i) An explicit ecosystem is in place in the campus to bring about a culture of Entrepreneurship and innovation amongst the students and staff. The college is actively involved in such programs through the Institution's Innovation Council (IIC), which was constituted during October 2019 with the objectives of creating a platform to work, learn & network for start-ups. The innovation ecosystem in our institution consists of:

- ***Ideation cell***
- ***Validation committee***
- ***Scientific and Technology advisory committee***
- ***Business Model & Marketing Cell***
- ***Financial & Feasibility cell***

Creating physical and cyber infrastructure, investors and feasibility are done through financial assistance cell. This cell comprises of staff member from the department of commerce and manager of Indian Overseas Bank, Scott Christian College Branch.

15 council meetings were held and documented (File A.). Students and staff were benefitted through 42 programs including government initiative programs like Impact lecture series by the Institution on IPR/Entrepreneurship/Skill Development and the students are motivated to take entrepreneurship as a career (File B). Students participated in Hackathons. In Toycathon our students reached up to semifinals (Fig. 15). The IIC has signed a MoU with Mar Ephraem College of Engineering and Technology (Pg. 19-22).

ii) Indian Knowledge System (IKS) is being practiced in our institution

- ***Curriculum***

The courses "Indian knowledge system & human rights" and "Health and Fitness through Yogasanas" has been included in the curriculum as value added courses. The Modern Indian languages Tamil, Malayalam & Hindi are being used in teaching (Fig.16 & 17).

- ***Seminars/Symposiums***

A seminar on Folklore has been conducted which depicts importance of ancient south Indian Languages (Fig. 18 & 19).

- ***Museum***

The college has a museum in which the traditional tools and palm leaf manuscript were protected (Fig. 20 & 21). The students are made to visit the museum to know the ancient tools and how they are being .modified nowadays.

- ***Geographical marking (Herbal medicinal garden)***

The traditional herbal medicinal garden in our campus which consists of herbal plant species of "Marunthuvazh Malai" (hill) located in our district is a unique feature (Fig. 22). This hill is related to Ramayana, that this part of the hill was a fallen while lord Hanuman was carrying Sancheevi to treat Laksmanan. The knowledge and importance of herbal medicines especially the "kayathirumeni oil" used in the treatment of joint pain is transferred to the next generation.

- ***Yoga, Martial arts***

The practice of Yoga in our institution develops strength and flexibility, calming the mind (Fig. 23). Students used to perform yoga in the yoga center every day. The traditional martial arts is also practiced in our college (Fig. 24). The students were trained for self-protection through various martial arts.

iii) The functions of IPR cell are:

- **Conducting IPR awareness programs**

The institution has conducted 7 IPR awareness programs which includes state government sponsored program namely NIPAM.

- **Guidance for applying Patent**

The IPR cell established aims to coordinate the high end research activities leading to Patenting and Technology transfer. This cell has been a help desk for those who wish to apply patents, trademarks and journal publications.

- **Recording Patents & Designs awarded and applied**

3 patents have been awarded in the year 2022-2023 (Fig. 25-28). Two product designs were awarded (Fig.29 & 30). One patent has been filed on 06.04.2024 (Fig.31).

- **REPC**

The Research Promotions and Ethics Committee (RPEC) also facilitates incubation/creation and transfer of knowledge. There are 11 research laboratories and the quantum of research output is evident from patents.

The evidences are attached herewith *

INNOVATION ECOSYSTEM

IDEATION CELL

1. Dr. S.Sharmila Juliet	-	*Assistant Professor of Physics*
2. Dr. T. Nisha	-	*Assistant Professor of Tamil*
3. Dr. P. D. Sheena Smart	-	*Assistant Professor of Computer Science*
4. Dr.D. Hudson Oliver	-	*Assistant Professor of Physics*

VALIDATION CELL

1. Dr. R. Leo Bright Singh	*-Assistant Professor, Dept. of Mechanical Engineering, Mar Ephraem College of Engineering & Technology, Kanyakumari District.*
2. Dr. R. Rajesh	*-Field Coordinator, EDII Hub, Government college of Engineering,Nagercoil*
3. Dr. V. Anslin Ferby	*-IIC Vice-President & Associate Professor of Physics*

SCIENTIFIC AND TECHNICAL CELL

Mr. G. Arul Jerald Prakash - *Former Director, Kerala State Science & Technology Museum and Planetarium, Thiruvananthapuram*

Dr. S. G. Prakash Vincent - *HoD, Centre for Marine Science and Technology, MS University, Rajakkamangalam, Kanyakumari District*

Dr. C. James - *Dean, IQAC and Associate Professor of Physics*

Dr. A. Malar Retna - *IIC Convener and Associate Professor of Chemistry*

Committees in the Ecosystem

BANKING AND FINANCE COMMITTEE

1. Dr.P. Christopher Raj	-	*Assistant Professor of Commerce*
2. Dr. V. Ahila	-	*Assistant Professor of Commerce*
3. Dr. J. Kingsly	-	*Assistant Professor of Tamil*
4. Dr. T. P. Sherin	-	*Assistant Professor of Commerce*

MARKETING COMMITTEE

1. Dr. J. Jane TheebaJeyaVanathy	-	*Assistant Professor of Business Administration*
2. Dr.V.K.JeensFriero	-	*Assistant Professor of Business Administration*
3. Dr.G. Jones Green	-	*Assistant Professor of Business Administration*
4. Dr. A. Remila Jann	-	*Assistant Professor of Business Administration*

IPR Cell

1. Dr. C. P. Ben	-	*Assistant Professor of Botany*
2. Dr. L. Jaya Singh Dhas	-	*Assistant Professor of Computer Science*
3. Dr. J. Georgina	-	*Assistant Professor of Zoology*
4. Dr. R. D. Femitha	-	*Assistant Professor of Chemistry*

IIC President

Principal

SCOTT CHRISTIAN COLLEGE
(AUTONOMOUS)

Nagercoil - 629 003, Kanniyakumari District, Tamil Nadu, India.

04652 - 235240
sccprincipal@yahoo.com
www.scott.ac.in

Dr. J. Robert Victor Edward
PRINCIPAL

August 16, 2021

Dr. S.G. Prakash Vincent
HoD, Centre for Marine Science & Technology
Manonmaniam Sundaranar University
Rajakkamangalam
Kanyakumari District.

Greetings from Institution's Innovation Council, Scott Christian College.

We feel happy to inform you that two teams with innovative ideas were validated. Hence I request you to be present for a meeting to give Scientific and Technology feasibility Ideas for these students on 25.08.2021.

Agenda: To give Scientific and Technology based ideas.

IIC President

Principal

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NAGERCOIL-629 003

Call letter to Dr.Prakash Vincent to attend the Scientific and Technological committee meeting organized by IIC to be held on 25.08.2021

Action Taken Report

The Scientific and Technology committee members Dr.Arul Jerald Prakash and Dr.G.Prakash Vincent, met the students whose ideas were validated through the validation cell. Two team leaders Suresh Kumar Manickam, III B.Sc Zoology & Shajin, III B.Sc Physics participated the meeting. They presented their ideas to the external experts. The experts gave valuable suggestions to bring their ideas inti technological based product. The discussion went on for one hour. Their doubts were clarified. 7 IIC council members participated in the session. This was a very useful session and the IPR coordinator Dr.C.P..Ben gave the formal vote of thanks.

