understanding, representations and commitments and sets down the complete terms and conditions of Agreement between the parties as to the subject matter.

15. Annex and Schedules

- a. The Schedules and their Annexes attached to this Agreement or Schedule that may be added subsequently by way of an amendment under the provisions of this Agreement shall form an integral part of this Agreement and shall be binding on the Parties.
- b. This Agreement has been executed in duplicate, each of which shall be deemed to be original; one shall be retained by the NBA and other by the Applicant and both shall constitute one and the same instrument.

IN WITNESS WHEREOF the parties hereto have signed in this Agreement on the sear aforesaid in this Agreement. the day mentonno

(s/d with date

Signed by the Authorized person of the Authority

Signed by the Applicants

Barfeylld Collegatef Pharmacy

BAPATLA - 522 101.

For National Biodiversity Authority

Witnesses

Signature

डॉ. नरेन्द्रन टी / Dr. Karenkran T

तकनीची अपनिवारी (आईपीजार) / Technical Officer(IPIt) Name राष्ट्रीय जेव विविधता पृतद्विकरण / National Biodiversity Authority भारत सरकार / Government of India

Address वर्ग तल, टावसल बाबोपार्क / 5° Floor, TICEL Bio Park, सरम्बर्ग, धेन्नई / Taramani, Chennal- 600113

2. Signature

Name

Address

(. CC

K. CHITRARASU Advisor (Law) National Biodiversity Authority, Govt. of India TICEL Bio Park, 5th Floor, CSIR Road, Taramani, Chennai - 600 113.

For the Applicant

Witnesses

Signature

Bushno Name: Y. Sushma

Address: Assistant Professor, Bapatla College of Pharmacy, Bapatla-522101

Signature

Name: T. Vijay Sekhar

Address: Ir. Assistant. Bapatla College of Pharmacy,

Bapatla-522101

Bapatla College BAPATLA - 522 101.

SCHEDULE A - BENEFIT SHARING COMPONENT

Higher benefit sharing component is fixed, due to use of traditional knowledge in the invention

- (i) Where the applicant himself commercializes the process/product/innovation, the monetary benefit sharing shall be 0.4% on the annual gross ex-factory sale minus government taxes.
- (ii) Where the applicant assigns/licenses the process/product/innovation to a third party for commercialization, the applicant shall pay to NBA 4.0% of the fee received (in any form including the license/assignee fee) and 4.0% of the royalty amount received annually from the assignee/licensee.

PRINCIPAL PRINCIPAL SCHEDULE B - ANNEXES TO BE ATTACHED BAPATLA - 522 101.

- ANNEX A Details of biological resources and/or knowledge associated thereto and geographical locations
- ANNEX B Title, Details of the invention and the patent application number in case patent has been filed
- ANNEX C Authorisation made by the Applicant (if any) for signing the Agreement and/or filing IPR

ANNEX D - Name of the countries/territories where IPR over the invention is sought to be taken

chennal .

T. galalousha 28 10 2620 PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

Annexure-A

Details of biological resources and/or knowledge associated thereto and geographical locations

Detailed description of the invention

The present invention relates to evaluation of antidiabetic potential of different solvent extracts of Dactyloctenium aegyptium whole plant in Streptozotocin induced diabetic rats.

The present invention further relates to evaluation of antidiabetic potential of different solvent fractions of best/active extract obtained in the above step.

The present invention also relates to isolation of active constituent responsible for antidiabetic activity from the best/active fraction obtained from the earlier step.

The present invention also relates to conducting solubility and stability studies for Rutin (active constituent) in different buffers.

The present invention also relates to a pharmaceutical composition comprising Rutin and one or more pharmaceutically acceptable excipients.

The present invention also relates to dissolution studies for Rutin tablets in the developed dissolution media.

In the present invention, Dactyloctenium aegyptium powder material was subjected to extraction with different solvents like water, hydroalcohol (water: methanol 50:50), ethanol, ethyl acetate, chloroform and n-hexane. All extracts were subjected to phytochemical screening and antidiabetic activity in Streptozotocin induced diabetic rats.

In another embodiment of the present invention, best/active extract obtained in the above step was then fractionated by column chromatography using n-Hexane, Chloroform, Ethyl acetate and Methanol. All fractions were subjected to phytochemical screening and antidiabetic activity in Streptozotocin induced diabetic rats.

In another embodiment of the present invention, best/active fraction was identified from the cabove study and from which the active constituent responsible for antidiabetic activity was isolated. Its structure was identified and characterized by using suitable analytical techniques like IR spectroscopy, H1 NMR spectroscopy, C13 NMR spectroscopy and Mass spectroscopy.

ationa/

In another embodiment of the present invention, active constituent obtained in the above step subjected to antidiabetic studies in different doses in Streptozotocin induced diabetic rats and the effective antidiabetic dose was established.

In another embodiment of the present invention, active constituent obtained in the above step subjected to mechanistic studies and the mechanism was established.

In another embodiment of the present invention, solubility and stability studies were conducted for Rutin in different buffers.

In another embodiment, the present invention relates to pharmaceutical composition comprising Rutin prepared by a process comprising the steps of:

- (a) Blending Rutin with one or more pharmaceutically acceptable excipients, and
- (b) Processing into a suitable dosage form.

Nations,

"Pharmaceutically acceptable excipient/s" is the components added to pharmaceutical formulation to facilitate manufacture, enhance stability, control release, enhance product characteristics, enhance bioavailability, enhance patient acceptability, etc. Pharmaceutically acceptable excipients includes, but not limited to, diluents/fillers, binders, disintegrants, sugars, lubricants, glidants, compression aids, colors, sweeteners, preservatives, surfactants, phospholipids, suspending agents, dispersing agents, film formers, flavors, printing inks, etc.

Binders hold the ingredients in the composition together. Exemplary binders include, but not limited to, cellulose and its derivatives, starch and its derivatives; hydrocolloids; sugars; polyvinyl pyrrolidone and combinations comprising one or more of the foregoing binders. The binder may be used in the range of 1-15% by weight of the composition.

Disintegrants according to the present invention include, but not limited to, water swellable substances, for example, cellulose and its derivatives sodium starch glycolate; ion-exchange resins; starch and modified starches including pregelatinized starch; formalin-cascin; and combinations comprising one or more of the foregoing water swellable substances. The disintegrant may be used in the range of 1-20% by weight of the composition.

sinclude, but not limited to, calcium stearate, glycerol behenate, magnesium stearate, mineral oil, polyethylene glycol, sodium stearyl fumarate, stearic acid, tale, vegetable oil, zinc stearate, and combinations comprising one or more of the foregoing lubricants. Exemplary glidants include, but not limited to, tale, silicon dioxide, cornstarch and the like. The lubricant may be used in the range of 0.1-5% by weight of the composition.

Surfactants according to the present invention may be selected from anionic, cationic or nonionic surface-active agents or surfactants. Suitable anionic surfactants include but not limited
to carboxylate, sulfonate, and sulfate ions such as sodium lauryl sulfate (SLS), sodium
laurate, dialkyl sodium sulfosuccinates particularly bis-(2-ethylhexyl) sodium sulfosuccinate,
sodium stearate, potassium stearate, sodium oleate and the like. Suitable cationic surfactants
include but not limited to those containing long chain cations, such as benzalkonium chloride,
bis-2- hydroxyethyl oleyl amine or the like. Suitable non-ionic surfactants include but not
limited to polyoxyethylene sorbitan fatty acid esters (polysorbates), fatty alcohols such as
lauryl, cetyl and stearyl alcohols; glyceryl esters such as the naturally occurring mono-, di-,
and tri-glycerides; fatty acid esters of fatty alcohols; polyglycolized glycerides such as
gelucire; polyoxyethylene-polyoxypropylene block co-polymer such as Poloxamer and other
alcohols such as propylene glycol, polyethylene glycol.

