



All Saints' College
Trivandrum

Accredited by NAAC with A+ Grade

Department of Botany

in association with IQAC, All Saints' College

INTERNATIONAL SEMINAR 'FRONTIERS IN PLANT SCIENCE RESEARCH'

Seminar Series on Research Methodology - Series II



28.09.2022



Audiovisual Hall



9.30 AM- 3.30 PM



Dr. Sajitha Biju

Crop Scientist, School of Agriculture and Food
Faculty of Veterinary and Agricultural Sciences
The University of Melbourne



Dr. K Murugan

Director, CISSAPHYTOTECH, R & D of CISSA
Principal (Rtd) Govt. Arts College,
Thiruvananthapuram



Mr. Ajeesh Thekkatavan

Assistant Director (Biology)
Regional Forensic Science Laboratory
Dept of Police, Kannur

Patron

Rev Mother Mary Frances

Director

Rev Sr. Belinda Perreira

Principal

Dr. Reshmi R Prasad



Coordinator

Dr. Nisha K K (Assistant Professor)

Organizing Committee

Dr. Cinthya Christopher (HoD, Assistant Professor)

Dr. Sr. Shalva T J (Assistant Professor)

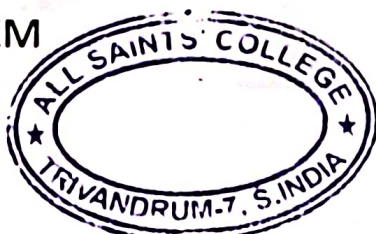
Dr. Pressy P Prakasia (Assistant Professor)

Reshmi
Principal
All Saints' College
Thiruvananthapuram-7

PROGRAM

- 9.30 AM - Registration
- 9.45 AM - 10.00 AM - Inaugural Session
- Prayer
- Welcome - Dr. Cinthya Christopher (HoD, Botany)
- Presidential Address - Dr. Reshmi R Prasad (Principal)
- Inaugural Address - Dr. Sajitha Biju, Crop Scientist,
School of Agriculture and Food, FVAS
The University of Melbourne
- Vote of Thanks - Dr. Nisha K K (Coordinator)
- 10.00 AM- 11.15 AM - Scientific Session I
- Chair - Dr. Sr. Shaina T J (Asst. Professor)
- "Framing the future of sustainable agriculture"**
Dr. Sajitha Biju, Crop Scientist,
School of Agriculture and Food, FVAS
The University of Melbourne
- 11.15 AM- 11.30 AM - Tea break
- 11.30 am- 12.45 PM - Scientific Session II
- Chair - Dr. Cinthya Christopher (HoD, Botany)
- "Plant taxonomy learning and research for hitting the right target of taxonomic challenges"**
Dr. K Murugan, Director, CISSAPHYTOTECH
Principal (Rtd) Govt. Arts College, Tvpm
- 12.45 PM- 1.30 PM - Lunch
- 1.30 PM- 3.00 PM - Scientific Session III
- Chair - Dr. Pressy P Prakasia (Asst. Professor)
- "Role and Career Prospects of Biology in Forensic Science Aspect"**
Mr. Ajeesh Thekkatavan
Assistant Director(Biology)
Regional Forensic Science Laboratory
Department of Police, Kannur

NATIONAL ANTHEM



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**Report on the
International Seminar on
'Frontiers in Plant Science Research'**

**Organized by
The Department of Botany, All Saints' College,
Thiruvananthapuram**

**Date
28.09.2022**



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International Seminar on the 'Frontiers in Plant Science Research' (second in the series on Research Methodology) was organized by the Department of Botany, All Saints' College on 28th September 2022. Dr. Sajitha Biju, Dr. K. Murugan, and Mr. Ajesh Thekkatavan were the resource persons of the seminar.

The seminar was started by seeking the blessings of the Almighty by prayer song by the department choir. Dr. Cinthya Christopher, Head of the department of Botany welcomed the gathering. The seminar was officially inaugurated by Dr. Sajitha Biju, Crop Scientist in the School of Agriculture and Food, FVAS, The University of Melbourne. Dr. Nisha K K, Assistant professor and coordinator of the seminar delivered the vote of thanks.

