

# **DEVA MATHA COLLEGE KURAVILANGAD**

**Affiliated to Mahatma Gandhi University, Kottayam**



## **SYLLABUS**

**OF**

**ADD-ON COURSE**

**IN**

**Plant Tissue Culture**

**Academic Year: 2022-23**



**DEVA MATHA COLLEGE KURAVILANGAD**

**DEPARTMENT OF BOTANY**

**Add on Courses offered for Students : 2022-2023**

**Plant Tissue Culture  
DMCK/BOT/AD 01/2022**

**Department Coordinator: Ms.Varsha Maria Babu**



**Title:** Plant Tissue Culture

**Instructional Hours:** 30 hrs

**Duration:** Three Months

**Mode of Instruction:** English

**Intake Capacity:** 35

**Eligibility:** +2

# DEVA MATHA COLLEGE KURAVILANGAD

## ADD-ON COURSE FOR THE AY 2022-23

### Course Objectives

1. Understand the current developments in the field of Biotechnology
2. Equip the students to carry out plant tissue culture

### Module 1(4 Hours)

Brief history of tissue culture -Cellular totipotency, Concept of dedifferentiation, redifferentiation and organogenesis, Media composition, Selection of media, Media preparation

### Module 2 (6 Hours)

Micropropagation- Selection of suitable material Stock plant selection, Parts of plant, Size of explants, Avoid diseased tissue

### Module 3 (4 Hours)

Benefits of plant tissue culture Rapid multiplication of clones, Genetic uniformity, Aseptic condition, Controlled environment

### Module 4 (1 Hours)

Outline of procedure and technique – Slide show

**Practical** - 12Hours

### References

1. R Keshavachandran and K V Peter. Plant Biotechnology: Methods in Tissue Culture and Gene Transfer. Orient Blackswan.
2. Haberlandt, G. (1902) KulturversuchemitisoliertenPflanzenzellen. Sitzungsber. Akad. Wiss. Wien. Math.-Naturwiss. Kl., Abt. J. 111, 69–92.
3. Noé, A. C. (1934). "Gottlieb Haberlandt". *Plant Physiol.* **9** (4): 850–855. doi:10.1104/pp.9.4.850. PMC 439112. PMID 16652925.
4. Plant Tissue Culture. 100 years since Gottlieb Haberlandt. Laimer, Margit; Rücker, Waltraud (Eds.) 2003. Springer ISBN 978-3-211-83839-6

5. *Martin, Bernice M. (2013-12-01). Tissue Culture Techniques: An Introduction. Springer Science & Business Media. pp. 29–30. ISBN 978-1-4612-0247-9.*
6. *Simon, Eric M. (1988). "NIH PHASE I FINAL REPORT: FIBROUS SUBSTRATES FOR CELL CULTURE (R3RR03544A) (PDF Download Available)". ResearchGate. Retrieved 2017-05-22.*

### **Assessment Procedure**

Theory and practical examinations will be conducted at the end of completion of syllabus.

### **Grading**

<b>Sl. No</b>	<b>Marks</b>	<b>Grade</b>
<b>1</b>	90-100%	A+
<b>2</b>	75-90%	A
<b>3</b>	60-75%	B+
<b>4</b>	50-60%	B
<b>5</b>	40-50%	C
<b>6</b>	Below 40%	D



*Principal*  
*Deva Matha College*  
*Kuravilangad - 686 633*