In another embodiment, the present invention also relates to dissolution studies for Rutin tablets in the developed dissolution media.

The following examples further exemplify the invention and are not intended to limit the scope of the invention. It is obvious to those skilled in the art to find out the composition for other dosage forms and substitute the equivalent excipients as described in this specification or with the one known to the industry.

Example 1: Preparation of different solvent extracts of Dactyloctenium aegyptium

Extraction was carried out by maceration method using different solvents like water (ADA), hydro alcohol (water: methanol 50:50) (HADA), ethanol (EDA), ethyl acetate (EADA), chloroform (CDA) and n- hexane (NHDA) for 72 hours. Then the contents were filtered and the filtrates were concentrated using rotary flash evaporator, calculated for their yield and stored in desiccators till further use.

Example 2: Preliminary Phytochemical Screening of different solvent extracts of Dactyloctenium aegyptium

All extracts were qualitatively tested for the presence of chemical constituents and these were identified by characteristic colour changes using standard procedure.

Example 3: Study of antidiabetic activity of different solvent extracts of Dactyloctenium aegyptium

All extracts were evaluated for their antidiabetic activity in streptozotocin induced diabetic rats and diabetes was induced by intraperitoneal injection of streptozotocin dissolved in 0.1 M cold sodium citrate buffer, pH 4.5, at a dose of 55 mg/kg. The animals were allowed to drink 5% glucose solution overnight to overcome the drug induced hypoglycaemia. After 72 h, rats with marked hyperglycemia (FBG ≥250 mg/dl) were selected and used for the study. All the animals were allowed free access to tap water and pellet diet and maintained at room temperature in plastic cages. All extracts were administered at a dose of 200mg/kg, p.o. and standard drug Gliclazide was administered at a dose of 4.5mg/kg, p.o. for 30 days. Blood samples were collected on 1st, 10th, 20th and 30th day of study from retro orbital venous plexus following the technique described by Coccheto and Bjornsson, allowed to clot and were centrifuged at 3000 rpm for 20 min. The serum was separated and used for the estimation of glucose levels.

From the results inventors found that Ethanolic extract is having best antidiabetic activity and hence it was further subjected to fractionation by column chromatography using different solvents.

Example 4: Preparation of different fractions of Ethanolic extract of Dactyloctenium aegyptium

Ethanolic extract of *Dactyloctenium aegyptium* was further subjected to fractionation by column chromatography using n-Hexane (NHF), Chloroform (CF), Ethyl acetate (EAF) and Methanol (MF). All fractions were calculated for their yield and stored in desiccators till further use.

Example 5: Preliminary Phytochemical Screening of different fractions of Ethanolic extract of Dactyloctenium aegyptium

All fractions were qualitatively tested for the presence of chemical constituents and these were identified by characteristic colour changes using standard procedure.

Biodiverside 6: Study of antidiabetic activity of different fractions of Ethanolic extract of

the fractions were evaluated for their antidiabetic activity in Streptozotocin induced diabetic at and the same method was followed as mentioned in example 3.

National

From the results inventors found that Methanolic fraction of Ethanolic extract of Dactyloctenium aegyptium is having best antidiabetic activity and hence further studies focused on the isolation of active constituent responsible for activity.

Example 7: Isolation of active constituent from Methanolic fraction of Ethanolic extract of Dactyloctenium aegyptium

Based upon the earlier literature, phytochemical screening and TLC profile of Methanolic fraction of Ethanolic extract of *Dactyloctenium aegyptium*, active flavonoid constituent was isolated by preparative TLC technique and it was subjected to characterization by various analytical techniques.

Example 8: Physical Characterization of isolated compound

Colour : Yellow to brown

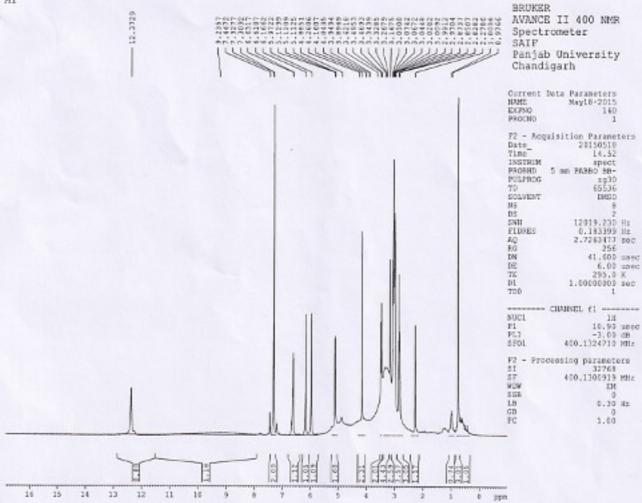
Physical appearance: Powder

Solubility: Soluble in water

Melting point: 243° C

Example 9: Chemical Characterization of isolated compound

Figure 1: 1 H NMR Spectra of Isolated Compound



avtar_saifpu@yahoo.co.in



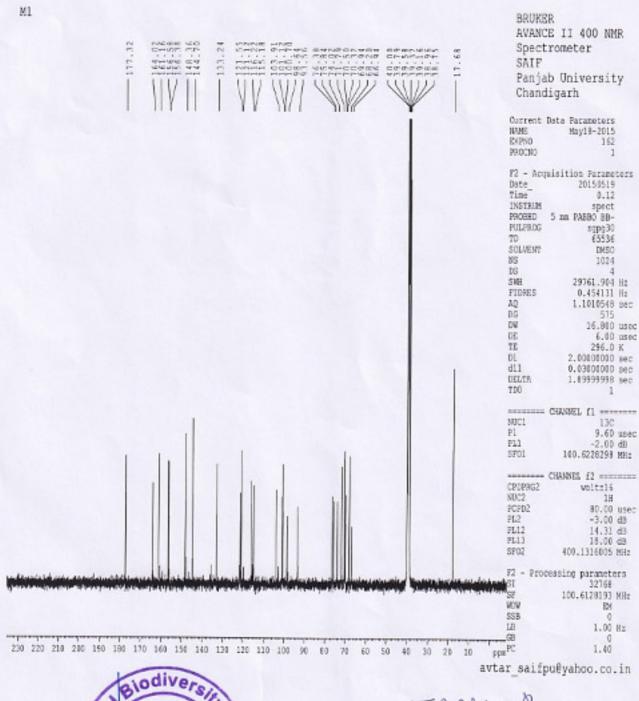




Figure 3: Mass Spectra of Isolated Compound

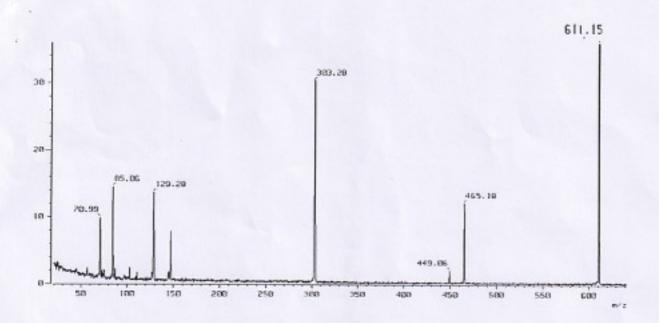
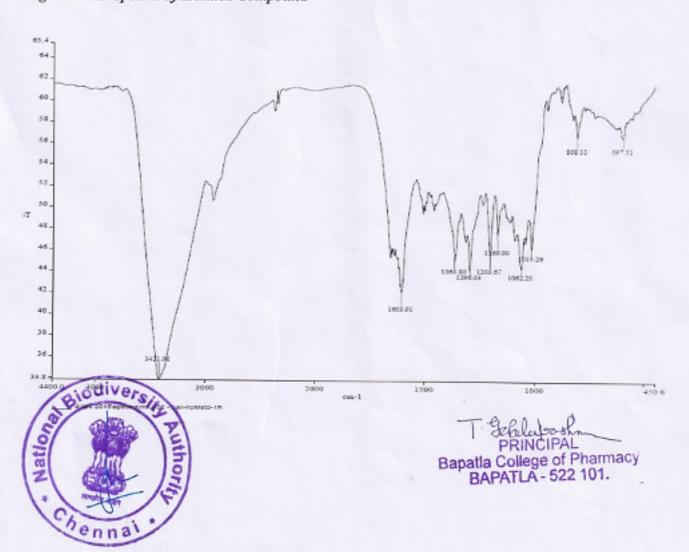
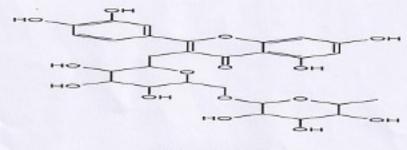


Figure 4: IR Spectra of Isolated Compound



Based on the physical and spectral characterization reports the isolated compound was identified as Rutin.



