



Phytochemical analysis and functional enzyme inhibition properties related to nephroprotective efficacy of a Sri Lankan traditional herbal formulation

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Building Networks to Address the Goals

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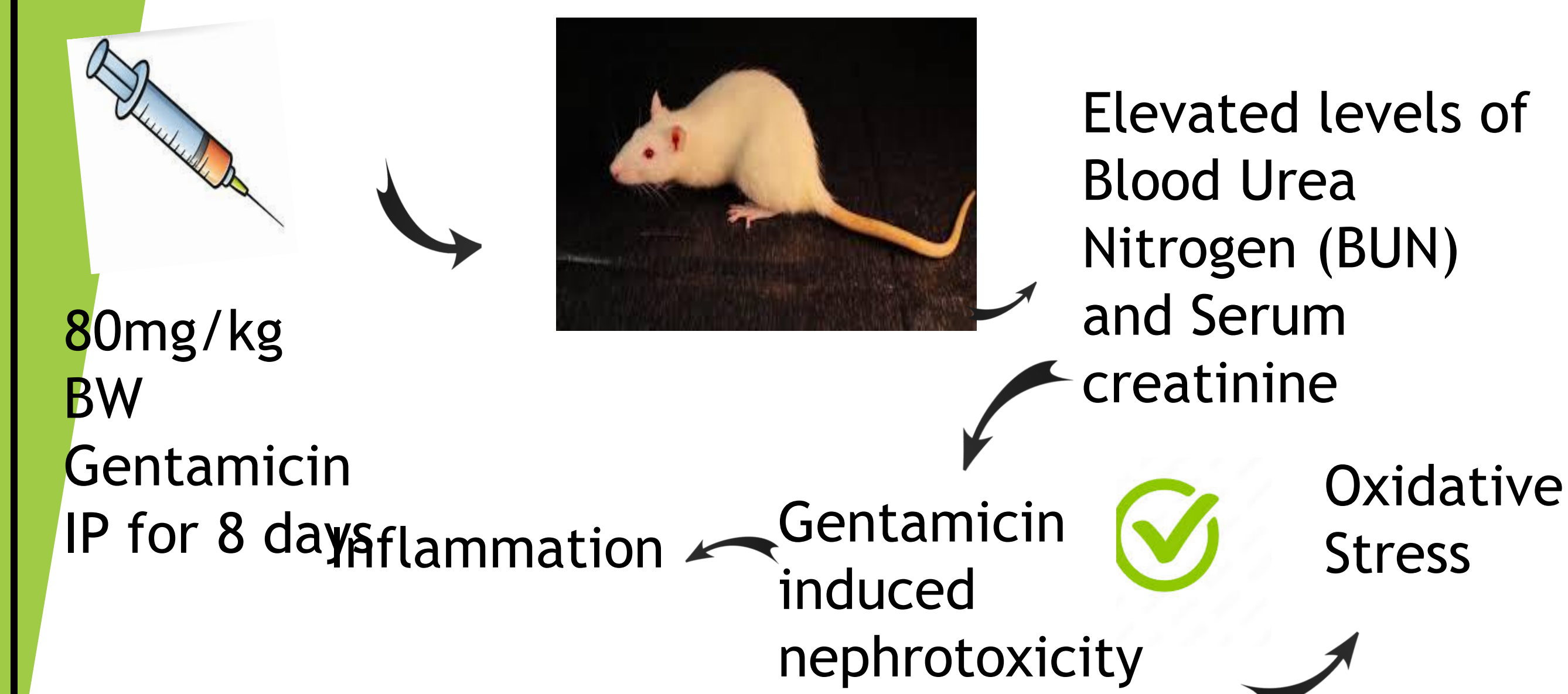
Research Problem

Nephrotoxicity contributes to chronic kidney disease, but safe and effective therapeutic options remain limited. Exploring antioxidant, anti-inflammatory, and enzyme inhibition potentials of traditional herbal formulations is essential to establish their nephroprotective value.

