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# In-Vitro Antioxidant study of Colebrookea oppositifolia Sm. extract for treatment of Alzheimer's Disease

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#### INTRODUCTION & AIM

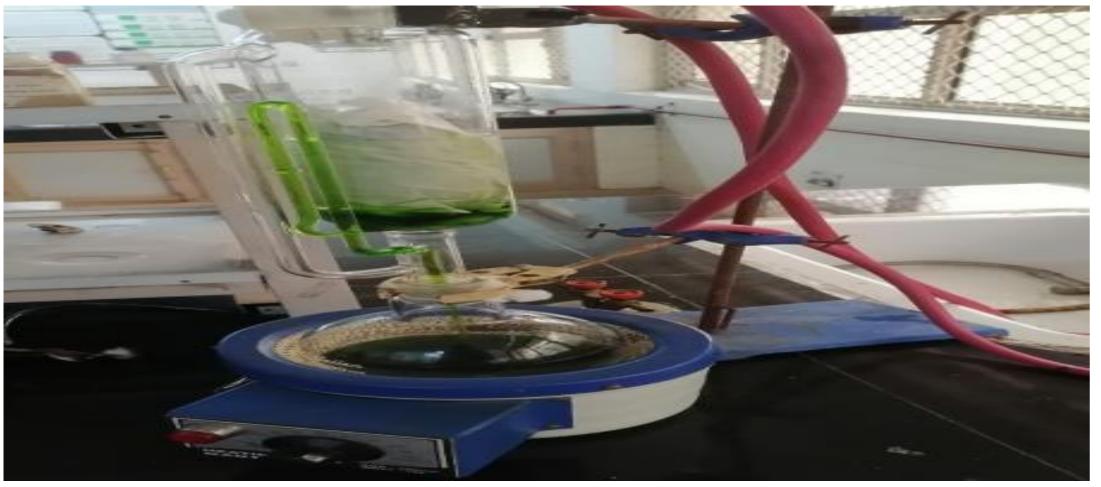
**Background:** Dementia, a major cause of dependency, disability, and mortality, characterized by a progressive cognitive decline that makes daily tasks difficult. Alzheimer's disease, a major neurodegenerative dementia, primarily affects the elderly population. Early identification and the usage of natural plant-based phytoconstituents may lower the risk and delay the advancement of the condition, even though there are presently no disease-modifying medications available.

**Aim(s):** The research aimed to find out the antioxidant and neuroprotective potential of plant derived phytoconstituent for the treatment of Alzheimer's disorder

#### **METHOD**

**Methods:** The Soxhlet extraction method was used to isolate the primary phytoconstituent from the plant (*Colebrookea oppositifolia* Sm.) using its aerial and root parts. The particular extraction technique used complies with the requirements as stated. The antioxidant potential of the plant phytoconstituent was then assessed using an *in-vitro* antioxidant assay.





### **RESULTS & DISCUSSION**

The percentage yield for the plant extract carried out by using the hot continuous percolation technique (Soxhlet Extraction Method). In comparison to the aerial parts (13.80% w/w), the root extract (14.10% w/w) was found to have a higher percentage yield. During the *In-vitro* analysis, the root extract showed higher antioxidant potential compared to the aerial extract.

Sample	Solvent used	Sample Weight	Final Extract Obtained	Percentage Yield (w/w)
Aerial part	Ethanol	500g	69g	13.80
Second Sample	Solvent used	Commis Weight	5' 15 ' '01' '	5
	Solvent useu	Sample Weight	Final Extract Obtained	Percentage Yield (w/w)

Phytochemicals	Aerial Part Extract	Root Part Extract
Alkaloids	+	+
Flavonoids	+	+
Phenolic compounds	+	+
Steroidal compounds	+	_
Tannins	+	+
Cardiac glycosides	+	+
Saponins	+	+
Carbohydrates	+	+
Terpenoids	+	+

#### CONCLUSION

The plant extract (root) showed significant antioxidant potential based on preliminary results, and it was chosen for further thorough research including the *In-vivo* studies (animal study).

## FUTURE WORK / REFERENCES

To fully investigate its potential medicinal uses, more research is necessary which is in continue phase with I*n-Vivo* studies in rodents.

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