RUTIN (C27H30O16)

2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-3-[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-[[(2R,3R,4R,5R,6S)-3,4,5-trihydroxy-6-methyloxan-2-yl]oxymethyl]oxan-2-yl]oxychromen-4-one.

Example 10: Mechanistic studies on Rutin

Rutin was further tested for its antidiabetic activity in Streptozotocin induced diabetic rats at different doses like 10mg/kg, 20mg/kg, 30mg/kg, 40mg/kg and 50mg/kg P.O. 50mg/kg P.O was observed as effective antidiabetic dose in rats and upon conversion to Human equivalent dose (HED), dose became 500 mg. Further studies focused on mechanistic studies for Rutin.

Table 1: Effect of Rutin on insulin secretion from perfused pancreas

	Insulin secre	Insulin secretion (ng/ml)		
	2.8 mM glucose	11 mM glucose		
Control	0.05 ± 0.005	0.82 ± 0.16		
Rutin	$1.42 \pm 0.06^{*}$	1.66 ± 0.19°		

^{*}P< 0.001 compared with 2.8 mM glucose, *P<0.01 compared with 11 mM glucose.

Table 2: Effect of Rutin on insulin secretion from isolated islets

	Insulin (ng/m	Insulin (ng/mg islet protein)	
	3 mM glucose	11 mM glucose	
Control	3.35 ± 0.34	6.23 ±0.78	
Rutin	$7.12 \pm 0.64^{\text{W}}$	9.98±0.92*	

diverb 01 compared with 3 mM glucose, P<0.01 compared with 11 mM glucose.

From the above results inventors found that Rutin is having Insulin Secretagogue property.

Example 1: Solubility and Stability studies for Rutin in different Buffers

solubility of Rutin was studied in different buffers like HCl Buffer pH 1.2, Phosphate buffer pH 6.8, Acetate buffer pH 4.6 and also in water. Rutin had shown very poor solubility profile in all pH media and also in water. Among these, Rutin shows highest solubility in phosphate buffer pH 6.8 (0.2 mg/ml) whereas Rutin shows lowest solubility in water (0.16 mg/ml).

Further stability of Rutin was studied in HCl Buffer pH 1.2 and Phosphate buffer pH 6.8. Inventors found that Rutin was stable in both HCl Buffer pH 1.2 and Phosphate buffer pH 6.8.

Example 12: Micromeritic Properties of Rutin

Table 3:

Bulk density	Tapped density	Carr's Index	Hausner's	Inference
(g/ml)	(g/ml)	(%)	ratio	
0.29	0.41	29.26	1.41	Poor flow

Examples 13-15: Preparation of tablets comprising Rutin with different Superdisintegrants

Table 4:

	Example 13	Example 14	Example 15
Rutin	500	500	500
Povidone	Q.S.	Q.S.	Q.S.
Sodium starch glycolate	30		
Cross Povidone		30	
Cross Carmellose Sodium		-	30
Magnesium stearate	3	3	3
Tale	3	3	3
Total weight	536	536	536

Example No.	Theoretical Weight (mg)	Average Weight (mg)	Hardness (kg/cm ²)	% Friability	Disintegration time (min)
Example 13	536	536.8±0.66	5.6±0.22	0.24	09
Example 14	536	538.2±0.88	4.8±0.16	0.32	06
Example 15	536	537.4±0.46	4.2± 0.14	0.52	04

- gralabashin PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

From the above results, inventors selected example 15 as best formulation.

Example 17: Dissolution studies for Rutin Tablets

Based upon the solubility studies in different buffers, no buffer satisfies the criteria for sink conditions. Hence solubility of Rutin was aided by the addition of different concentrations of surfactants in Phosphate buffer pH 6.8.

Table 6: Solubility of Rutin in Phosphate buffer pH 6.8 with varying concentrations of surfactants

	Amount in 1 ml (mg/ml)
Phosphate buffer pH 6.8	0.223
Phosphate buffer pH 6.8 +0.5% SLS	1.74
Phosphate buffer pH 6.8 +1% SLS	2.47
Phosphate buffer pH 6.8 +1.5% SLS	3.52
Phosphate buffer pH 6.8 + 0.5% Tween 80	1.58
Phosphate buffer pH 6.8 + 1% Tween 80	2.39
Phosphate buffer pH 6.8 + 1.5% Tween 80	2.98

Based upon the above results, Phosphate buffer pH 6.8 +1.5% SLS satisfies the criteria for sink conditions and hence it was selected as dissolution media for example 15.

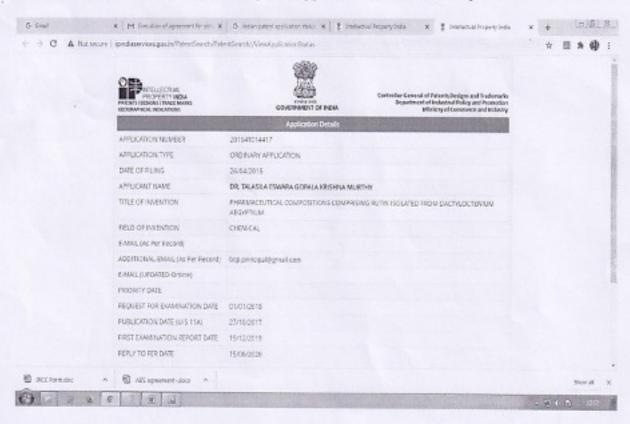
Table 7: Dissolution studies for Rutin Tablets (Example 15) in Phosphate buffer pH 6.8 +1.5% SLS

S. No.	TIME (min)	% Drug Release
1.	10	32.04
2.	20	68.04
3.	30	88.74
4.	40	99.36

diversity vulnority.