The first scientific session was by Dr. Sajitha Biju and was chaired by Dr. Sr. Shaina T J, Assistant professor, Department of Botany, All Saints' College. Dr. Sajitha Biju is a Crop Scientist in the School of Agriculture and Food, FVAS The University of Melbourne. She was also a former faculty at All Saints' College. The topic for the first session was "Framing the Future of Sustainable Agriculture". Dr. Sajitha Biju talked about the aspects of sustainable agriculture. She introduced modern techniques of agriculture like hydroponics, microgreen farming, organic farming, sensors used in agriculture, artificial intelligence in agriculture, etc. Hydroponics is a type of agriculture in which crops are grown using water-based mineral nutrient solutions in aqueous solvents and not in soil. Hydroponics systems can be set up indoors in places that would normally require more space. Microgreen farming is growing tiny edible greens at home. These microgreens have more nutrients than mature plants. Organic farming is an agricultural system that uses biological fertilizers. Sensors are used in agriculture, it enables the farmer to get a wide range of data points from various inputs and factors that determine crop yield, and turn that data into an actionable plan to detect patterns. It helps to detect stress in plants. Thermal sensors, multispectral imaging sensors, hyperspectral sensors, and LiDAR are the various sensing devices used. Artificial Intelligence in agriculture helps in improving the overall harvest quality and accuracy. She also mentioned the 'OMICS' and 'Genome Editing' approaches for stress tolerance in plants. Sustainable agriculture eradicates hunger, malnutrition, poverty, etc. Global tensions, policies, demographics, and natural resource changes affect sustainable food production and distribution. She said that lack of food (bio)diversity is a threat. Everyone should have a sustainable menu. Food loss and waste must be stopped. She mentioned the new approaches for reducing the wastage of food like the Y Waste app, synthetic meat, climate-resilient

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practices, dietary changes, digital technologies, and eating insects. She spoke about her journey to becoming a crop scientist. It really inspired the students. She also mentioned the scholarship programs at the University of Melbourne. The session was very informative to the students. The first session ended by 11.30 am.

The second session was by Dr. K. Murugan, Director of CISSAPHYTOTECH and retired Principal of Govt. Arts College, Trivandrum. The scientific session started around 11.40 am and the session was chaired by Dr. Cinthya Christopher, Head and Assistant professor, Department of Botany, All Saints' College. The topic of the session was "Plant Taxonomy Learning and Research for Hitting the Right Target of Taxonomic Challenges". He first suggested two books – "Are We Losing the Science of Taxonomy" by Lisa. W. Drew and "Plight of Plant Taxonomy and Taxonomists In India; What, Why And How? By Ramamoorthy Siva – for the students to read. He mainly focused on the scope in Botany. He mentioned the websites like Biotechnika, Tair, Pathway to Science, Ambitious Researchers, I Dream Career, etc. He commented on how algal biofuels are turned into petroleum fuels. He talked about the hydroponics market, Arpeggio Bio, Biomanufacturing, etc. He mentioned the Tree Ambulance. The Tree Ambulance is an initiative that has been initiated to protect the tree by Chennai-based environmentalist K. Abdul Ghani in Tamil Nadu. He mentioned the rediscovery of plants. He briefly spoke about *Posidonia australis*, *Septemeranthus*, Himalayan trillium, Coccolithophores, and *Pinanga andamanesis*. He talked about D. Vasini Bai, an innovator from Kerala, who developed *Anthurium* as a natural air purifier. He talked about his visit to a Kudumbashree unit and an Ayush Ayurveda outlet. He mentioned how taxonomy is becoming endangered and how it failed to attract the youth generation. He said taxonomy is removed from Botany texts to add "more important topics". For taxonomy, the most important scientific instrument is one's eyes and brain. He said that curiosity and critical thinking make the subject interesting. The session was very interactive and it made the students interested in taxonomy.