Fig.1 ***Dr.Prakash Vincent, the external expert assessing the ideas presented by the student Mr.Shajin of III B.Sc Physics whose ideas were validated through Validation Cell and giving scientific and technology based ideas in the meeting held on 25.08.2021***

B. S. Benil

Dr. B.S. BENIL.A M.Sc.,M.Phil.,Ph.D
Assistant Professor
Department of Physics & Research Centre
Scott Christian College (Autonomous)
Nagercoil - 629 003

PRINCIPAL
SCOTT CHRISTIAN COLLEGE
(Autonomous)
NAGERCOIL-629 003

Fig-2 ***Dr.Prakash Vincent, the external expert assessing the ideas presented by the student Mr.Suresh Kumar Manickam of III B.Sc Zoology whose ideas were validated through Validation Cell and giving scientific and technology based ideas in the meeting held on 25.08.2021***

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NAGERCOIL- 629 003

B.S. Benila

Dr. B.S. BENILA M.Sc.,M.Phil.,Ph.D
Assistant Professor
Department of Physics & Research Centre
Scott Christian College (Autonomous)
Nagercoil - 600 003

T.Shajin presented a paper on Nano technology in the International conference on Recent Innovations in Biotechnology after the ideas he got from thebscientific & Technology meeting held on 25.08.2021

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with Grade 'A++' by NAAC | 12B status by UGC | Approved by AICTE

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119

I-CRIB 2023

INTERNATIONAL CONFERENCE ON RECENT INNOVATIONS IN BIOTECHNOLOGY (ICRIB-2023)

Supported by CSIR, New Delhi

Certificate of Presentation

This is to certify that Mr. Shajin T of S T Hindu college, Nagercoil has presented a paper (Oral) entitled Synthesis and characterization of Zn2+ Doped Ba2TiO4 Nanoparticles In the International Conference on Recent Innovations in Biotechnology (ICRIB-2023) organized by Sathyabama Institute of Science and Technology, Chennai during 21st-23rd September, 2023.

Dr. S. Johnson — CONVENER

Dr. A. Madan Kumar — CONVENER

Dr. A. Dayanandan — ORGANIZING SECRETARY

Dr. T. Sasipraba — VICE-CHANCELLOR

SCOTT CHRISTIAN COLLEGE (AUTONOMOUS)
NAGERCOIL - 629 003,
Kanniyakumari District, Tamilnadu, India

Dr. D. HENRY RAJA, M.Sc.,M.Phil.,Ph.D.,B.D.,D.Min.,D.D.
Principal i/c
E-mail : scoprincipal@yahoo.com

Office : 04652-235240
Website : www.scott.ac.in
Mobile No. : 9488748900

January 10, 2024

Dr. R. Leo Bright Singh
Assistant Professor
Department of Mechanical Engineering
Mar Ephraem College of Engineering & Technology
Kanyakumari District.

Greetings from Institution's Innovation Council, Scott Christian College

We feel happy to inform you that the ideas of five teams were selected by the Ideation cell of Institution's Innovation Council (IIC) for validation. Hence I request you to be present for the presentation session on 19.01.2024 for validating the ideas. Looking forward for your esteemedpresence.

Agenda: To validate the ideas of students.

IIC President

Principal

Call letter to Dr.R.Leo Bright Singh to attend the Validation committee meeting organized by IIC to be held on 19.01.2024

Action Taken Report

The Validation committee members Dr.Leo Bright Singh & Mr.R.Rajesh, met the students whose ideas were selected through the Ideation cell on 19.01.2024 at 11 am in the physics library. Five team leaders Flavia I M.Sc zoology, Sabin Abishek, II B.Sc Physics, Joselin, II M.Sc Physics, Jesevar, III BCA, Benifa, I M.Sc Chemistry participated the meeting. They presented their ideas to the external experts. The experts listened them carefully gave valuable suggestions to bring their ideas into product. Out of the five teams, three teams (with team leaders Flavia I M.Sc zoology, Joselin, II M.Sc Physics, Benifa, I M.Sc Chemistry) ideas were validated. Valuable suggestion was given for the other two teams to modify their ideas.The discussion went on for two hours. Their doubts were clarified. 5 IIC council members participated in the session. This was a very useful session and the NIRF coordinator Dr.Shirley Daniel gave the formal vote of thanks.

Five teams and their topics are.

(1) Flavia I M.Sc zoology

Flavia, the team leader of first team presented her ideas on heat pads and heat pack slippers using calotropis Gigante to treat arthritis pain.

(2) Sabin Abishek, II B.Sc Physics

Innovative application using drone technology in agriculture.

(3) Joselin, II M.Sc Physics

Separating plastic waste from other waste using Aurdino.

(4) Jesevar, III BCA

Searching and filling with fuel from the nearest petrol bulk when there is a shortage.

(5) Benifa, I M.Sc Chemistry

Rolling trays provided with adjustment for picking the ingredients in an orderly manner thereby easing the cooking process.

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Dr. B.S. BENILA M.Sc.,M.Phil.,Ph.D
Assistant Professor
Department of Physics & Research Centre
Scott Christian College (Autonomous)
Nagercoil - 600 003

Fig.3 ***Dr.R.Leo Bright Singh & Mr.R.Rajesh assessing the ideas presented by the five team of students selected through ideation cell for validation in the meeting held on 19.01.2024***

Dr. B.S. BENILA M.Sc.,M.Phil.,Ph.D
Assistant Professor
Department of Physics & Research Centre
Scott Christian College (Autonomous)
Nagercoil - 600 003

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SCOTT CHRISTIAN COLLEGE
(Autonomous)
NAGERCOIL - 629 003

SCOTT CHRISTIAN COLLEGE (AUTONOMOUS)
NAGERCOIL - 629 003,
Kanniyakumari District, Tamilnadu, India

Dr. D. HENRY RAJA, M.Sc.,M.Phil.,Ph.D.,B.D.,D.Min.,D.D.
Principal I/c
E-mail : sceprincipal@yahoo.com

Office : 04652-235240
Website : www.scott.ac.in
Mobile No. : 9488748900

February 2, 2024

Dr. S.G. Prakash Vincent
HoD, Centre for Marine Science & Technology
Manonmaniam Sundaranar University
Rajakkamangalam
Kanyakumari District.

Greetings from Institution's Innovation Council, Scott Christian College.

We feel happy to inform you that three teams with innovative ideas were validated. Hence I request you to be present for a meeting to give Scientific and Technology feasibility Ideas for these students on 09.02.2024.

Agenda: To give Scientific and Technology based ideas.

IIC President

Principal

Call letter to Dr.Prakash Vincent to attend the Scientific and Technological committee meeting organized by IIC to be held on 09.02.2024

Action Taken Report

The Scientific and Technology committee member Dr. G. Prakash Vincent, met the students whose ideas were validated through the validation cell. Three team leaders Flavia, I M.Sc. Zoology, Subin Abishek, I M.Sc. Chemistry & Joselin, I M.Sc. Physics participated the meeting. They presented their ideas to the external experts. The experts gave valuable suggestions to bring their ideas inti technological based product. The discussion went on for one hour. Their doubts were clarified. 5 IIC council members participated in the session. This was a very useful session and the Innovation coordinator Dr. S. Sharmila Juliet gave the formal vote of thanks.