Main Objective

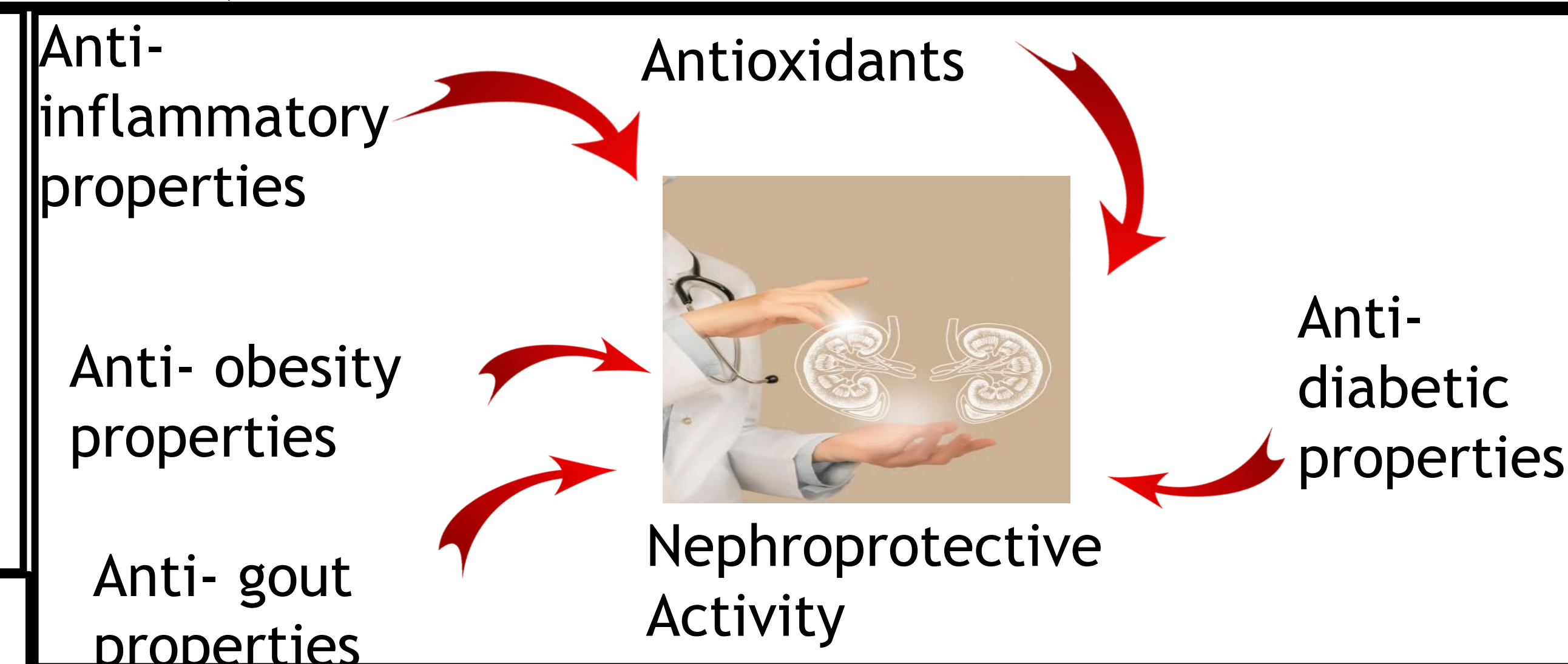
Standardize and evaluate the nephroprotective potential of a traditional herbal formulation through its antioxidant, anti-inflammatory, and enzyme inhibition activities before the preclinical investigation using Wistar rats.

Why, Anti inflammatory and antioxidant activities?



Physicochemical Characterization

Physicochemical parameter	Mean value±SD
Moisture content	(9.00 ± 0.117)
Total Ash Content	(5.77 ± 0.827)
Acid insoluble ash	(0.0027 ± 0.0005)
Water soluble ash content	(2.128 ± 0.145)



Phyllanthus emblica Linn.