The third scientific session was in the afternoon and was chaired by Dr. Pressy. P. Prakasia, Assistant professor, Department of Botany, All Saints' College. Mr. Ajeesh Thekkatavan, Assistant Director (Biology) of the Regional Forensic Science Laboratory, Department of Police, Kannur was the resource person. The topic for the session was "Role and Career Prospects of Biology in Forensic Science Aspect". He talked about the relevance of science in criminal investigations. The principles of Forensic Science are the law

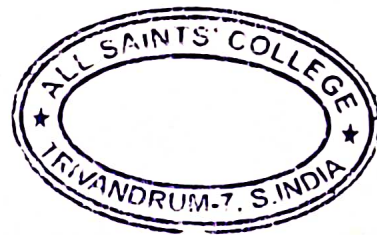
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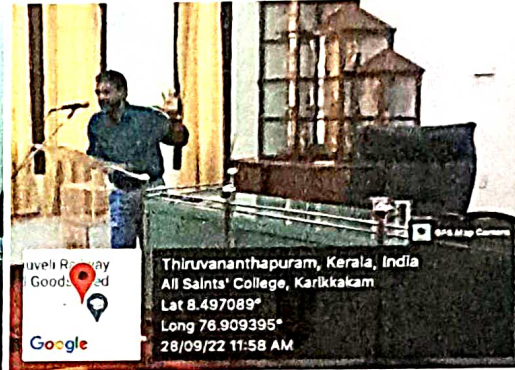


of individuality, the principle of exchange, the law of progressive change, the principle of comparison, and the law of probability. How a biology student has more opportunities in the forensic field were also mentioned. Forensic Biology plays a very important role in forensic science. Through science better evidence can be produced. He talked about Edmond Locard, the father of the crime lab, and Arthur Cohler. He shared his personal experiences working as a forensic officer.

The event concluded at 3.30 pm. The students found the session very interesting, interactive, and informative.

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International Seminar

'Frontiers in Plant Science Research'

Seminar Series on Research Methodology - Series II

In Association with IQAC

Date: 28.09.2022

Venue: Audiovisual Hall

Resource Persons

1. Dr. Sajitha Biju
Crop Scientist,
School of Agriculture and Food
FYAS, The University of Melbourne
2. Dr. K. Munugan
Director, CISSAPHYTOTECH
R & D of CISSA
3. Mr. Ajeesh Thakkattavan
Assistant Director (Biology)
Regional Forensic Science Laboratory
Dept of Police.

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*International Seminar on Frontiers in Plant Science Research.
Seminar Series on Research Methodology - Level II 13*

Sl No.	Name	Designation	Signature
1.	Ajma Chandra L.	DC III Botany	<i>Ajma</i>
2.	Lija Raj. R	Bsc Botany	<i>Lija</i>
3.	Geethu Nair. E.L	Bsc Botany DC III	<i>Geethu</i>
4.	Smithi S. Nair	Dc III Botany	<i>Smithi</i>
5.	Athulya. C.V	Dc II Botany	<i>Athulya</i>
6.	Uma Devi	Dc II Botany	<i>Uma</i>
7.	Anugama Santhosh	Dc II Botany	<i>Anugama</i>
8.	Krishna. C. S	DC III Botany	<i>Krishna</i>
9.	Athulya Sankar	DC III Botany	<i>Athulya</i>
10.	Jeena. J.S	Dc III Botany	<i>Jeena</i>
11.	Ansi Antony	Dc III Botany	<i>Ansi</i>
12.	Haritha G.	Dc III Botany	<i>Haritha</i>
13.	Darshin S. Zahid	Dc III Botany	<i>Darshin</i>
14.	Ashifa A.S	Dc III Botany	<i>Ashifa</i>
15.	Sandra L.R	Dc I Botany	<i>Sandra</i>
16.	Devika L.S	DC I Botany	<i>Devika</i>
17.	Anga A.R	Dc I Botany	<i>Anga</i>
18.	Abhirami A.R	Dc I Botany	<i>Abhirami</i>
19.	M.S. Ameena Fathima	Dc I Botany	<i>Ameena</i>
20.	Abhina S	DC I Botany	<i>Abhina</i>
21.	Revathy R.S	Dc I Botany	<i>Revathy</i>
22.	Ancy K	Dc I Botany	<i>Ancy</i>
23.	Shincy Bossiat	Dc I Botany	<i>Shincy</i>
24.	Raisa Rafi	Dc I Botany	<i>Raisa</i>
25.	Aneetha A	Dc I Botany	<i>Aneetha</i>
26.	Neha S.B	DC II Botany	<i>Neha</i>
27.	Devika S	DC III Botany	<i>Devika</i>
28.	Aminu S	DC III Botany	<i>Aminu</i>
29.	Anaswara R.K	Dc III Botany	<i>Anaswara</i>
30.	Alina Eric	DC III Botany	<i>Alina</i>
31.	Geethu V Nair	Dc III Botany	<i>Geethu</i>
32.	Greeshma R.S	DC II Botany	<i>Greeshma</i>

