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INTRODUCTION

- Carbon NPs and metal NPs are becoming popular in various fields
- Nanocomposites incorporating metal NPs and carbon nanomaterials will enhance biological application
- The release of NPs into the environment as a result of manufacture or application will impact the aquatic animals
- The eco-toxicity was conducted towards aquatic species (*Artemia salina* cysts) and cytotoxicity on human adenocarcinoma cell lines



Green synthesis

Eco-friendly

Economical

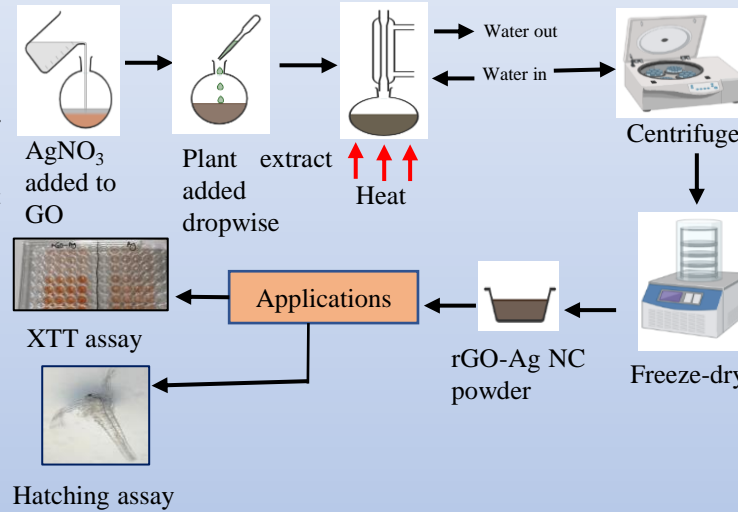
Non-toxic

Facile

Objectives

- To synthesize reduced graphene oxide (rGO)- silver (Ag) nanocomposite (rGO-Ag NC) using *Clinacanthus nutans* leaf extract.
- To assess the *in vitro* cytotoxicity of the synthesized sample towards lung (A549) and epithelial colorectal (Caco2) adenocarcinoma cell line using the XTT assay.
- To evaluate the toxicity of the synthesized samples towards brine shrimp cysts (*A. salina*) using hatching assay.

METHODOLOGY



CONCLUSION

•rGO-Ag NC have more pronounced inhibitory effect on the Caco2 cell viability compared to A549 cell lines

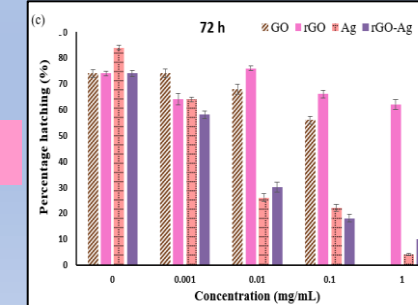
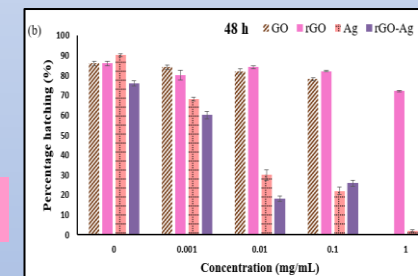
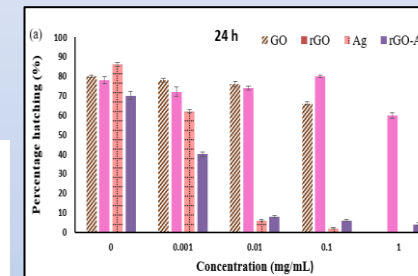
•rGO-Ag NC exhibits a higher hatching rate at low concentration

ACKNOWLEDGEMENTS

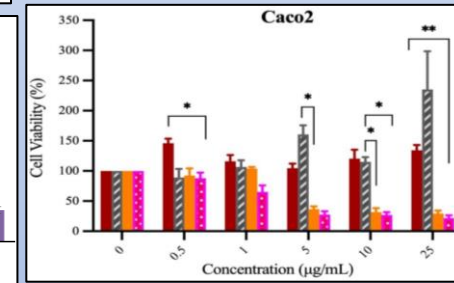
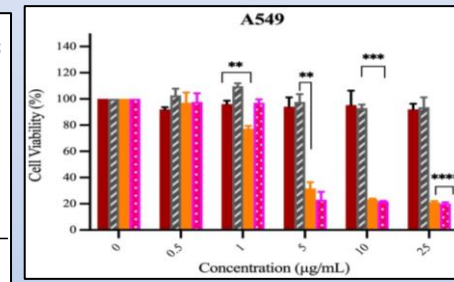


RESULTS AND DISCUSSION

Hatching assay



XTT assay



Legend: GO (red), Ag (blue), rGO (green), rGO-Ag (purple)

Sample	IC ₅₀ (µg/mL)	
	A549	Caco2
GO	NA	NA
rGO	NA	NA
Ag	3.3 ± 0.3	5.2 ± 1.1
rGO-Ag	3.5 ± 0.4	2.7 ± 1.6