TEACHER'S ACTIVITY REPORT 2017-18

FACULTY – Science **DEPARTMENT/ COMMITTEE -Botany**

IQAC ACTIVITY No: SVC/2017-2018/BOT/NM3

NAME OF THE ACTIVITY: Research based Project on "Tissue culture studies in Medicinal Plants."			
DATE 2017-2018	**FACULTY** **Dr. Neeti Mehla and Dr. Aditi Kothari**	**DEPARTMENT/COMMITTEE** **Botany**	**COORDINATOR NAME** **Dr. Neeti Mehla** **Dr.Aditi Kothari**
TIME –	**VENUE – SVC**	**NUMBER OF PARTICIPANTS**	**NATURE: Outdoor/Indoor**
		5-7 students of Botany (H) Life Sciences and Bio sciences	indoor
SUPPORT/ASSISTANCE:	In house projects		

BRIEF INFORMATION ABOUT THE ACTIVITY (**CRITERION NO. - 2,7)**:

TOPIC/SUBJECT OF THE ACTIVITY	**Research based Project on "Tissue culture studies in Medicinal Plants."**
OBJECTIVES	The project was initiated with an objective of generating interest in the area of Plant Biotechnology among Students, which is also one of the core course paper in BSC. Botany (H) 6th semester and in BSc. Life Sciences 6th semester as well. The major objectives were • To make the students understand the practical aspects of Plant Tissue culture techniques. • To impart training of Micropagation techniques that are often used to conserve the rare medicinal plants. • To create awareness about the importance of biodiversity conservation using *invitro* techniques.
METHODOLOGY	Sri Venkateswara College has a dedicated Plant Tissue culture laboratory for practical training for undergraduate students. Experiments were designed and conducted on a weekly basis and observations were recorded regularly. (Photographs attached). Students were trained through scientific interactions, invited lectures, Industrial visits and Hands on training in the field of Plant Tissue culture.
OUTCOMES	Students learnt about the practical aspects of Tissue culture techniques which is a part of their curriculum. They became aware of the recent developments of Plant Tissue Culture techniques which are used for the conservation of rare and endangered Medicinal Plants. They got the hands-on experience of different techniques like Media preparation, Sterilization and Culture techniques. Field and Industrial visits to different Universities and Institutes helped them to know about the practical aspects of plant tissue culture and Biodiversity conservation strategies. Students got the opportunity to present their work in National Conferences which is an achievement at undergraduate level.

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

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

IQAC Document No:	Criterion No: 7	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 and Dr. Aditi kothari	Dr. P.Hemalatha Reddy	

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

This short research project was initiated with an objective of generating interest in the area of Plant Biotechnology among Students, which is also one of the core course paper in BSC. Botany (H) 6th semester and in BSc. Life Sciences 6th semester as well. The major objective was to make the students understand the importance of biodiversity conservation using *invitro* techniques. Sri Venkateswara College has a dedicated Plant Tissue culture laboratory for undergraduate students where the students can get 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 *Bacopa monnieri.* In India *Bacopa monnieri L Penn*., also referred to as *Bacopa monnieri, Herpestis monniera* or water hyssop is an important medicinal herb belonging to family Scrophulariaceae. *Bacopa monniera* is a vegetatively propagated medicinal plant enlisted among the most endangered plants due to its overexploitation. The plants of *Bacopa monnieri* were collected from Botanical Garden of Noida and Herbal Garden of Jamia Hamdard University and grown in Sri Venkateswara college's botanical garden. Apical buds and nodal segments were used for micropropagation studies on MS medium (Murashige and Skoog, 1962). (Figure 1) Experiments were designed and conducted on a weekly basis and observations were recorded regularly. All this research work was carried out by undergraduate students of BS. Botany, Life Sciences and Bio Sciences under the able guidance of Dr. Aditi Kothari and Dr. Neeti Mehla, Department of Botany.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 Bacopa *monnieri.* Through this project students learnt about the recent developments of Plant Tissue Culture techniques which are used for the conservation of rare and endangered Medicinal Plants. Students have learnt the handling of instruments like Laminar airflow, Autoclave, measuring pH etc. Students got the opportunity to present their work in National Conferences which is an achievement at undergraduate level. This skill-based learning can help the students to get absorbed in well-established and commercial tissue culture units.

Tissue cultured Plants of *Bacopa monnieri.*

Poster Presentation by Students

SRI VENKATESWARA COLLEGE
(University of Delhi)

Internal Quality Assurance Cell

Chairperson

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Principal
Sri Venkateswara College

IQAC Coordinator
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Dr. Meenakshi Bharat
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Department of Political Science

Dr. A. K. Chaudhary
Department of Physics

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Dr. Swarn Singh
Department of Mathematics

Dr. Neeraj Sahay
Department of History

Dr. Vartika Mathur
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

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