ANNEX B

Title, Details of the invention and the patent application number in case patent has been filed





ANNEX - C

Authorisation made by the Applicant (if any) for signing the Agreement and/or filing IPR

Answer: -- Not Applicable ---



ANNEX - D

Name of the countries/territories where IPR over the invention is sought to be taken

Answer: India



PERMIT OR ITS EQUIVALENT CONSTITUTING AN INTERNATIONALLY RECOGNIZED CERTIFICATE OF COMPLIANCE (IRCC)

Internationally Recognised Certificate of Compliance (IRCC) is a globally recognised compliance certificate that serves as an evidence of the decision by the Parties to grant permit to the Applicant. The permit issued by the National Biodiversity Authority (the competent national authority under the Nagoya Protocol) will facilitate generation of IRCC and will be published online in the Access and Benefit Sharing Clearing House (ABSCH) (https://absch.cbd.int/)

By procuring an IRCC, the Applicant can globally demonstrate their legal compliance with the domestic Access and Benefit Sharing (ABS) legislation (in the present case with the Biological Diversity Act, 2002 and Rules, 2004). Applicant can also keep certain information confidential, as the IRCC document is publicly available. For this purpose, the Applicant shall fill in the following details as given in the table below:

S.N o	Particulars	Details about the nature of information (Please mention YES or NO in the box)		
1	Name of the Applicant: Dr. Talasila E Gopala Krishna Murthy	Do you require your name to be kept confidential?		
2	Subject matter of approval: Pharmaceutical compositions comprising rutin isolated from Dactyloctenium aegyptium	Do you require the biological resources/ knowledge for which the approval was given to be kept confidential? Yes		
3	Keywords that describe the subject matter of approval: Rutin, Dactyloctenium aegyptium	Do you require the keywords that describes or indicates the biological resources/ knowledge for which the approval was given to be kept confidential?		
4	Type of activity to be undertaken using the subject matter of approval: Anti-Diabetic Activity	Do you require the activity (research/commercial utilisation/blo-survey and bio-utilisation/IPR/transfer of biological resources/knowledge) to be carried out using the approved biological resources/knowledge to be kept confidential?		

Applicants Signature
PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

Disclaimer: Please note that the above format does not constitute an access permit in itself and only validates the permit.



National Biodiversity Authority

राष्ट्रीय जैव विविधता प्राधिकरण

(Statutory body of Winistry of Environment, Forest and Climate Change, Government of India)



J. Justin Mohan, IFS Secretary

열 +91 44 2254 1071 본 +91 44 2254 1074

Secretary@nba.nic.in ⊕ www.nbaindia.org

5 Floor, CSIR Road, TICEL Bio Park, Taramani, Chennai - 600 113, Tamil Nadu, India. 5 बा तल, सीएलआईआर रोड, टाइवल बायो गार्थ, तरमणि, केनई - 60013 लिक नाड, पास्त.

23.11.2020

NBA/IPR Appl/3880/20-21/ 3/40

To
Dr. Talasila E Gopala Krishna Murthy,
Bapatla College of Pharmacy, GBC Road,
Bapatla, Andhra Pradesh -522101.
Email:bcp.principal@gmail.com,indira.sarihaddula@gmail.com,
moparthijesumercy01@gmail.com

Madam,

Sub: Approval for applying for IPR as per Section 6 of the Biological Diversity Act, 2002 read with Rules 18 of the Biological Diversity Rules, 2004 – reg.

Ref: Application in Form-III No. 3880

With reference to your application cited in reference on the subject cited above to facilitate for the invention titled "Pharmaceutical compositions comprising okra mucilage and neem leaf extract" using the biological resource Neem leaves and Okra has been approved by the National Biodiversity Authority subject to the conditions laid down namely in the agreement.

In this regard, I am enclosing herewith one mutually signed stamp paper agreement executed between National Biodiversity Authority and the applicant for the applicant's reference and compliance. It is also to inform you that breach of the terms of agreement and provisions of the Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 made thereunder will invite imposition of penalties as per Section 55, 56 & 57 of the Biological Diversity Act, 2002.

Please acknowledge receipt of this communication.

Yours faithfully,

(J. Justin Mohan) Secretary, NBA

Encl.: As above.

Copy to:

Member Secretary, Andhra Pradesh Biodiversity Board, Flat No.210 Walnut Block, Raintree Park, Nagarjuna Nagar, Opp. Nagarjuna University, NH-5, Guntur District, Andhra Pradesh – 522508

Ms. Sarihaddula Indira, No 21/485-4B. Lakshmanaraopuram, Machilipatnam, Krishna, Andhra Pradesh - 521001

Ms. Moparthi Jesu Mercy, Srungarapuram, Bapatla, Guntur, Andhra Pradesh - 522101



ఆంద్రప్రదేశ్ आंध्र प्रदेश ANDH SL No. 5377 Date 07-09-2923

AGREEMENT FOR ACCESS AND BENEFIT SHARING L.No.07-20-004/2020 To 31-12-2022 D.No. 11-7-8, Kalidas Street, Bapaku

(Form-III - For filing applications for obtaining any Intellectual Property Right 555033944

(Under the Biological Diversity Act, 2002 and Rules, 2004 and Guidelines on ABS Regulations, 2014) November

This Agreement is made and entered on this 7th day of Sept. -2020 at Chennai, India.

Between

For Whom

National Biodiversity Authority, a statutory body established under the Biological Diversity Act, 2002, having its head office at5th Floor, TICEL Bio Park, Taramani, Chennai-600 113, Tamil Nadu, India (hereafter "NBA"), acting through and represented by the Secretary, NBA/authorized signatory of NBA, being the person authorised to execute this Agreement.

And

1. Dr. Talasila E Gopala Krishna Murthy , having address at Bapatla College of Pharmacy, GBC Road, Bapatla, Andhra Pradesh -522101, 2.Ms.Sarihaddula Indira Che chaving address at No.21/485-4B, Lakshmanaraopuram, Machilipatnam, Krishna, Andhra Pradesh -521001 and 3.Ms.Moparti Jesu Mercy having address at Srungarapuram, Bapatla, Guntur Andhra Pradesh-522101 who are citizens of India. Hereafter the Applicants.

Hereafter, referred to as the "Parties" and individually as a "Party".

PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101,

WHEREAS the NBA is the authority established under the Biological Diversity Act, 2002 (hereafter "the Act") authorised to grant approval for the purpose set forth herein and to determine terms and conditions to secure fair and equitable sharing of benefits arising out of the use of biological resources, knowledge and practices associated with their use;

WHEREAS the Applicant has submitted an application in Form III (Appl.no.3880) dated 02.03.2020 under the Biological Diversity Rules, 2004 (hereafter the "Rules, 2004") to seek prior approval from NBA;

WHEREAS under the Rules and the guidelines on access to biological resources and/or associated knowledge and benefit sharing regulations, 2014 made under the Act, the approval shall be in the form of a written agreement duly executed between the Parties (hereafter the "Agreement");

AND the Parties have entered into this Agreement for access and benefit sharing according to the terms and conditions set out below.

NOW the Parties agree as follows:

1. Definition

For the purpose of this Agreement, the expression "Effective Date" shall mean the date on which both the parties sign this Agreement. In case the parties sign on different dates, the effective date shall be the date signed by NBA;

2. Terms and Conditions of the Agreement

2.1 Grant of approval

The NBA hereby grants approval forfiling applications for obtaining Intellectual Property Right ("IPR") over the invention as described in Annex B, only in the countries mentioned in Annex D subject to such other terms and conditions set forth in this Agreement.

2.2 Scope and extent

The approval is limited to the extent and for the purpose for which it is accorded under the appropriate Annexures.

henna Period

2.3.1 Period of Agreement -This Agreement shall remain in force from the effective date of this Agreement till the subsistence of the IPR for which approval was granted.

2.3.2 Notwithstanding the above, this Agreement shall remain in force until the applicant fulfils all the obligations as required under this Agreement.

PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

2.4 Transfer to third party or by operation of law

In the event that the IPR of the Applicants is transferred by way of an assignment, licensing or by operation of law (including in cases of death or bankruptcy or dissolution of a company), all rights and obligations under this Agreement shall be binding upon the assignee or licensee or legal representative or the person to whom the IPR devolves as the case may be.

In the case of above eventuality, the legal representative or the assignee or licensee or the person to whom the IPR has devolved shall intimate and submit such relevant documents to NBA within sixty days of the happening of such event. Upon receiving such intimation, NBA may amend the agreement under clause 13 of this Agreement so as to ensure fair and equitable benefit sharing.