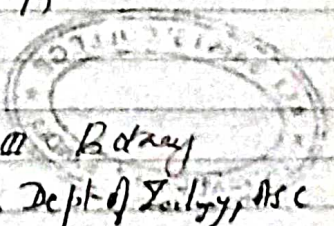
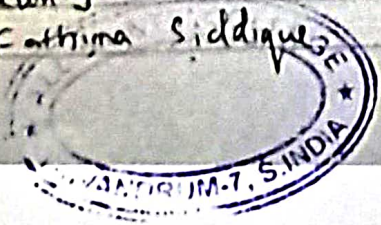


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No	Name	Designation	Signature
33	Sumi A S	DC III Botany	[Signature]
34	Prapotha D	DC III Botany	[Signature]
35	Sheela Shibu	DC III Botany	[Signature]
36	Hanna George	DC III Botany	[Signature]
37	Arpa J S	DC III Botany	[Signature]
38	Abitha Jaya	DC I Botany	[Signature]
39	Alcena C	DC I Botany	[Signature]
40	Ajitha Deepi J	DC III Botany	[Signature]
41	Ashna S	DC III Botany	[Signature]
42	Asiya A	DC III Botany	[Signature]
43	Adithya V	DC III Botany	[Signature]
44	Aparna P	DC I Botany	[Signature]
45	Parvathi Mahendran	DC I Botany	[Signature]
46	Krishnendhu B S	DC I Botany	[Signature]
47	Anupriya A S	DC I Botany	[Signature]
48	D. Smitha Asok V (NR)	Asst. Prof in EVS, All Saints' Coll	[Signature]
49	Farsana S	DC I Botany	[Signature]
50	Lekshmi V R	DC I Botany	[Signature]
51	Arpa S	DC I Botany	[Signature]
52	Hudafathima A	DC I Botany	[Signature]
53	Tennamoh	DC I Zoology	[Signature]
54	Dr. Ayona Jayadev	Asst. Prof of EVS, All Saints' Coll	[Signature]
55	Haris Asha Santhosh	DC I Zoology	[Signature]
56	Sufiya Husam U	DC III Botany	[Signature]
57	Vidhya V T	DC III "	[Signature]
58	Krishna R S	"	[Signature]
59	Shubino S Shibu	"	[Signature]
60	Ramsiya A	DC I Zoology	[Signature]
61	Prabha T	"	[Signature]
62	Kalvanesia A	"	[Signature]
63	DEVIKA A R	DC III BOTANY	[Signature]
64	SARNA S	"	[Signature]
65	Mithra	DC I zoology	[Signature]



Sl No	Name	Designation	Signature
66	Aswathy M.V.	DCI Zoology	Aswathy
67	Gowri Nandana R.S	"	Gowri
68	Adithyan R. Nair	DCI Botany	Adithyan
69	Srinivas Sahuraj	DCI Zoology	Srinivas
70	Nimmi Jose S	"	Nimmi
71	Alimya A.B	DCI Zoology	Alimya
72	Jayalakshmi A	DCI Zoology	Jayalakshmi
73	Gauri S	DCI Zoology	Gauri
74	Sajitha R	DCI Botany	Sajitha
75	Aidwaya Lekshmi S.R	DCI Botany	Aidwaya
76	Heshaya G. Nair	DCI Botany	Heshaya
77	Noona A	DCI Zoology	Noona
78	ISHA FATHIMA S	"	ISHA
79	Sayoojya	"	Sayoojya
80	Meenakshi	"	Meenakshi
81	Akhila	"	Akhila
82	Sreekutty	"	Sreekutty
83	Sabira	"	Sabira
84	Sandra B.M.R.	DCI BOTANY	Sandra
85	Aparna V.S	"	Aparna
86	Monica M	MSc EVS	Monica
87	Anaswara A	"	Anaswara
88	Savitha P.S	"	Savitha
89	Sandra V.S	"	Sandra
90	varsha P	"	varsha
91	Arya kv	"	Arya
92	Saranya S.	"	Saranya
93	Veena M. Wilfred	"	Veena
94	Neethu S.S	"	Neethu
95	Arya A	DCI Botany	Arya
96	Dr. Dhundekihy T.G	HOD, Dept of Zoology, Asst	Dr. Dhundekihy
97	Meelon J	DCI Botany	Meelon
98	Fathima Siddique	DCI Chemistry	Fathima