Fig. 4 *Dr.G.Prakash Vincent the external expert assessing the ideas presented by the students whose ideas were validated through Validation Cell and giving scientific and technology based ideas in the meeting held on 09.02.2024*

Dr. B.S. BENILA M.Sc.,M.Phil.,Ph.D
Assistant Professor
Department of Physics & Research Centre
Scott Christian College (Autonomous)
Nagercoil - 600 003

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SCOTT CHRISTIAN COLLEGE
(Autonomous)
NAGERCOIL-629 003

The Scott Science Club and the Institution's Innovation Council have conducted the National Science Day celebration (Science Spectacle 2k23) every year. A working model competition (Demo

Exhibition) with the theme of "Science and Technology Innovation for Global Sustainability" for students of various schools was held.

Fig. 5

Release of Scott Science Club logo designed by the students and staff of Science Club by the Principal Dr.J.R.V.Edward in the National Science Day Celebration 2020

Fig. 6 Students demonstrating their innovative working models to the students of our institution in view of National Science Day celebration 2022 on the topic "Understanding ecosystem for health and well-being"

Fig. 7 Display of Innovative models designed by Mr.Maria paul, a carpenter who had applied his models for patent and the students are visiting and know their importance in daily use in the National Science Day Celebration 2020

Fig. 8 Students demonstrating their innovative working models to the students of our institution in view of National Science Day celebration 2023 on the topic "Understanding ecosystem for health and well-being"

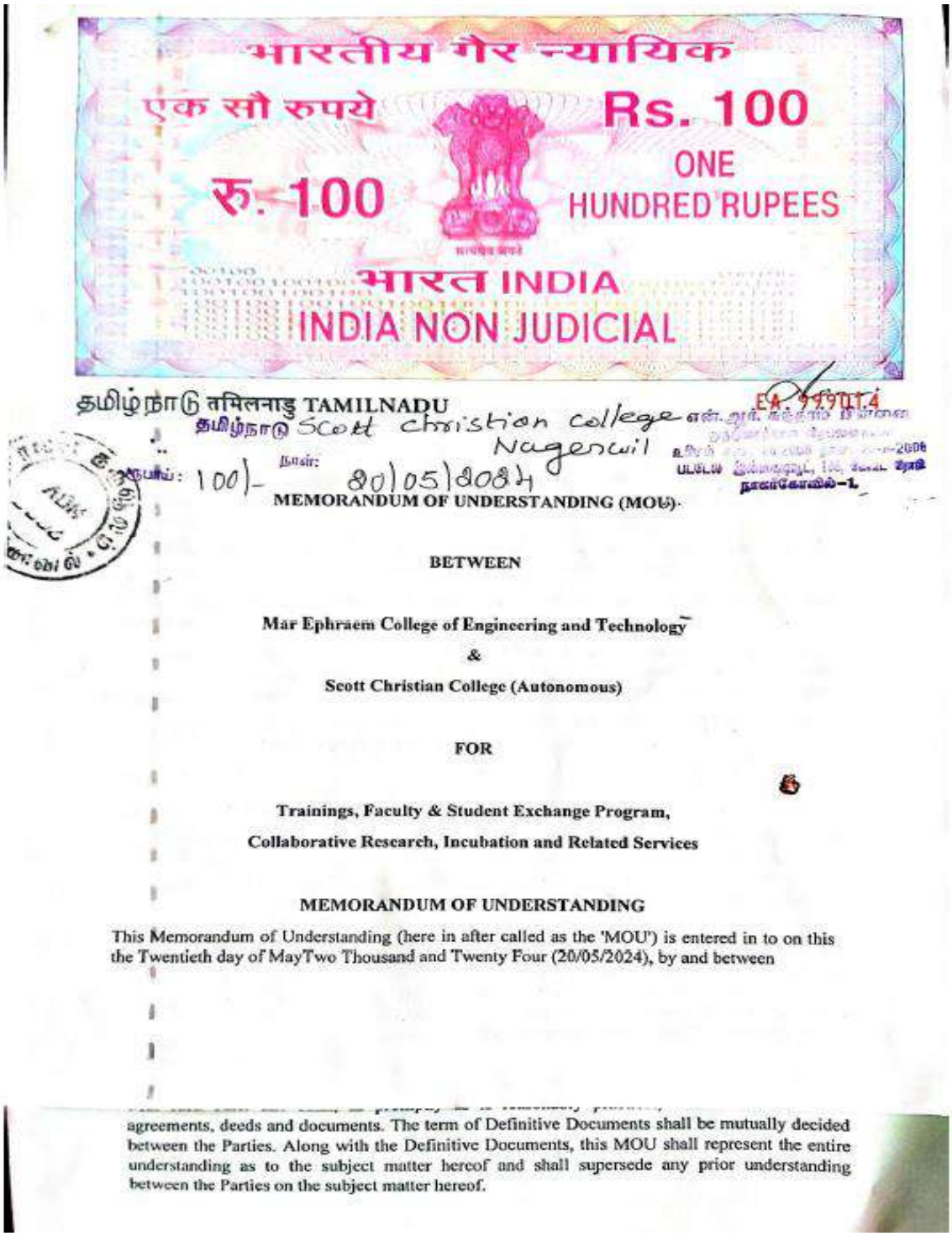
Fig. 9 Students demonstrating their innovative working models to the students of our institution in view of National Science Day celebration 2024 on the topic "Understanding ecosystem for health and well-being"

Fig. ***10 School Students explaining their innovative working models to the judges Prof.A.Charles Hepzy Roy & Dr.Shynin Brinda in the National Science Day Celebration 2022***

Fig. ***11 Staff and student***

coordinators of IIC with the working model competition prize winners of different schools in the National Science Day Celebration 2023

MOU between Scott Christian (Autonomous), Nagercoil & Mar Epraem College of Engineering and Technology, Elavuvilai, Kanyakumari District



भारतीय गैर न्यायिक

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தமிழ்நாடு तमिलनाडु TAMILNADU

தமிழ்நாடு Scott christian college Nagercoil

EA 999117

20/05/2024

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

Mar Ephraem College of Engineering and Technology

&

Scott Christian College (Autonomous)

FOR

Trainings, Faculty & Student Exchange Program,

Collaborative Research, Incubation and Related Services

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (here in after called as the 'MOU') is entered in to on this the Twentieth day of MayTwo Thousand and Twenty Four (20/05/2024), by and between

agreements, deeds and documents. The term of Definitive Documents shall be mutually decided between the Parties. Along with the Definitive Documents, this MOU shall represent the entire understanding as to the subject matter hereof and shall supersede any prior understanding between the Parties on the subject matter hereof.

Mar Ephraem College of Engineering and Technology, Malankara Hills, Elavuvilai, Kanyakumari District, 629171, represented by its Principal, Dr. A. Lenin Fred (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

Scott Christian College (Autonomous), Nagercoil, Kanyakumari District, Tamil Nadu, India – 629003 and represented by its Principal, Dr. D. Henry Raja (here in after referred to as "Second Party", the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors in office, administrators and assigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party') as

WHEREAS:

First Party, Mar Ephraem College of Engineering and Technology run by Diocese of Marthandam Trust, is an Educational Institution engaged in offering Bachelor's, Master's and Doctoral programs in Engineering and Technology.

First Party & Second Party believe that collaboration and co-operation between themselves will promote more effective use of each of their resources, and provide each of them with enhanced opportunities.

The Parties intent to cooperate and focus their efforts on cooperation within area of promotion and nurturing start up, community innovation trainings and related services.

