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2.	Roll No. and Year of Registration	19PHBOF003, 2019
3.	Department	Botany
4.	Name of the Research Guide	Dr. S. Amutha
5.	Title of the Thesis / Dissertation	Optimization of <i>In vitro</i> Micropropagation, Characterization of Bioactive compounds and biological activities of <i>Cynanchum tunicatum</i> (Retz.) Alston - A Rare Medicinal Plant
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File name: PLAGIARISM\_20.12.2024.doc  
File size: 874.5K  
Page count: 89  
Word count: 27,813  
Character count: 154,156  
Submission date: 20-Dec-2024 05:01 PM (UTC+0530)  
Submission ID: 2374952813

Optimization of *In vitro* Micropropagation, Characterization of Bioactive compounds  
and biological activities of *Cynanchum tunicatum* (Retz.) Alston - A Rare  
Medicinal Plant

### CHAPTER - I

#### INTRODUCTION

##### 1.1. General Introduction about Medicinal Plants

Plants served as a significant resource for food, medicine, fertilizer, shelter, and clothing (Mulugeta et al., 2024). Nowadays, people's attention to medicinal plants were increasing due to universal pandemic, they have concerned about their health and persistently sick people are desiring herbal medicines to boost immune system (Panjiyeva & Elmurodova, 2024). However, 85% of the world population sees medicinal plants to be primary healthcare and source for drug discovery (Fitzgerald et al., 2020).

The uses of medicinal plants have various beneficial effects which is commonly used to treat illness, it has been practiced over the generations. Salmeron et al., explained about folk medicine was knowledge and practices founded on the beliefs of aboriginal public which is used to prevent physical and mental illness (Salmeron-Manzano et al., 2020). In global healthcare utilization of natural products and their derivatives, contributing to over half of the medications throughout the world (Shedoeva et al., 2019). Due to climate change, over-harvesting and habitat loss can affect the conservation of these plants. Insufficient conservation of medicinal plants can impact their yield (Roopashree et al., 2024).

The evolution of modern medicine can offer lifesaving solution, yet it has a great challenge to treat side effects. Therefore, herbal medicine can be used as an alternative remedy (Abubakar & Haque, 2020). For decades, medicinal plants produce natural products which have diverse group of bioactive compounds are alkaloids, phenols, saponin, terpenoids, tannins etc., to treat various disease (Cedillo-Cortezano et al., 2024).

The gaining of ethnomedicinal knowledge in biosciences is to explore novel bioactive compounds and create plant extract formulations for various pharmaceutical purposes. Drug discovery is a tedious process and should select suitable method depends

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*by Central Library Avinashilingam*

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**Submission date:** 20-Dec-2024 05:01PM (UTC+0530)

**Submission ID:** 2374952813

**File name:** PLAGIARISM\_20.12.2024.doc (874.5K)

**Word count:** 27813

**Character count:** 154156

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1	Deepika Krishnamoorthy, Amutha Swaminathan, Amal Mohamed AlGarawi, Lavanya Nallasamy et al. "Exploring the therapeutic potential of <i>Cynanchum tunicatum</i> (Retz.) Alston- assessment of phytochemicals and biological activities", <i>Journal of King Saud University - Science</i> , 2024 Publication	1%
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