99	Anjali. S	DC-I Chemistry	At
100	Renukhi. R.C		At
101	Fariya. S		At
102	Megha Ramakrishnan		At
103	Neethu. T. Noble	DC - I Botany	Neethu
104	Asiya. S.S	DC - I Chemistry	Asiya
105	Ilaiya. S. Ashraf	Research Scholar (Botany)	Ilaiya
106	Athira. J.M	"	Athira
107	Vijitha. V	"	Vijitha
108	Anya. T	DC-III Botany	Anya
109	Greena. P	DC-III Botany	Greena
110	Aswathy. S.B	DC-III Botany	Aswathy
111	Aiswarya. B.S	DC-III Botany	Aiswarya
112	Aswani. J.K	DC-III Botany	Aswani
113	Prasanth. T	DC-III Botany	Prasanth

Dr. Nisha K.K.
Co-ordinator

Dr. Cynthia Christopher
Head
Department of Botany

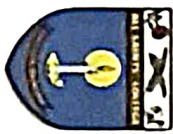


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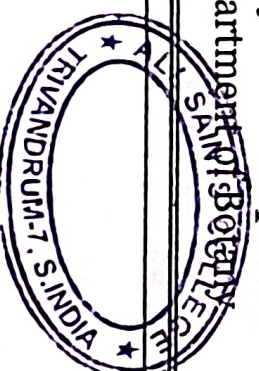
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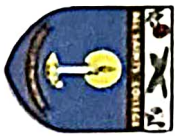
This is to certify that **Dr. Dhanalekshmy T J**, Head and Asst. Prof. of Zoology, has participated in the **International Seminar on 'Frontiers in Plant Science Research'** organized by the Department of Botany and IQAC, All Saints' College, Thiruvananthapuram, Kerala on 28th September 2022

Dr. Nisha K K
Coordinator

Dr. Cinthya Christopher
Head, Department of Botany

Dr. Reshmi R Prasad
Principal





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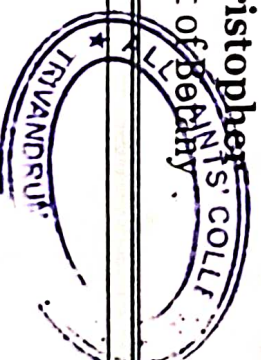
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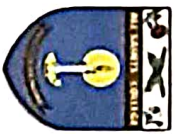
This is to certify that Ms. Haifa S. Ashraf, Research Scholar, has participated in the **International Seminar on 'Frontiers in Plant Science Research'** organized by the Department of Botany and IQAC, All Saints' College, Thiruvananthapuram, Kerala on 28th September 2022

Dr. Nisha K K
Coordinator

Dr. Cinthya Christopher
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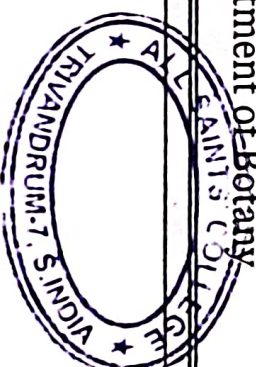
Certificate of Participation

This is to certify that **Dr. Ayona Jayadev**, Asst. Prof. of Environmental Sciences has participated in the **International Seminar on 'Frontiers in Plant Science Research'** organized by the Department of Botany and IQAC, All Saints' College, Thiruvananthapuram, Kerala on 28th September 2022

Dr. Nisha K K
Coordinator

Dr. Cinthya Christopher
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