Both Parties, being legal entities in themselves desire to sign this MOU for advancing their mutual interests.

Scott Christian College (Autonomous), the Second Party is an Educational Institution run by Diocese of Kanyakumari of the Church of South India, engaged in offering Bachelors, Masters and Doctoral programs in Arts and Science for the students irrespective of caste, creed and race.

NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES SET FORTH IN THIS MOU, THE PARTIES HERE TO AGREE AS FOLLOWS:

CLAUSE 1

CO-OPERATION

Both Parties are united by common interests and objectives, and they shall establish channels of communication and co-operation that will promote and advance their respective operations within the Institution and its related wings. The Parties shall keep each other informed of potential opportunities and shall share all information that may be relevant to secure additional opportunities for one another.

First Party and Second Party co-operation will facilitate effective utilization of the intellectual capabilities and the facility of both the parties by providing significant inputs to the faculties and students. Necessary innovative trainings on applied sciences, product development, robotics, artificial intelligence and related services will be provided by the first party to the second party. Necessary fundamental trainings on basic sciences and related services will be provided by the second party to the first party.

The general terms of co-operation shall be governed by this MOU. The Parties shall cooperate with each other and shall, as promptly as is reasonably practical, enter into all relevant agreements, deeds and documents. The term of Definitive Documents shall be mutually decided between the Parties. Along with the Definitive Documents, this MOU shall represent the entire understanding as to the subject matter hereof and shall supersede any prior understanding between the Parties on the subject matter hereof.

CLAUSE 2

SCOPE OF THE MOU

Collaborative research programs in specific fields of Interest – First Party and Second Party will jointly identify specific fields to conduct collaborative research programmes of mutual interest and benefit. Both parties believe that close co-operation between the two would be of major benefit to the entire society.

Student exchange programme - Exchange programme for First Party and Second Party students will be explored and conducted accordingly which will be mutually beneficial for both parties.

Faculty exchange programme - Exchange programme for First Party and Second Party faculty will be explored and conducted accordingly which will be mutually beneficial for both parties.

Both Parties will coordinate and organize their students to provide trainings and the necessary facilities available with them.

Both Parties have agreed to carry out the joint activities in the fields of innovation, incubation, entrepreneurship, Patenting and capacity building.

Both Parties agreed to obtain all internal approvals, consents, permissions, and licenses of whatsoever nature required for offering the Programme on the terms specified herein

CLAUSE 3

INTELLECTUAL PROPERTY

Nothing contained in this MOU shall, by express grant, implication, or otherwise, create in either Party any right, title, interest, or license in or to the intellectual property (including but not limited to know-how, inventions, patents, copy rights and designs) of the other Party. The idea of the particular party will be patented only in the name of that party. But the other parties may contribute their expertise. The expenses incurred should be borne by the particular party. If a product is developed by the equal contribution of both the parties, then both will get equal rights. If the contribution varies then the benefits will be shared based on their contribution which will be agreed by both the parties. A separate agreement to be executed on each intellectual property involved in that particular Project/Product/Technology taken up by both the party jointly in which IP should be mentioned specifically.

CLAUSE 4

VALIDITY

This Agreement will be valid until it is expressly terminated by either Party on mutually agreed terms, during which period both parties will take effective steps for implementation of this MOU. Both Parties may terminate this MOU upon 30 calendar days' notice in writing. In the event of Termination, both parties have to discharge their obligations.

CLAUSE 5

RELATIONSHIP BETWEEN THE PARTIES

It is expressly agreed that First Party and Second Party are acting under this MOU as independent contractors, and the relationship established under this MOU shall not be construed as a partnership. Neither Party is authorized to use the other Party's name in any way, to make any representations or create any obligation or liability, expressed or implied, on behalf of the other Party, without the prior written consent of the other Party. Neither Party shall have, nor represent itself as having, any authority under the terms of this MOU to make agreements of any kind in the name of or binding upon the other Party, to pledge the other Party's credit, or to extend credit on behalf of the other Party.

Any divergence or difference derived from the interpretation or application of the MoU shall be resolved by arbitration between the parties as per the Arbitration Act, 1996. This undertaking is to be construed in accordance with Indian Law with exclusive jurisdiction in the Court of Kuzhithurai.

AGREED:

For Mar Ephraem College of Engineering and Technology

Authorized Signatory

Prof. Dr. A. Leoni Fred, M.E., Ph.D.
PRINCIPAL
MAR EPHRAEM COLLEGE
OF ENGINEERING & TECHNOLOGY
MALANKARA HILLS, ELAVUVILAI, MARTHANDAM - 629 171
KANYAKUMARI DISTRICT, TAMILNADU, INDIA

For Scott Christian College (Autonomous)

Authorized Signatory

PRINCIPAL
SCOTT CHRISTIAN COLLEGE
(Autonomous)
NAGERCOIL - 629 003

Mar Ephraem College of Engineering and Technology	Scott Christian College (Autonomous)
Malankara Hills, Elavuvilai, Kanyakumari District - 629171	Nagercoil, Kanyakumari District - 629003
04651-271111	04652-235240
marephraem@gmail.com	principal@scottchristian.org
www.marephraem.edu.in	www.scott.ac.in

Witness 1:

R. LEO BRIGHT SINGH
Mar Ephraem College of Engg & Tech
Elavuvilai.

Witness 2:

Dr. B.S. BENILA
IIC President & Asso. Prof. of Phys
Scott Christian College
Nagercoil.

Module	Course Description	Hours % of	CLO mapping with	Module Learning Activities	Assessment Tasks	Reference
I	**Introduction**					
1.1	Overview of India's diversity, languages, religions, and regional variations	2	1[33]	AW	CA	2
1.2	Historical background and evolution of Indian society	2	1[33]	Ess	ST	2
1.3	Conservation and Revival of Traditional Knowledge in Modern India	2	1[34]	Rev	OT	2
II	**Indian Culture**					
2.1	Traditional Arts and Crafts of India	2	2[33]	TPS	OBT	2
2.2	Festivals and Celebrations in Indian Culture	1	2[17]	PT	HoA	2
2.3	Classical Dance and Music Forms of India	1	2[17]	GT	OBT	1
2.4	Culinary Traditions and Indian fashion	2	2[33]	CW	HoA	1
III	**Indian Astrology and Astronomy**					
3.1	Basic Concepts and Principles in Indian Astrology	2	3[33]	GD	SA	1
3.2	Zodiac Signs, Influence of Planetary Positions, Birth Charts and Horoscopes	1	3[17]	KWL	Qui	1
3.3	Applications and Relevance of Indian Astronomy	1	3[17]	Soc	ST	2
3.4	Ancient Indian Mathematics and Development of number systems	2	3[33]	BS	CT	2
IV	**Indian Ayurveda, Siddha and Unani**					
4.1	Introduction to Ayurveda: Principles and Doshas	2	4[33]	Rev	OBT	2
4.2	Key Concepts of Ayurvedic Medicine	2	4[33]	CW	MCQ	2
4.3	Importance of Siddha and Unani	2	4[34]	Rep	Qui	2
V	**Human Rights in India**					
5.1	Human Rights: Definition and Evolution	1	5[17]	Lec	Ess	2
5.2	Fundamental Human Rights in the Indian Constitution	1	5[17]	KWL	HoA	2
5.3	Protection of Civil Liberties and Freedoms – Safeguarding Social and Economic Rights	2	5[33]	Sem	OT	2
5.4	Women's Rights and Rights of Minorities	2	5[33]	GT	HrA	2

