

08-24-2024

Awards
NVLSR 2024-25

SAMVIT 2024

Best Paper Presentations

Track - 1

S. No.	Paper Code	Title of the Paper
1.	SCCAT1003	Exploring multiple ways to spot Hackers using Enhanced Neural Networks for stronger cyber security
2.	SCCAT1001	Preamble Fuzzy Estimator Based RNN Overload Defender For Cloud Computing

Track - 2

S. No.	Paper Code	Title of the Paper
1.	SCCAT2001	Influence of polymers on the properties and photocatalytic activity of PbO ₂ Nanoparticles.
2.	SCCAT2003	Green Synthesis and biological efficacy of zinc oxide nanoparticles from ocimum sanctum leaf extract.

Track - 3

S. No.	Paper Code	Title of the Paper
1.	SCCAT 3004	Green synthesis, characterization of Platinum nanoparticles from aqueous extract of Cucumis melo (Musk Melon) and study of anti-carcinogenic effect against ovarian cancer cell line (Pa-1)
2.	SCCAT 3008	Anti-inflammatory, biosensing capability and wound healing activity of <i>Rapanea wightiana</i> (Wall. Ex DC.)

Track - 4

S. No.	Paper Code	Title of the Paper
1.	SCCAT 4001	<i>In vitro</i> Study of Bitter Melon Nanocrystals For Chronic Kidney Disease Treatment
2.	SCCAT 4015	Metabolic Reprogramming And Rewiring: Elucidating The Oncogenic Potential Of Refined Palm Oil Via Modulation Of Cellular Metabolic Pathways

Anti-inflammatory, biosensing capability and wound healing activity of *Rapanea wightiana* (Wall. ex DC.)

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Abstract

The aim of the present study was to evaluate the anti-inflammatory, biosensing capability and wound healing potential of extracts, myrsinone and embelin from leaves of *Rapanea wightiana*. The *in vitro* anti-inflammatory activity of extracts and isolated compounds was evaluated by hemolysis inhibition, proteinase inhibition, protein denaturation inhibition, cyclooxygenase and lipoxygenase inhibition. Both myrsinone and embelin individually and as AgNP displayed 19.47-42.18% hemolysis inhibition, 51.23-81.34% inhibition of protein denaturation and 37.11-54.29% of proteinase inhibition. Both COX and LOX enzymes were inhibited significantly in a non-competitive and mixed fashion respectively. The standard tests chosen to evaluate the antimicrobial activity revealed a clear bioactivity of extracts and compounds using two distinct methodologies with different dynamics and contact times between the samples and the chosen bacterial inoculum. The cell-based assays revealed that the extracts and compounds accelerated the wound closure of an *in vitro* model of recovery of a damaged cell monolayer. The biosensing activity reveals that these nanoparticles are also a good source for biosensing hazardous heavy salts. The results suggest that the AgNPs of extracts and compounds offering an environmentally acceptable options that could be used as innovative therapeutic agents for the prevention and treatment of inflammation and wounds.

Keywords: *Rapanea wightinana*, AgNPs, anti-inflammatory activity, LOX, COX-1 and COX-2 enzymes and wound healing activity

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