

ACTIVITY REPORT 2016 - 2021

FACULTY: Science **DEPARTMENT/ COMMITTEE:** Science IQAC **ACTIVITY No:**SVC/2018-19/BOT/NM4

NAME OF THE ACTIVITY: Research based Project on Tissue culture studies in <i>Anacyclus pyrethrum</i>			
DATE	FACULTY	DEPARTMENT/COMMITTEE	COORDINATORS NAME
2018-2019	Science/Life Science	Botany	Dr. Neeti Mehla Dr. Aditi Kothari Chhajjer
TIME	VENUE	NUMBER OF PARTICIPANTS	NATURE: Outdoor/Indoor
		5-7 students of Botany (H) and Life Sciences	Indoor
SUPPORT/ASSISTANCE:	In house Projects		

BRIEF INFORMATION ABOUT THE ACTIVITY (CRITERION NO. – 7)

TOPIC/SUBJECT OF THE ACTIVITY	
OBJECTIVES	The Plant Tissue culture is a major component of the core paper Plant Biotechnology taught in Department of Botany, Biochemistry, Life sciences and Biological Sciences. The major objectives were to provide hands on training to the students and to understand the importance of biodiversity conservation using <i>invitro</i> techniques. This field of Plant Tissue Culture creates ample avenues for undergraduate students in both the field of research and placements in research and developments and also in biotechnology-based companies.
METHODOLOGY	The College has a dedicated Plant Tissue culture laboratory for undergraduate students to get hands on experience in Plant Tissue culture techniques. Students were trained through scientific interactions, invited lectures, Industrial visits and Hands on training in the field of Plant Tissue culture.
OUTCOMES	Students learnt the practical aspects of Tissue culture techniques which is a part of their curriculum. They learnt about the recent developments of Plant Tissue Culture techniques which are used for the conservation of rare and endangered Medicinal Plants. This skill-based learning can help the students to get absorbed in well-established and commercial tissue culture units. The project students visited different Universities and Institutes which helped them to know about the practical aspects of plant tissue culture and Biodiversity conservation strategies. The students also got the academic exposure by attending conferences where they presented their research.

PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):

Notice & Letters	Student list of participation	Activity report √	Photos v	Feedback form
Feedback analysis	News clip with details	Certificate	Any other	

IQAC Document No:	Criterion No:	Metric No:
Departmental file no	IQAC file No;	

NAME OF TEACHER & SIGNATURE	NAME OF HEAD/ COMMITTEE INCHARGE & SIGNATURE	IQAC COORDINATOR (SEAL & SIGNATURE)
Dr. Neeti Mehla Dr. Aditi Kothari Chhajer		

For Reference

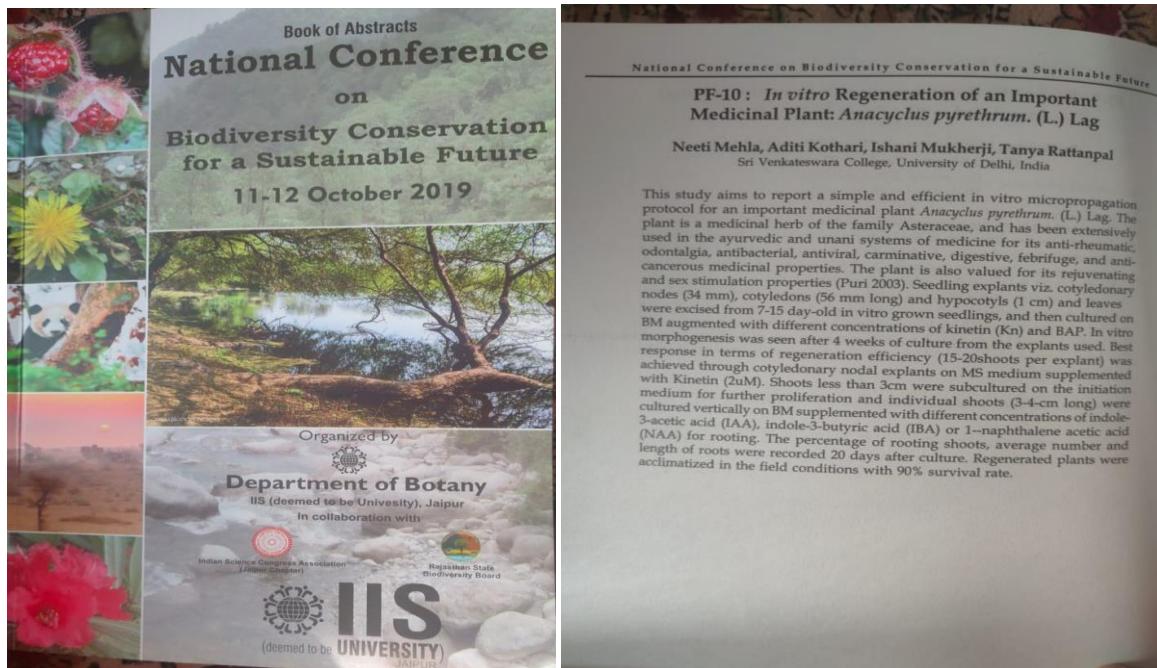
Criterion I	Curricular Aspects (planning & Implementation)	Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation	Criterion VI	Governance
Criterion III	Research, Innovations & Extension	Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure		