Reference Books:

1. Bhatia, Tej K. "Indian Culture and Heritage." New Delhi, Prabhat Prakashan, 2018.
2. Thapar, Romila. "The Penguin History of Early India: From the Origins to AD 1300." Penguin Books, 2003.
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4. Sarma, P.S. "Astronomy in India: A Historical Perspective." Springer, 2014.
5. Pingree, David. "Jyotiḥśāstra: Astral and Mathematical Literature." Otto Harrassowitz Verlag, 1981.
6. Raghavan, Sriram. "Music and Dance in Indian Art." New Delhi, National Book Trust, 2009.
7.. Frawley, David, and Vasant Lad. "The Yoga of Herbs: An Ayurvedic Guide to Herbal Medicine." Lotus Press, 2001.
8. Gupta, L. C. "Fundamentals of Ayurvedic Medicine." Chaukhamba Sanskrit Pratishthan, 2002.
9. Sahni, Julie. "Classic Indian Cooking." William Morrow Cookbooks, 1980.
10. Harle, J.C. "The Art and Architecture of the Indian Subcontinent." Yale University Press, 1994.
11. Craven, Roy C. "Indian Art: A Concise History." Thames & Hudson, 2010.
12. Anand, Meenakshi, and A. G. Noorani. "Human Rights in India: Historical, Social, and Political Perspectives." Oxford University Press, 2017.
13. Kapur, Ratna. "Gender, Alterity and Human Rights: Freedom in a Fishbowl." Routledge, 2017.

Fig. 16 Syllabus and credits of the Value added course "Indian Knowledge System & Human Rights"

SEMESTER -III

Course Title: Value Added Course I Health and Fitness through Yogasanas		Course Type: Theory
Total Hours: 0 Hours/Week: 0 Credit: 1		Course Code: 23SE31

Course Creator	Expert 1	Expert II
Dr.C.Samson Assistant Professor Mobile: 9080025484 samson@scottchristian.org	Dr.N.Aseer Rufuss Associate Professor Mobile: 9865187847 aseerrufs@ gmail.com	Dr. B. Benitto Anand Associate Professor Mobile:9443204442 anandbenit@gmail.com

CLO-No.	Course Learning Outcomes *Upon completion of this course, students will be able to:*	% of PLO Mapping with CLO	CLO & PLO Mapped with GA#	Cognitive Level (CL)	Knowledge Category (KC)
CLO-1	analyse their body physically and mentally for the integration of physical, mental and spiritual fitness	2(8), 3(12)	1, 8	U	M
CLO-2	understand to mental hygiene	2(4), 3(7), 4(5), 6(4)	1, 2, 7	An, Ap	C, P
CLO-3	apply co-ordination in sports	2(2), 3(8), 4(7), 6(3)	1, 2, 7, 8, 10	C	P
CLO-4	understand oneself with basic knowledge about one's personality	2(2), 3(8), 4(7), 6(3)	1, 2, 7, 8, 10	Ap, C	C, P
CLO-5	evaluate themselves and become healthier, saner and more integrated members of the society and of the nation	2(3), 3(9), 4(6), 6(2)	1, 2, 7, 8, 10	An,E	C, F, M

Module	Course Description	Hours	% of CLO mapping with Module	Learning Activities	Assessment Tasks	Reference
1.1	Asanas, Procedure for doing asanas	2	1[33]	Lec	HrA	1
1.2	Asanas in Long sitting position	1	1[17]	BS	Qui	1
1.3	Padmasana, Chin Mudra	1	1[17]	OT	CA	1
1.4	Sugasana, Vajrasana	2	1[33]	Sem	SA	1
2.1	Prone position Asanas	2	2[33]	SI	HoA	2
2.2	Makrasana	1	2[17]	WSQ	CT	2
2.3	Dhanurasana	1	2[17]	FC	CA	2
2.4	Bujankasana	2	2[33]	OO	SA	2
3.1	Supine position Asanas - Sava asana	2	3[33]	TPS	Ess	2
3.2	Sarvaangasana	1	3[17]	KWL	HA	2
3.3	Vibareethakarani	1	3[17]	OO	MCQ	2
3.4	Halasana	2	3[33]	Soc	CA	2
4.1	Standing position Asanas - Thirikonasana	2	4[33]	sSem	HA	3
4.2	Thadasana	1	4[17]	GT	MCQ	3
4.3	Veerapathrasana	1	4[17]	Lec	HrA	3
4.4	Bathahasthasana	2	4[33]	BS	Qui	3
5.1	Kneeling position Asanas	2	5[33]	OT	CA	3
5.2	Mayoorasana	1	5[17]	Sem	SA	3
5.3	Artha sirasana	1	5[17]	SI	HoA	3
5.4	Sirasana	2	5[33]	WSQ	CT	3

Reference Books

1. K. Chandrasekaran, "Sound Health through Yoga" Prem Kalian Publication, Sedapatti, 1999.
2. Yogeshwar, "Textbook of Yoga", Madras Yoga Centre, 2004.
3. Kumaresan P. "Yogasanam", Abinaya Publications, 2002.

Fig. 17 Syllabus and credits of the Value added course "Health & Fitness through Yogaasanas"

Fig. 18 Invitation of Folklore Seminar depicting Indian Knowledge system organized by the Department of Tamil

Fig. 19 Dr.Viola Baby, Assistant Professor of Tamil Felicitating the Gathering on the Folkloke Seminar organized by the department of Tamil held on 20.03.2024

Fig. 20 Students viewing the palm leaf manuscript protected in the Tamil Department museum and understanding how the ancient people used the Palm leaf manuscripts for communication

Fig. 21 Traditional Tools depicting the Indian Knowledge System which is being protected in the Tamil Department museum of our institution

Fig. 22 The medicinal Garden in our campus containing the medicinal herbs of Marthuvazhmalai located in Kanyakumari district used in the preparation of medicinal oils

16 | நாகர்கோவில்

நாகர்கோவில் ஸ்காட் கிறிஸ்தவ கல்லூரியில் சர்வதேச யோகா தினம் கொண்டாடப்பட்டது.