3. Obligations of the Applicants

- 3.1 The Applicants shall share benefits as stipulated under Schedule A.
- 3.2 The permission granted to the Applicants is limited to that granted by the NBA in Annex-B of Schedule B of this Agreement. All other activities of the Applicants which require NBA's prior approval will need to be applied separately in the concerned Form under Rules, 2004. Further, the Applicants shall intimate to the NBA in the event of seeking IPR in other territories and thereafter the Agreement's annex will be suitably amended.
- 3.3 The Applicants shall abide by all the terms and conditions of the Agreement and other related legislations in force including any clearances required from the concerned authorities, such as the Chief Wildlife Warden in protected areas and forest authorities in other forest areas.

3.4 The Applicants shall, in the event that the Applicants form a body corporate, association or organization under section 3(2)(c), intimate the same and submit all the related documents to NBA within 90 days from the completion of that event. Subsequent to the said intimation, NBA shall decide whether this Agreement shall be amended as per clause 13 or a fresh approval is required. NBA's decision in this regard shall be final.

The Applicants shall have India as its first source of supply and/or cultivation of biological resources for the commercialization of IPR as the case may be.

3.6 The Applicants shall in the event of any breach of this Agreement pay such compensation commensurate with the damage incurred to the Republic of India or to the benefit claimers as decided by the appropriate forum.

PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

enn35

- 3.7 The Applicants shall keep all the relevant records that serve as a proof of the monetary benefits shared by the Applicants with NBA or the concerned benefit claimers as the case may be, together with supporting documents. This may be submitted to NBA as specified from time to time and such records shall be retained for at least three (3) years after the termination of this Agreement.
- 3.8 NBA shall have the right to regulate /monitor the activities approved under this Agreement, by itself or through any appropriate agency as it may deem fit.
- 3.9 Whenever the Applicants require to access biological resources for commercial utilization of the IPR for which approval is granted under this Agreement, the Applicants shall take prior approval of NBA under Form I of the Rules, 2004 or the respective form of the concerned State biodiversity rules.
- 3.10 The Applicants shall notify in writing to the NBA about the grant of IPR and the assignment or licensing of such IPR, if any, in each of the countries/territories as specified in Annex D, within 60 days from the date of grant of the said IPR.
- 3.11 The Applicants shall, in case of any modification or improvement or commercialization of the invention/ product/process of the IPR, intimate to NBA within 45 days of the happening of such event. Based on such intimation, NBA may decide to review the earlier approval and its decision shall be final.
- 3.12 The Applicants, in the event of decision to withdraw or abandon the patent application, shall intimate to NBA within 45 days of the happening of such event.

3.13 Status Reports

3.13.1 The Applicants shall submit a status report for each reporting year not later than two months of the end of each reporting year in the prescribed format of NBA.

3.13.2 During the subsistence of this Agreement, the Applicants shall submit separate status reports in relation to each of the countries/territories mentioned in Annex D for each reporting year in the prescribed format of NBA. This shall be submitted not later two months of the end of each reporting year.

3.13.3 Non-submission of the status reports within the stipulated time period in relation to any of the countries/territories mentioned in Annex D will be construed as a breach for which penalty may be imposed by NBA under clause 6 of this Agreement.

Bapatla College of Pharmacy BAPATLA - 522 101. 3.13.4 The Applicants shall submit a copy of Form 27 of the Indian Patent Rules, 2015 within one month of submitting the same to the Patent Office.

4. Fair and Equitable Benefit Sharing

- 4.1 The Applicants shall share benefits as per Schedule A in monetary mode.
- 4.2 The Applicants shall make the payment preferably by way of demand draft or any other approved mode of payment and the same shall be drawn in the name of "National Biodiversity Fund".

5. Written Notice

odivers/

5.1 Any communication including serving notices under this Agreement, shall be in writing and communicated by Registered post with acknowledgement due or e-mail or fax in the address mentioned hereunder.

If to NBA:

The Secretary, NBA, 5th Floor, TICEL Bio Park, Taramani, Chennai-600 113, Tamil Nadu, India. secretary@nba.nic.in

If to the Applicants:

- Dr. Talasila E Gopala Krishna Murthy, Bapatla College of Pharmacy, GBC Road, Bapatla, Andhra Pradesh -522101. Email: bcp.principal@gmail.com
- Ms.SarihaddulaIndira,No.21/485-4B,Lakshmanaraopuram,Machilipatnam Krishna, Andhra Pradesh -521001. Email: indira.sarihaddula@gmail.com
- Ms.Moparti JesuMercy, Srungarapuram, Bapatla, Guntur, Andhra Pradesh-522101. Email:moparthijesumercy01@gmail.com
- 5.2 Notice is deemed to have been given if duly communicated in accordance with the Indian Contract Act, 1872 and the Information Technology Act, 2000 and related Indian legislations.
 - Any change in the address/email address/fax of the Parties shall be notified to the other Party within 15 days of such change by way of a notice.
- 6. Procedure for imposing penalty in case of breach.
 - 6.1 If NBA has prima facie evidence to the effect that the Applicants have committed a breach of any of the terms of this Agreement, NBA shall send a written notice to the Applicants communicating the default or details of the breach within 30 days of the discovery of that event, giving an opportunity to be heard to the Applicants.

Bapatla College of Pharmacy

- 6.2 The Applicants shall within 30 days from the date of serving of such notice respond in writing to NBA.
- 6.3 Upon receiving such explanation from the Applicants, NBA shall take into account the explanation and decide if there is a breach committed by Applicants or not. In the event that the NBA does not receive such explanation from the Applicants, NBA shall send final notice to the Applicants. If the Applicants respond within 30 days, NBA shall be taken into account the explanation and decide on the breach. If the Applicants do not respond within 30 days, the Applicants will be deemed to be in breach of this Agreement.
- 6.4 In the event that the Applicants do not respond to the final opportunity given by NBA or in the event that NBA decides that there is a breach of this Agreement, NBA has the power to issue any order executable under section 53 of the Act including imposition of penalty of a sum which may extend to one lakh rupees as determined by NBA from time to time and in addition direct the Applicants to pay such compensation commensurate with the damage incurred by the Republic of India or the benefit claimers.
- 6.5 Penalties imposed by NBA under this clause shall be in addition to any recovery of any monetary benefits due, compliance with directions or orders issued by NBA and without prejudice to any other rights under this Agreement.
- 6.6 Notwithstanding any of the clauses above, in addition to imposition of penalty, if the breach or default committed by the Applicants amounts to violation of any of the provisions of the Act, appropriate legal proceedings shall be initiated under Section 61 of the Act.

7. Termination and Revocation

A Subject to clause 2.3, the Agreement shall stand automatically terminated on the completion of the period agreed to between the Parties including the period of extension agreed to, if any. On termination, the Applicants shall comply with obligation under clause 7.3.

During the subsistence of this Agreement, the Applicants shall have an option to initiate termination of this Agreement by sending a request to NBA in the form of a notice stating valid reasons for the same. On receipt of the same, it shall be the discretion of NBA to accept the reasons specified by the Applicants or not. In the event of its decision to terminate, NBA shall intimate to the applicants by way of a notice within 90 days of making the decision. On receipt of such a notice from NBA, the applicants shall comply with clause 8.3.

7.3 Upon termination of the Agreement, the Applicants shall pay all outstanding dues including the benefit sharing amount and submit status report dues, if any, due until then by the Applicants within 45 days of the date of termination of this Agreement.

Bapatla College of Pharmacy BAPATLA - 522 101. 7.4 NBA may withdraw the approval granted and revoke this Agreement in case of occurrence of any of the conditions mentioned in Rule 15 of the Rules, 2004 or if the applicant performs activities contrary to any restriction or prohibition imposed by NBA or under the Act and Rules, 2004.