Avera lanata var. *rotundifolia*



Tinospora cordifolia



Traditional herbal formulation

Detection of Heavy metals(ICP-MS Technique)



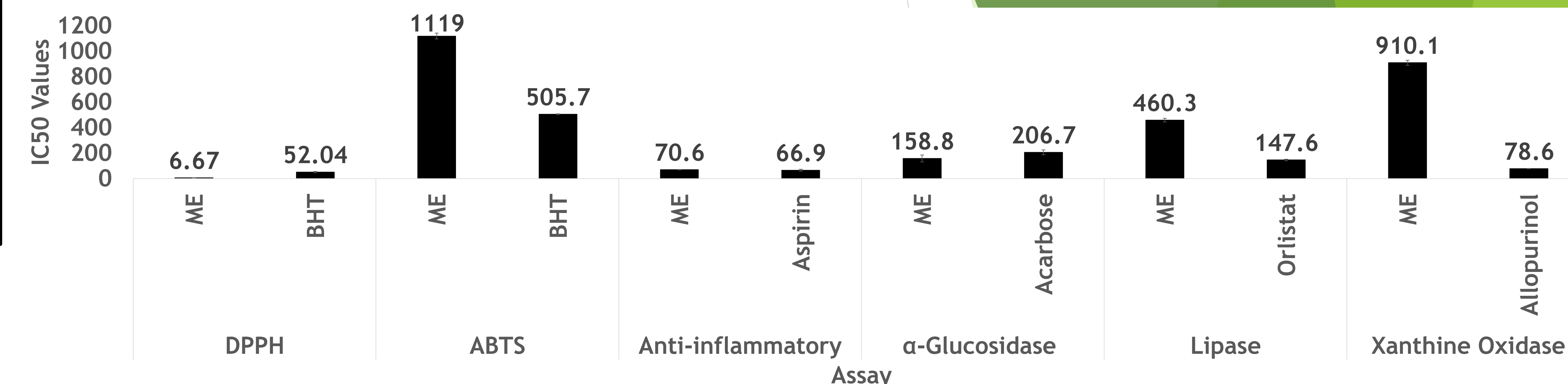
Heavy metals including **Arsenic, Lead and Cadmium** were within WHO safety limits

Microbial Contamination Levels

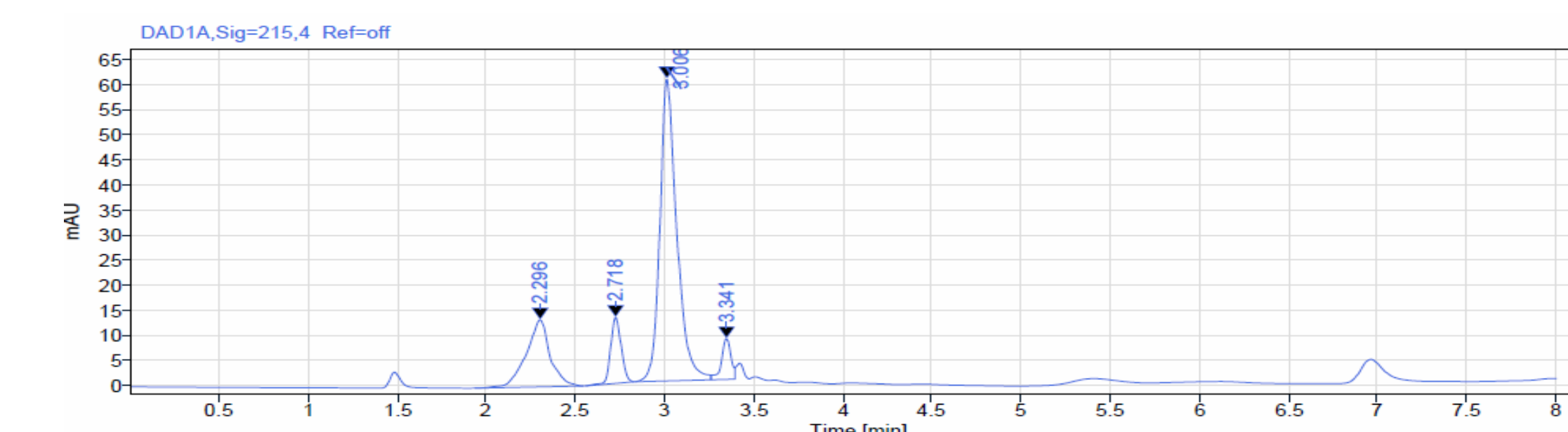
APC
YMC

Both aerobic plate count and yeast and mold counts are within permissible levels

Bioactivity of the methanolic extract of traditional herbal formulation



HPLC Analysis



HPLC Chromatogram of the methanolic extract of the traditional herbal formulation

GC-MS Analysis