ஸ்காட் கல்லூரியில் யோகா தினம்

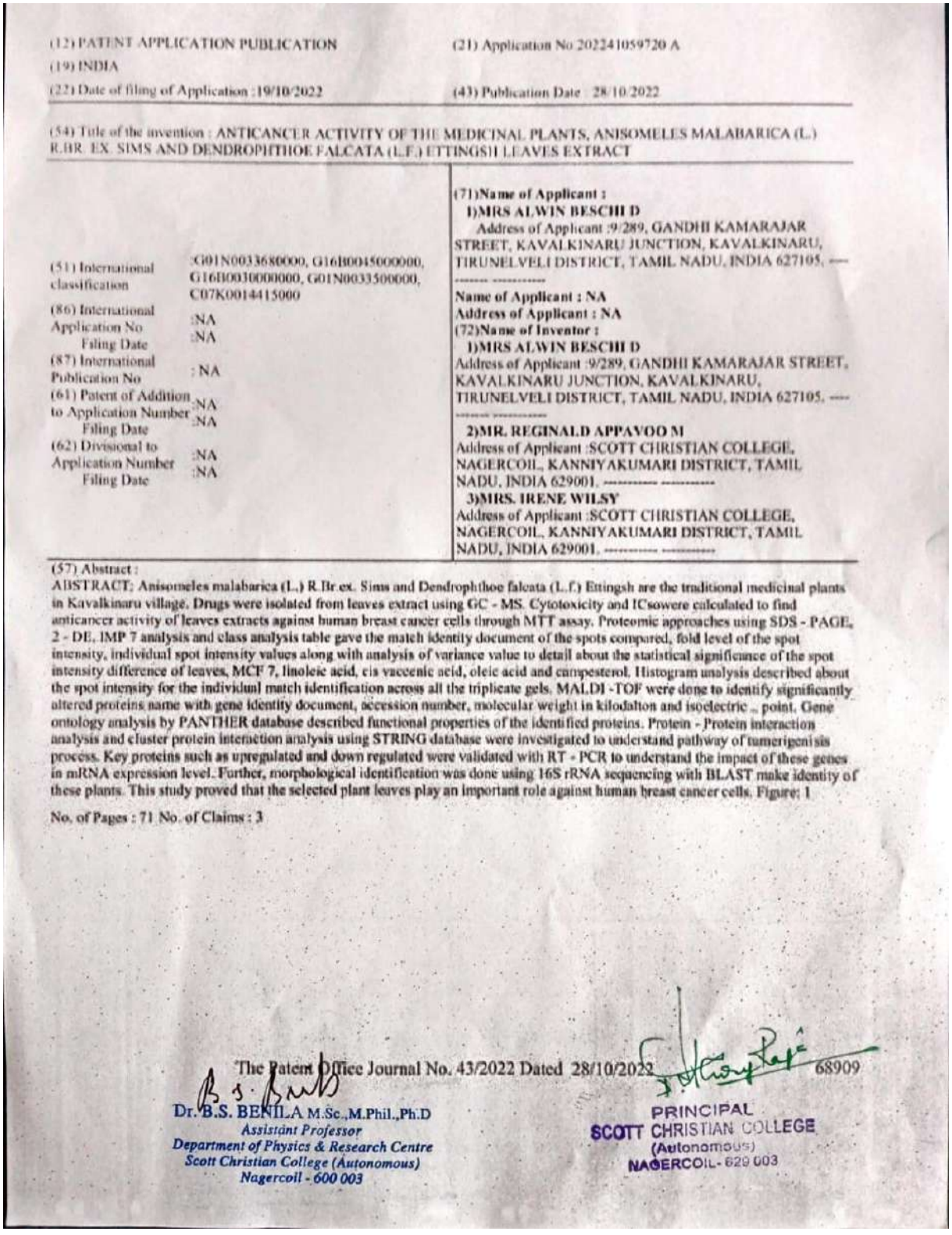
நாகர்கோவில், ஜூன் 23– நாகர்கோவில் ஸ்காட் கிறிஸ்தவ கல்லூரியில் சர்வதேச யோகா தினம் கொண்டாடப்பட்டது. நாகர்கோவில் ஸ்காட் கிறிஸ்தவ கல்லூரியில் நடந்த யோகா தின நிகழ்ச்சியை கல்லூரி முதல்வர் எட்வர்ட் துவக்கி வைத்தார். பேராசிரியர் யார்டிலி வரவேற்றார். கிறிஸ்தவ உடற்கல்வியியல் கல்லூரி முதல்வர் பிரைட் செல்வகுமார் பேசினார். தொடர்ந்து மாணவர்களுக்கு யோகா பயிற்சி அளிக்கப்பட்டது. ஏராளமான கல்லூரி மாணவ, மாணவிகள் யோகா பயிற்சி பெற்றனர். ஏற்பாடுகளை என்.எஸ்.எஸ்., என்.சி.சி., அலுவலர்கள் செய்தனர். பேரா. பென் நன்றி கூறினார்.

Fig. 23 Students and Staff Practicing Yoga in the Yoga center of our Institution and is encouraged to perform every day with the help of Yoga masters

News published in the newspapaer Thina Thanthi regarding practice of yoga in our institution

Fig. **24 Students are given coaching in martial arts like fencing, kazhari, silampum and they are performing them in the sports day celebration 2023**

Patents Awarded



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :19/10/2022

(21) Application No 202241059720 A
(43) Publication Date : 28/10/2022

(54) Title of the invention : ANTICANCER ACTIVITY OF THE MEDICINAL PLANTS, ANISOMELES MALABARICA (L.) R.BR. EX. SIMS AND DENDROPHTHOE FALCATA (L.F.) ETTINGSH LEAVES EXTRACT

(51) International classification :G01N0033680000, G16H0045000000, G16H0030000000, G01N0033500000, C07K0014415000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT: Anisomeles malabarica (L.) R.Br.ex. Sims and Dendrophthoe falcata (L.f.) Ettingsh are the traditional medicinal plants in Kavalkinaru village. Drugs were isolated from leaves extract using GC - MS. Cytotoxicity and IC50were calculated to find anticancer activity of leaves extracts against human breast cancer cells through MTT assay. Proteomic approaches using SDS - PAGE, 2 - DE, IMP 7 analysis and class analysis table gave the match identity document of the spots compared, fold level of the spot intensity, individual spot intensity values along with analysis of variance value to detail about the statistical significance of the spot intensity difference of leaves, MCF 7, linoleic acid, cis vaccenic acid, oleic acid and campesterol. Histogram analysis described about the spot intensity for the individual match identification across all the triplicate gels. MALDI -TOF were done to identify significantly altered proteins name with gene identity document, accession number, molecular weight in kilodalton and isoelectric ,, point. Gene ontology analysis by PANTHER database described functional properties of the identified proteins. Protein - Protein interaction analysis and cluster protein interaction analysis using STRING database were investigated to understand pathway of tumerigenisis process. Key proteins such as upregulated and down regulated were validated with RT - PCR to understand the impact of these genes in mRNA expression level. Further, morphological identification was done using 16S rRNA sequencing with BLAST make identity of these plants. This study proved that the selected plant leaves play an important role against human breast cancer cells. Figure: 1

No. of Pages : 71 No. of Claims : 3

The Patent Office Journal No. 43/2022 Dated 28/10/2022 68909

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Fig.* 25 *Patent awarded to Dr.M.Reginald Appavoo, Associate Professor of Botany

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341007762 A

(19) INDIA

(22) Date of filing of Application :07/02/2023

(43) Publication Date : 24/03/2023

(54) Title of the invention : SYSTEM AND METHOD FOR PLANT DISEASE DETECTION USING NEURAL NETWORKS

(51) International classification	[illegible]
(86) International Application No	NA
Filing Date	NA
(87) International Publication No	NA
(61) Patent of Addition to Application Number	NA
Filing Date	NA
(62) Divisional to Application Number	NA
Filing Date	NA

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(57) Abstract :
Nowadays, when the crops are infected with pests, it greatly affects the agricultural production of the country. These types of pests and infections pose a huge threat to their growth. So, in order to protect the crops in the field, the farmers observe them for detection and identification of pests. But this phenomenon is time consuming as well as inaccurate. With the enormous growth of technology, the manual detection of pests can be replaced by alternative techniques which are automated. The methodology of automatic detection of pests using image processing techniques using deep learning renders accurate results with better precision. This invention describes disease recognition model with the supported leaf image classification, built with the deep convolutional networks. The recent advances in computer vision helps to achieve better plant protection and extend the market of computer vision in agricultural applications. This invention of plant disease recognition model explains the process starting from collection of images to create a dataset, examined by the agricultural experts, finally the design of deep CNN model to train and validate the images. The built model has the ability to analyses and distinguish the diseased leaves from the healthy leaves simultaneously growing in the agricultural field by employing the Convolutional Neural Networks. This type of Image classification models built by Deep learning techniques are proven to be successful to solve pest detection problems