8. Liabilities and Indemnification

- 8.1 NBA shall not be liable for any loss or damage whatsoever caused to the Applicants due to revocation of approval for access and/or termination of this Agreement on any grounds whatsoever.
- 8.2 The Applicants shall be jointly and severally responsible for any claims by third parties arising from the Applicants acts or omissions in the course of performing this Agreement and under no circumstances shall the NBA be held responsible or liable for any claims by such third parties.
- 8.3 The Applicants shall pay such sum for breach committed by the Applicants as determined by NBA under clause 6 of this Agreement which is in addition to the compensation commensurate with the damage incurred by the Republic of India or the benefit claimers that the Applicants are liable to pay as decided by the appropriate forum.
- 8.4 The Applicants shall indemnify and save NBA and its employees, members and officers, from and against all claims, demands, losses, damages, costs (including attorney fees), actions, suits or other proceedings, all in any manner based upon, arising out of, related to, occasioned by or attributable to, any acts or conduct of the Applicants, its employees or agents, (whether by reason of negligence or otherwise) in the performance by or on behalf of the Applicants of the provisions of this Agreement or any activity undertaken or purported to be undertaken under the authority or pursuant to the terms of this Agreement.

9. Confidentiality

Upon request from the Applicants, NBA shall keep as confidential those information which is desired to be kept as confidential by the Applicants.

Notwithstanding the above, confidential information may be disclosed by NBA to the extent required by any law or regulation or order of any authority established by law having jurisdiction over any of the Parties or in the opinion of NBA such disclosure becomes necessary to deal with any emergency situations, or national or public interest.

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

10. Arbitration

- 10.1 In case any dispute or difference arises out of the interpretation of any clauses of the Agreement, either of the Parties may give the other Party a notice clearly identifying and providing details of the dispute. On receipt of such notice by the other Party, the Parties shall try to settle such dispute/difference amicably between them by negotiating in good faith within 30 days of the receipt of such notice.
- 10.2 If the dispute or difference is not resolved by such negotiations within the period mentioned, the dispute or difference shall be referred to the sole arbitrator appointed by NBA.
- 10.3 The arbitration shall be governed by the Arbitration and Conciliation Act, 1996 and the rules framed thereunder. The place of arbitration shall be Chennai, India.
- 10.4 The award of the Arbitrator shall be final, conclusive and binding on the Parties. The Arbitrator shall be competent to decide whether any matter or dispute or difference referred to him falls within the purview of arbitration.

11. Governing Law and Jurisdiction

- 11.1 This Agreement is governed by and is to be construed in accordance with the laws of India without regard to the principles of conflicts of laws subject to the provisions of arbitration clauses to this Agreement.
- 11.2 In the event of a dispute or difference not settled through arbitration as specified in clause 11, the Parties shall irrevocably and unconditionally submit to the appropriate court of jurisdiction in Chennai.
- 11.3 As regards all other aspects and the terms and conditions not provided for this in this Agreement, they shall be governed by the provisions of the Act read with Rules and Regulations made thereunder.
 - 11.4 This Agreement shall not in any way constitute or be presumed to constitute a partnership or a joint venture or a joint enterprise in any way or for any purpose between the Parties hereto or make the parties in any way liable as partners of or as agents for one another.

12. Severability

- 12.1 If any part of this Agreement is declared or held improper or unjustifiable or invalid by a Court of Law for any reason, the deficiency or invalidity of that part shall not affect the validity of the remainder which will continue in full force and effect and be construed as if the Agreement had been executed without the invalid portion.
- 12.2 However the remainder of the Agreement shall not come into force unless the remainder is consistent with the declaration or order or judgment of the Court.

 PRINCIPAL

Bapatla College of Pharmacy

13. Amendment

No amendment to this Agreement shall be valid or binding upon the Parties, unless agreed upon by the Parties, in writing, and signed on behalf of each Party by their duly and legally authorized persons and such amendment shall be made as a supplementary agreement along with Annexes, as applicable.

14. Entirety of Agreement

This Agreement constitutes the culmination of all prior negotiations, understanding, representations and commitments and sets down the complete terms and conditions of Agreement between the parties as to the subject matter.

15. Annex and Schedules

- a. The Schedules and their Annexes attached to this Agreement or Schedule that may be added subsequently by way of an amendment under the provisions of this Agreement shall form an integral part of this Agreement and shall be binding on the Parties.
- b. This Agreement has been executed in duplicate, each of which shall be deemed to be original; one shall be retained by the NBA and other by the Applicant and both shall constitute one and the same instrument.

IN WITNESS WHEREOF the parties hereto have signed in this Agreement on the day month and the year aforesaid in this Agreement.

(s/d with date)

hen Bigned by the Authorized person of the Authority

For National Biodiversity Authority

Witnesses

Signature

तकनीकी अधीवनी ह dismry / Technical Officer(PR) Name प्रतिस जीय बांधियता प्राप्यांकारण / Mational Biodiversity Assume 'y MINE CONT / Government of India

Address 541 det, Elune anthungs 1 5" Floor, TICEL Bio Park, World, Burg / Toromani, Chennel-650113

Signature

Name

Address

K. CHITRARASU

Advisor (Law) National Biodiversity Authority, Govt. of India TICEL Bio Park, 5th Floor, CSIR Road, Taramani, Chennai - 600 113.

(s/d with date)

Signed by the Applicants PRINCIPAL

Bapatla College of Pharmacy For the Applicant 522 101.

Witnesses

Signature

Sustina

Name: Y. Sushma

Address:

Assistant

Professor, Bapatla College of

Pharmacy, Bapatla-522101

2. Signature Name: T. Vijay Sekhar

Address: Ir. Assistant. Bapatla College of Pharmacy,

Bapatla-522101

SCHEDULE A - BENEFIT SHARING COMPONENT

Higher benefit sharing component is fixed, due to use of traditional knowledge in the invention

- (i) Where the applicant himself commercializes the process/product/innovation, the monetary benefit sharing shall be 0.4% on the annual gross ex-factory sale minus government taxes.
- (ii) Where the applicant assigns/licenses the process/product/innovation to a third party for commercialization, the applicant shall pay to NBA 4.0% of the fee received (in any form including the license/assignee fee) and 4.0% of the royalty amount received annually from the assignee/licensee.

SCHEDULE B - ANNEXES TO BE ATTACHED

- ANNEX A Details of biological resources and/or knowledge associated thereto and geographical locations
- ANNEX B Title, Details of the invention and the patent application number in case patent has been filed
- ANNEX C Authorisation made by the Applicant (if any) for signing the Agreement and/or filing IPR

ANNEX D - Name of the countries/territories where IPR over the invention is sought to be taken

PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

T. goblatousha

ANNEXURE - A

Details of biological resources and/or knowledge associated thereto and geographical locations

Neem leaf were collected from the neem trees available at our college campus. Okra was purchased from local market as it is commonly used vegetable.

GEO-LOCATION OF ACCESS - BAPATLA , GUNTUR , ANDRA PRADESH

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

Biodivers of Authorities

ANNEXURE - B

Title, details of the invention and the patent application number in case patent has been filed

Answer: Neem Leaf extract was prepare and concentrated to obtain a semi solid. Okra mucilage was also prepared and dried to get a solid powder. Damp mass of neem leaf extract was prepared by mixing okra mucilage. The damp mass was sieved through sixteen mess screen and dried. The Dried granules were filled into capsules.

The Invention was not yet filed for patent. It is in process.

PRINCIPAL Bapatla College of Pharmacy BAPATLA - 522 101.

Blodive

ANNEX - C

Authorisation made by the Applicant (if any) for signing the Agreement and/or filing IPR

Answer: --- Not Applicable ---

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101.