Activity Report

The Plant Tissue culture is a major component of the core paper Plant Biotechnology taught in Department of Botany, Biochemistry, Life sciences and Biological Sciences. The major objectives were to provide hands on training to the students and to understand the importance of biodiversity conservation using *invitro* techniques. This field of Plant Tissue Culture is another candidate in the pool of scientific horizon that creates ample avenues for undergraduate students in both the field of research and placements in R&D and also in biotechnology-based companies. Sri Venkateswara College has a dedicated Plant Tissue culture laboratory for undergraduate students to impart hands on experience in these cutting-edge techniques. This study aims to report a simple and efficient *in vitro* micropropagation protocol for an important medicinal plant *Anacyclus pyrethrum*. (L.) Lag. ***Anacyclus pyrethrum*** (pellitory, Spanish chamomile, or Mount Atlas daisy) is a perennial herb much like chamomile in habitat and appearance. It is found in North Africa, elsewhere in the Mediterranean region, in the Himalayas, in North India, and in Arabian countries. It is popular as a food spice. It induces heat, tingling and redness when applied to the skin. The plant is a medicinal herb of the family Asteraceae, and has been extensively used in the ayurvedic and unani systems of medicine for its anti-rheumatic, odontalgia, antibacterial, antiviral, carminative, anti-catarrh, digestive, emmenagogue, febrifuge, vermifuge, sialagogue and anti-cancerous etc. medicinal properties .The plant is also valued for its rejuvenating and sex stimulation properties (Puri 2003). There is a general dearth of tissue culture reports on morphogenetic studies in *Anacyclus pyrethrum*. Experiments were designed and conducted on a weekly basis and observations were recorded regularly. (Photographs attached). Successful visits were made to reputed Institutes like Jamia Hamdard institute and Dabur India Pvt. Ltd. An efficient and reproducible regeneration protocol was established for the medicinal plant *Anacyclus pyrethrum*. (L.) Lag. This project was initiated under the Mentorship of Prof.SB Babbar, Department of Botany, University of Delhi. Students were trained in Plant Tissue culture techniques which is a part of their curriculum. They learnt about the recent developments of Plant Tissue Culture studies which are used for the conservation of rare and endangered Medicinal Plants. The students got technically and critically trained with practical exposure to perform the Plant tissue culture, which is a leading technology among the frontier areas of science. The students also learnt the handling of instruments like Laminar airflow, Autoclave, measuring pH etc. They also presented their work in National Conferences which is an achievement at undergraduate level. The project students visited different Universities and Institutes which helped them to know about the practical aspects of plant tissue culture and Biodiversity conservation strategies.



Tissue cultured Plants of *Anacyclus pyrethrum*



Poster presentation in National Conference on Biodiversity Conservation for a Sustainable future



SRI VENKATESWARA COLLEGE
(University of Delhi)

Internal Quality Assurance Cell

Chairperson

Prof C. Sheela Reddy
Principal
Sri Venkateswara College

IQAC Coordinator

Dr. N. Latha
Department of Biochemistry

External Members

Prof Debi P Sarkar
Department of Biochemistry
University of Delhi South
Campus

Prof Alo Nag
University of Delhi South
Campus

Dr. Gitanjali Yadav
NIPGR, Delhi

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Department of Zoology

Dr. Shruti Mathur
Department of Commerce

Dr. Padma Priyadarshini
Department of Sociology

Dr. Nimisha Sinha
Department of Biochemistry

Shri D. Venkat Ramana
A.O (I/C)

This is to certify that the Activity report (Teacher/Department /Society/Association) has been submitted for documentation to IQAC, Sri Venkateswara College, University of Delhi.

N. Latha

IQAC Coordinator
Sri Venkateswara College

Coordinator, IQAC
Sri Venkateswara College
(University of Delhi)
Dhaura Kuan, New Delhi-110021

C. Sheela Reddy
PRINCIPAL

Sri Venkateswara College

PRINCIPAL
Sri Venkateswara College
(University of Delhi)
Dhaura Kuan, New Delhi-110021