No. of Pages : 14 No. of Claims : 10

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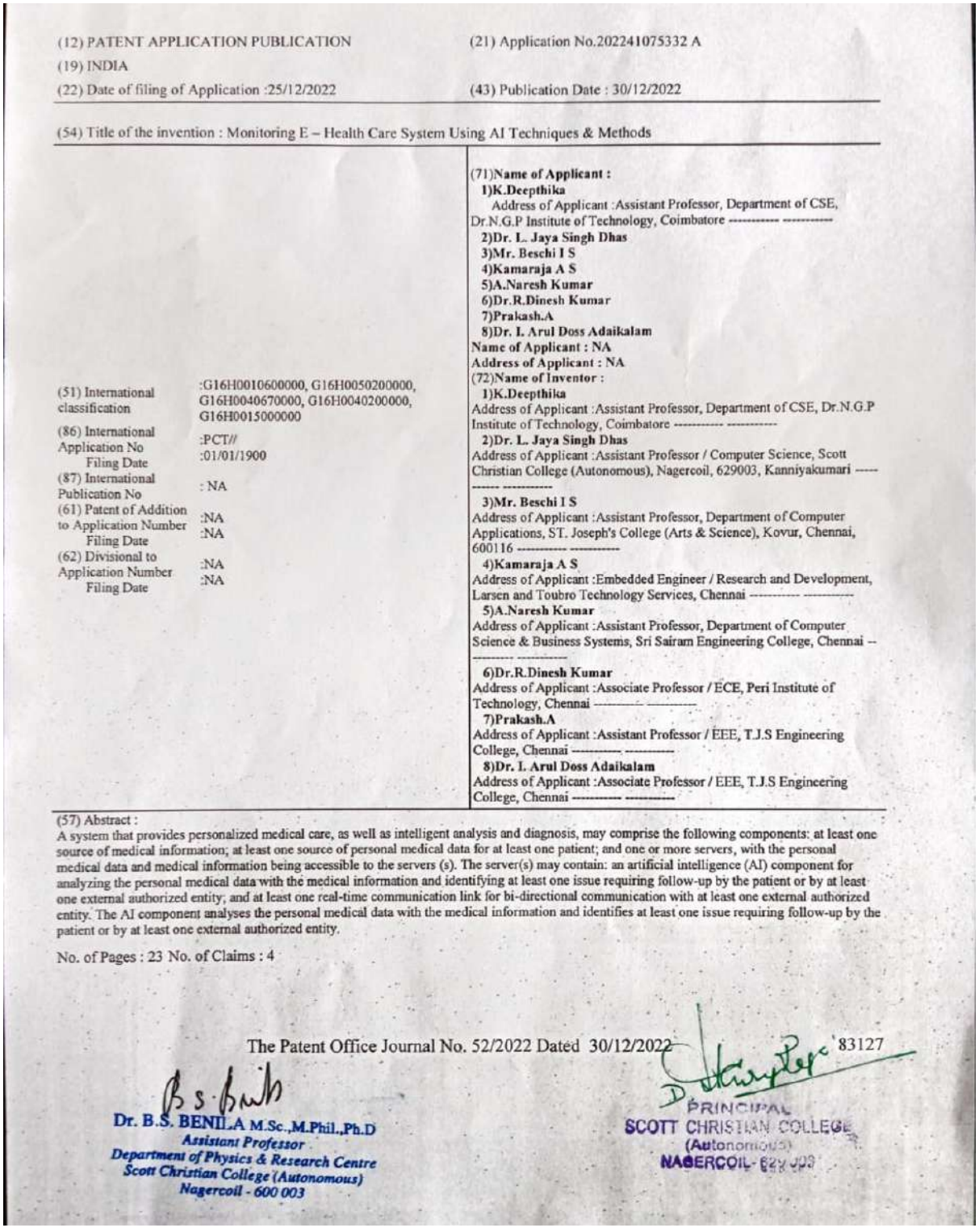
Fig. 26 Patent awarded to Dr.Shynin Brintha, Assistant Professor of Botany



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :25/12/2022

(21) Application No.202241075332 A
(43) Publication Date : 30/12/2022

(54) Title of the invention : Monitoring E – Health Care System Using AI Techniques & Methods

(51) International classification :G16H0010600000, G16H0050200000, G16H0040670000, G16H0040200000, G16H0015000000
(86) International Application No :PCT// Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA Filing Date :NA
(62) Divisional to Application Number :NA Filing Date :NA

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(57) Abstract :
A system that provides personalized medical care, as well as intelligent analysis and diagnosis, may comprise the following components: at least one source of medical information; at least one source of personal medical data for at least one patient; and one or more servers, with the personal medical data and medical information being accessible to the servers (s). The server(s) may contain: an artificial intelligence (AI) component for analyzing the personal medical data with the medical information and identifying at least one issue requiring follow-up by the patient or by at least one external authorized entity; and at least one real-time communication link for bi-directional communication with at least one external authorized entity. The AI component analyses the personal medical data with the medical information and identifies at least one issue requiring follow-up by the patient or by at least one external authorized entity.