Chounai . to

AUTHORISATION LETTER FOR REPRESENTATIVE

We Ms. Sarihaddula Indira, Moparthi Jesumercy & Dr. T. E. Gopala Krishna Murthy hereby authorize Mr. Dr. T. E. Gopala Krishna Murthy as our representative to submit an application under Form III of the Biological Diversity Rules, 2004, to the National Biodiversity Authority, India (hereinafter referred to as the NBA) for the purpose of obtaining the prior approval as required under the Biological Diversity Act, 2002, for access to biological resources/ knowledge associated with biological resources and/or traditional knowledge/transfer of results of research based on biological resources/application for an IPR/third party transfer of accessed biological resources.*

We hereby authorize and declare that all actions committed by the representative with regard to the above purpose and all communications by the representative with the NBA in this regard shall bind us entirely.

aiodive,

- 1. Andigo-s
- 2. M Jesseny
- 3. T. Filalaforishia

Signature of Applicants (Common seal if applicable)

Date : 13-11-2020 Station: Bapatla Signature of Representative (Common seal if applicable)

PRINCIPAL
Bapatia College of Phermacy
BAPATLA - 522 101.

Date: 13-11-2020 Station: Bapatla

ANNEX - D

Name of the countries/territories where IPR over the invention is sought to be taken

Answer: India

PRINCIPAL
Bapatla College of Pharmacy
BAPATLA - 522 101. Biodivers

PERMIT OR ITS EQUIVALENT CONSTITUTING AN INTERNATIONALLY RECOGNIZED CERTIFICATE OF COMPLIANCE (IRCC)

Internationally Recognised Certificate of Compliance (IRCC) is a globally recognised compliance certificate that serves as an evidence of the decision by the Parties to grant permit to the Applicant. The permit issued by the National Biodiversity Authority (the competent national authority under the Nagoya Protocol) will facilitate generation of IRCC and will be published online in the Access and Benefit Sharing Clearing House (ABSCH) (https://absch.cbd.int/)

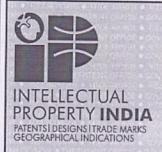
By procuring an IRCC, the Applicant can globally demonstrate their legal compliance with the domestic Access and Benefit Sharing (ABS) legislation (in the present case with the Biological Diversity Act, 2002 and Rules, 2004). Applicant can also keep certain information confidential, as the IRCC document is publicly available. For this purpose, the Applicant shall fill in the following details as given in the table below:

S.N o	Particulars	Details about the nature of information (Please mention YES or NO in the box)		
1	Name of the Applicant: Dr. T. E. Gopala Krishna Murthy	Do you require your name to be kept confidential?		
2	Subject matter of approval: Pharmaceutical compositions comprising okra mucilage and neem leaf extract	Do you require the biological resources/ knowledge for which the approval was given to be kept confidential? Yes		
3	Keywords that describe the subject matter of approval: neem leaf, Okra mucilage	Do you require the keywords that describes or indicates the biological resources/ knowledge for which the approval was given to be kept confidential?		
4	Type of activity to be undertaken using the subject matter of approval: Anti-Diabetic Activity	Do you require the activity (research/commercial utilisation/bio-survey and bio-utilisation/IPR/transfer of biological resources/knowledge) to be carried out using the approved biological resources/knowledge to be kept confidential? Yes		

Applicants Signature
PRINCIPAL
Bapatla College of Pharmacy

BAPATLA - 522 101.

Disclaimer: Please note that the above format does not constitute an access permit in itself and only validates the permit.





भारत सरकार GOVERNMENT OF INDIA पेटेंट कार्यालय THE PATENT OFFICE पेटेंट प्रमाणपत्र PATENT CERTIFICATE (Rule 74 Of The Patents Rules) क्रमांक : 044135346 SL No :



पेटेंट सं. / Patent No.

380979

आवेदन सं. / Application No.

4504/CHE/2014

फाइल करने की तारीख / Date of Filing

16/09/2014

पेटेंटी / Patentee

TALASILA ESWARA GOPALA KRISHNA MURTHY

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित STATIN IMPREGNATED COLLAGEN BASED DERMAL SCAFFOLDS MADE OF COW URINE नामक आविष्कार के लिए, पेटेंट अधिनियम, १६७० के उपबंधों के अनुसार आज तारीख 16th day of September 2014 से बीस वर्ष की अविध के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled STATIN IMPREGNATED COLLAGEN BASED DERMAL SCAFFOLDS MADE OF COW URINE as disclosed in the above mentioned application for the term of 20 years from the 16th day of September 2014 in accordance with the provisions of the Patents Act, 1970.

INTELLECTUAL

PATENT OF THE PA

PRINCIPAL
Bapatla College of Pharmacy
Bapatla 522 101

PATERTONICA PROPERTY OF THE STATE OF THE STA

अनुदान की तारीख : 30/10/2021 Date of Grant :

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 16th day of September 2016 को और उसके पश्चात प्रत्येक वर्ष मे उसी दिन देय होगी। Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 16th day of September 2016 and on the same day in every year thereafter.

PATENT OFFICE INTELLECTUAL PROPERTY BUILDING G.S.T. Road, Guindy, Chennai-600032 Tel No. (091)(044) 22502081-84 Fax No. 044 22502066

E-mail: Chennai-patent@nic.in Web Site: www.ipindia.gov.in

CHALLAN: TR-5 **DOCKET NO:111997**

TALASILA ESWARA GOPALA KRISHNA MURTHY

BAPATLA COLLEGE OF PHARMACY, BAPATLA, GUNTUR DISTRICT, ANDHRA PRADESH - 522101. bcp.principal@gmail.com





Date/Time: 17/11/2022

Agent Number:

Sr. No.	CBR No.	Reference Number /Application Type	Application Number	Title/Remarks	Amount Paid
1	46370	ORDINARY APPLICATION	202241065915	PHARMACEUTICAL COMPOSITIONS COMPRISING METHANOLIC FRACTION OF ETHANOLIC EXTRACT OF DACTYLOCTENIUM AE	1750
2		E-101/19445/2022- CHE	202241065915	Correspondence	0 ,
3		E-2/4869/2022- CHE	202241065915	Form2	0
-		E-5/4712/2022- CHE	202241065915	Form5	0
Total	1:				1750

Received a sum of Rs. 1750 (Rupees One Thousand Seven Hundred & Fifty only) through

Payment Mode	Bank Name	Cheque/Draft Number	Cheque/Draft Date	Amount in Rs
Draft	State Bank of India	681418	14/11/2022	1750

Note: This is electronically generated receipt hence no signature required.

T. Goldetougho PRINCIPAL
Bapatla College of Pharmacy
Bapatla 522 101

PATENT OFFICE INTELLECTUAL PROPERTY BUILDING G.S.T. Road, Guindy, Chennai-600032 Tel No. (091)(044) 22502081-84 Fax No. 044 22502066

E-mail: Chennai-patent@nic.in Web Site: www.ipindia.gov.in

CHALLAN: TR-5 DOCKET NO:127309

DR. TALASILA ESWARA GOPALA KRISHNA MURTHY

BAPATLA COLLEGE OF PHARMACY, BAPATLA - 522101, GUNTUR DISTRICT, ANDHRA PRADESH, INDIA. bcp.principal@gmail.com





Date/Time: 29/12/2022

Agent Number:

Sr. No.	CBR No.	Reference Number /Application Type	Application Number	Title/Remarks	Amount Paid
1	53479	ORDINARY APPLICATION	202241076750	PHARMACEUTICAL COMPOSITIONS COMPRISING OKRA MUCILAGE AND NEEM LEAF EXTRACT	1750
2		E-101/22942/2022-CHE	202241076750	Correspondence	0
3		E-2/5668/2022-CHE	202241076750	Form2	0
4		E-3/40741/2022-CHE	202241076750	Form3	0
5		E-5/5354/2022-CHE	202241076750	Form5	0
6	53479	R20224047451	202241076750	Form18	4400
-		E-106/8364/2022-CHE	202241076750	Form28	0
8		E-101/22943/2022-CHE	202241076750	Others(EDUCATIONAL INSTITUTIONAL ELIGIBILITY DOCUMENT)	0
Tota	1.				6150

Received a sum of Rs. 6150 (Rupees Six Thousand One Hundred & Fifty only) through

Payment Mode	Bank Name	Cheque/Draft Number	Cheque/Draft Date	Amount in Rs
Draft	State Bank of India	681645	27/12/2022	6150

Note: This is electronically generated receipt hence no signature required.