No. of Pages : 23 No. of Claims : 4

The Patent Office Journal No. 52/2022 Dated 30/12/2022 83127

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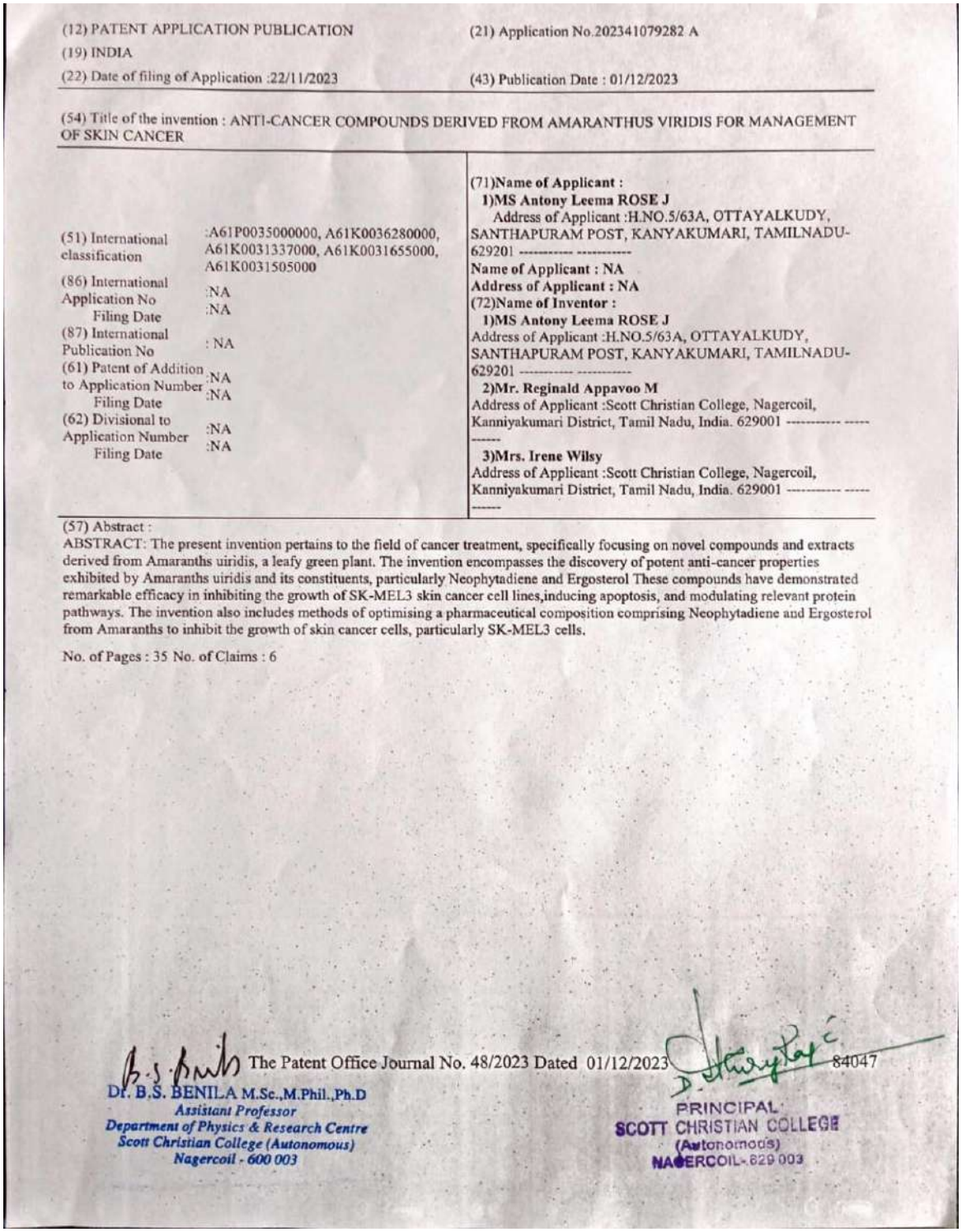
Fig. 27 Patent awarded to Dr.Jeya Singh Dhas, Associate Professor of Computer Science



(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :22/11/2023

(21) Application No.202341079282 A
(43) Publication Date : 01/12/2023

(54) Title of the invention : ANTI-CANCER COMPOUNDS DERIVED FROM AMARANTHUS VIRIDIS FOR MANAGEMENT OF SKIN CANCER

(51) International classification	:A61P0035000000, A61K0036280000, A61K0031337000, A61K0031655000, A61K0031505000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
ABSTRACT: The present invention pertains to the field of cancer treatment, specifically focusing on novel compounds and extracts derived from Amaranths uiridis, a leafy green plant. The invention encompasses the discovery of potent anti-cancer properties exhibited by Amaranths uiridis and its constituents, particularly Neophytadiene and Ergosterol These compounds have demonstrated remarkable efficacy in inhibiting the growth of SK-MEL3 skin cancer cell lines,inducing apoptosis, and modulating relevant protein pathways. The invention also includes methods of optimising a pharmaceutical composition comprising Neophytadiene and Ergosterol from Amaranths to inhibit the growth of skin cancer cells, particularly SK-MEL3 cells.

No. of Pages : 35 No. of Claims : 6

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Fig.* 28 *Patent awarded to Dr.M.Reginald Appavoo, Associate Professor of Botany

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

सत्यमेव जयते

ORIGINAL
क्रम सं/ Serial No. : 166481

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डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 407864-001

तारीख / Date : 17/02/2024

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *PLANT DIVERSITY DETECTION DEVICE* से संबंधित है, का पंजीकरण, श्रेणी 10-05 में 1.Dr. G. Jahirhussain 2. Dr. Amzad Basha Kolar 3.Ms. G. Karuniya Raja Viella 4.Dr. S. Sahaya Sathish 5.Dr. M. D. Saravanamoorthy 6.Dr. S. Dominic Rajkumar 7.Dr. M. Reginald Appavoo 8.Dr. J. Irene Wilsy 9.Ms. R. Kavitha 10.Dr. R. Kavitha 11.Dr. S. Bavya के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 10-05 in respect of the application of such design to *PLANT DIVERSITY DETECTION DEVICE* in the name of 1.Dr. G. Jahirhussain 2. Dr. Amzad Basha Kolar 3.Ms. G. Karuniya Raja Viella 4.Dr. S. Sahaya Sathish 5.Dr. M. D. Saravanamoorthy 6.Dr. S. Dominic Rajkumar 7.Dr. M. Reginald Appavoo 8.Dr. J. Irene Wilsy 9.Ms. R. Kavitha 10.Dr. R. Kavitha 11.Dr. S. Bavya.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue : 26/04/2024

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
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Fig. Fig. 29 Product Design awarded to Dr.M.Reginald Appavoo Associate Professor of Botany

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ORIGINAL
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पेटेंट कार्यालय, भारत सरकार **The Patent Office, Government Of India**

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No.	:	407865-001
तारीख / Date	:	17/02/2024
पारस्परिकता तारीख / Reciprocity Date*	:	
देश / Country	:	

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *PLANT ROOT POWER HARVESTING DEVICE* से संबंधित है, का पंजीकरण, श्रेणी 13-02 में 1.Dr. G. Jahirhussain 2. Dr. Amzad Basha Kolar 3.Ms. G. Karuniya Raja Viella 4.Dr. S. Sahaya Sathish 5.Dr. M. D. Saravanamoorthy 6.Dr. S. Dominic Rajkumar 7.Dr. M. Reginald Appavoo 8.Dr. J. Irene Wilsy 9.Ms. R. Kavitha 10.Dr. R. Kavitha 11.Dr. S. Bavya के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 13-02 in respect of the application of such design to *PLANT ROOT POWER HARVESTING DEVICE* in the name of 1.Dr. G. Jahirhussain 2. Dr. Amzad Basha Kolar 3.Ms. G. Karuniya Raja Viella 4.Dr. S. Sahaya Sathish 5.Dr. M. D. Saravanamoorthy 6.Dr. S. Dominic Rajkumar 7.Dr. M. Reginald Appavoo 8.Dr. J. Irene Wilsy 9.Ms. R. Kavitha 10.Dr. R. Kavitha 11.Dr. S. Bavya.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि :
Date of Issue 02/05/2024

उन्नत की पंडित
महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का स्वत्वाधिकार पंजीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

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Fig. 30 Product Design awarded to Dr.M.Reginald Appavoo Associate Professor of Botany

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Welcome James Chellappan Sign out

Controller General of Patents, Designs & Trade Marks

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G.A.R.6
[See Rule 22(1)]
RECEIPT

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Docket No 52236

Date/Time 2024/04/06 13:45:04

To
James Chellappan

15-159B, Lake View Road Christopher Nager

UserId: cjamesha

CBR Detail:

Sr. No.	App. Number	Ref. No./Application No.	Amount Paid	C.B.R. No.	Form Name	Remarks
1	202441028395	TEMP/E-1/30634/2024-CHE	1600	23915	FORM 1	MAD Mill Method: A System and Process for Holistic Assessment of Learning Outcomes in Education

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
N-0001385436	Online Bank Transfer	0604240014319	1600.00	1475001020000001

Total Amount : ₹ 1600.00

Amount in Words: Rupees One Thousand Six Hundred Only

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* This is a computer generated receipt, hence no signature required.

Fig. 31 Patent Filed by Dr.C.James, Dean of IQAC & Associate Professor of Physics