T. goldatoush PRINCIPAL
Bapatla College of Pharmacy
Bapatla 522 101



මීළුර්ග तेलंगाना TELANGANA

SL.No.2174. Date.29-07-2020. R/o. HYD. Sold to. S.DURGA PRASAD. S/o. S.VENKATESWARARAO. For Whom: HATCO PHARMA LIMITED.

AA 540794

KURNOOL NOORJAHAN LICENSED STAMP VENDOR LNO.16-11-018/2012, Ren.No.16-11-15/2018, # 6-3-354/19,Road No:1,Banjara Hills, Hyderabad (South) T.S. Cell:9391535407.

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (hereinafter referred to as "MOU") is made on 2nd day of January, 2021 (hereinafter referred to as "Effective Date") by and between:

M/S NATCO PHARMA LIMITED (CIN: L24230TG1981PLC003201), having its registered office at Natco House, Road No. 2, Banjara Hills, Hyderabad - 500034, Telangana, India, represented by its Vice President (HR & OD), Mr. Lakshminarayana. A, (hereinafter called "NATCO") which expression shall unless repugnant to the context thereof be deemed to mean and include its permitted assigns and successors) of the First Part

AND

BAPATLA COLLEGE OF PHARMACY, G.B.C. Road, Mahatmajipuram, Bapatla Post Office, Guntur District, Andhra Pradesh, represented by the Secretary, Bapatla Education Society, (hereinafter called BCOP) which expression shall unless repugnant to the context thereof be deemed to mean and include its permitted assigns and successors) of the Second Part

SECRETARY
BAPATLA EDUCATION SOCIETY
BAPATLA

Chamay



This MOU specifies a framework of co-operation and collaboration between NATCO and BCOP for exchanging knowledge and facilities for mutual development and benefit.

SCOPE OF COLLABORATION:

- Objectives: To take up the following activities for mutual benefit
 - 1.1 To initiate exchange of knowledge between NATCO and BCOP.
 - 1.2 To organize industrial Training Programs to the staff & students of BCOP.
 - 1.3 To collaborate in research and development projects involving staff and students of NATCO and BCOP for which BCOP in advance will have to intimate concerned plant head(s) for the permission and indicate the number of students / staff for such visits.
 - 1.4 To provide short term internship, if any, for students of BCOP.
 - 1.5 To engage students in development work involving them in short term projects.
 - 1.6 Any other activity with mutual agreement.

2. Responsibilities of BCOP

- 2.1 To depute faculty members for collaborative work to be carried out at NATCO
- 2.2 To depute students both of B. Pharmacy and M. Pharmacy for Industrial tour for which BCOP in advance will have to intimate concerned plant heads for the permission and indicate the number of students / staff for such visits.
- 2.3 To depute faculty members for training and coaching to be carried out at NATCO, HYDERABAD.
- 2.4 To maintain the secrecy of the data of NATCO shared for the purpose of research and/or projects.
- 2.5 To fulfill the assignment/basic research work requested by NATCO.
- 2.6 The students / staff will not cause any damage to equipment, lab, infrastructure and will not cause any inconvenience to the working conditions of employees at NATCO.

3. Responsibilities of NATCO

3.1 To facilitate the use of resources of NATCO in research and development projects, or whatever is required.

SECRETARY BAPATLA EDUCATION SOCIETY BAPATLA domay

CO Pharmatal

- 3.2 Depute Employees for Programs/collaborative research to be carried out at BCOP and NATCO jointly and such projects can be applied for funding offered by government organizations.
- 3.3 To provide projects, if any, to students either to carry them out at BCOP or at NATCO.
- 3.4 To provide Guest lectures on a regular basis, as and when required with prior approval.
- 3.5 Audit the facility of BCOP and help in fixing the gaps and improvements.
- 3.6 To provide internship to second year M. Pharmacy students to carry on their project work in Formulation R&D, Analytical R&D, provide a guide and to give consent to publish the same article in a reputed journal.
- 3.7 To offer jobs to the M. Pharmacy students after their course completion in BCOP when vacancy arises and their performance meets the criteria at NATCO.
- 3.8 To provide gratis samples of drugs and excipients required for the research work which are not confidential in nature.

4. Liabilities

- 4.1 Each party shall be responsible for its own acts and omissions and the results thereof and shall not be responsible for the acts of the other party and the results thereof.
- 4.2 NATCO shall be indemnified by BCOP for any loss / damage caused to it by the students / staff.

5. Other Terms

- 5.1 The MOU shall be effective on the effective date i.e., from 02.01.2021 and shall be valid for a period of one (1) year. Either party may terminate this MOU by giving thirty (30) days' notice in writing to the other.
- 5.2 Neither NATCO nor BCOP shall discriminate on the basis of race, religion, creed, color, sex, nationality, age, marital status, public assistance status, in relation to this MOU.
- 5.3 Neither NATCO nor BCOP shall be responsible for any delays or failure to perform any obligation under this MOU due to causes beyond the reasonable control of such party. Notwithstanding the foregoing, NATCO

Oronory.

SECRETARY
BAPATLA EDUCATION SOCIETY
BAPATLA

3

and BCOP agree to cooperate in good faith to mitigate the effect of any such delays or failures to perform, with the goal of achieving, to the extent possible, the objectives of this MOU.

- 5.4 Nothing in this MOU is intended or should be construed as creating the relationship of co-partners, joint ventures, or an association among the parties, nor shall any party, its employees, agents, students or representatives be considered employees, agents or representatives or any party to this MOU.
- 5.5 It is specifically agreed that neither party shall be responsible for costs or expenditures incurred by the other in the conduct of the programs / project contemplated hereby.
- 5.6 This MOU shall be governed by the laws of India and the courts at Hyderabad having the exclusive jurisdiction over others.
- 5.7 All amendments to this MOU must be in writing and executed by an authorized representative of each of the parties.

IN WITNESS WHEREOF the Parties have caused this MOU to be signed by their duly authorized representatives on the day first written above.

For Natco Pharma Limited

deceay

Mr. Lakshminarayana. A Vice President (HR & OD) For BAPATLA EDUCATION SOCIETY

SECRETARY

BAPATLA EDUCATION SOCIETY

BAPATLA

CHAPTER

05

Inhalation Drug Delivery Systems

Dr. V. Satyanarayana* and Dr.T.E.Gopala Krishna Murthy
* DGM, Natco Pharma Pvt LTD- Hyderabad

Introduction (1-5)

Since thousands of years ago, humans have been given pharmacologically



Bapatla College of Pharmacy

PATRONIZED BY



BAPATLA EDUCATION SOCIETY

IMPACT LECTURE SERIES

Sponsored by

INSTITUTION'S INNOVATION COUNCIL



Series - II Online Session 26-July - 2022



Resource Persons



Dr.Chittineni Aruna

Professor - Department of CSE,
KKR & KSR Institute of Technology and Sciences,
Vinjanampadu, Guntur, Andhra Pradesh
Co ordinator- MSME
President - KITS-IIC & Convener- EISC



Lecture - I Innovation skills for future 11.00.a.m. - 12.00.p.m. Lecture - II Impact of IPR on Pharmaceutical industry 12.00.p.m. - 1.00p.m.

Organized by

Dr. V. Sai Kishore President - IIC - BCOP Dr. T.E. Gopala Krishna Murthy
Principal