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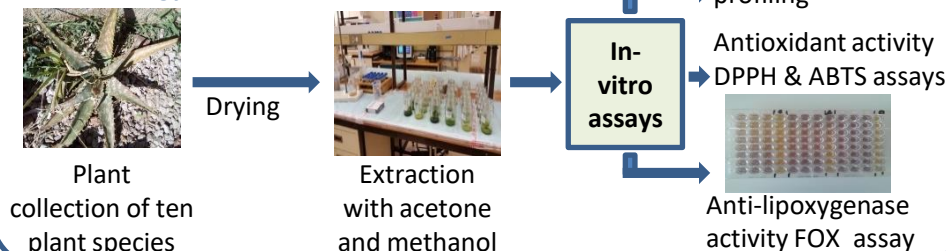
Introduction

-Plant based products have emerged as viable alternatives to in-feed antibiotics
-Anti-inflammatory and antioxidant activity are principal attributes of suitable candidates for the development of phytogetic feed additives

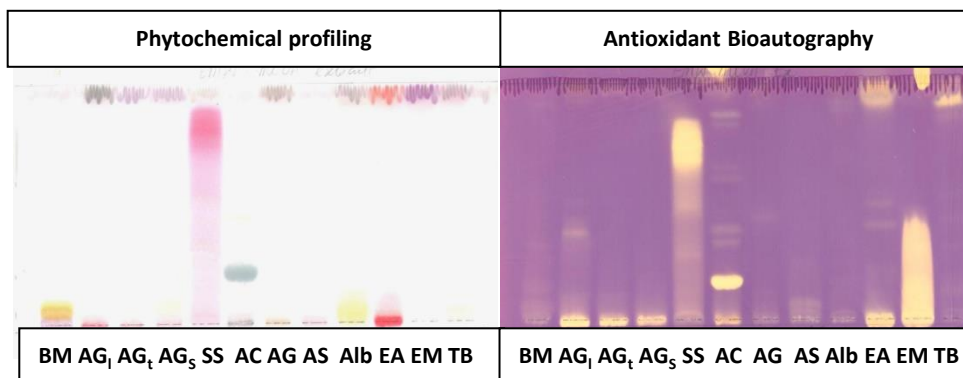
Aim of the study

-To evaluate the antioxidant and anti-lipoxygenase activities of selected plant species used in poultry ethnomedicine in Zimbabwe

Methodology

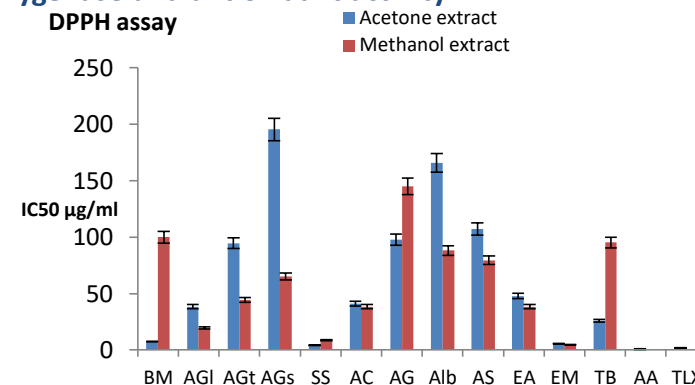


Results

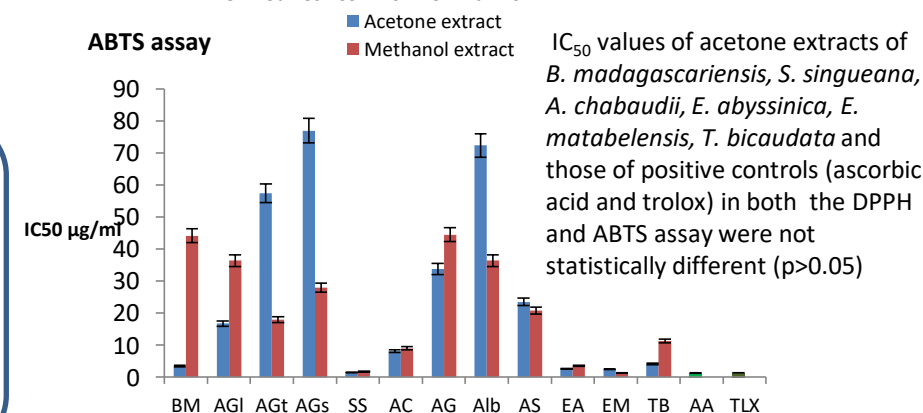


BM = *Bobgunnia madagascariensis*, Ag_l = *Adenia gummifera* leaves, Ag_t = *Adenia gummifera* twigs, Ag_s = *Adenia gummifera* stem, SS = *Senna singueana*, AC = *Aloe chabaudii*, AG = *Aloe greatheadii*, AS = *Agave sisalana*, Alb = *Albizia gummifera*, EA = *Erythrina abyssinica*, EM = *Euphobia matabelensis*, TB = *Tridactyle bicaudata*, AA = Ascorbic acid, TLX = Trolox, QC = Quercetin

DPPH assay

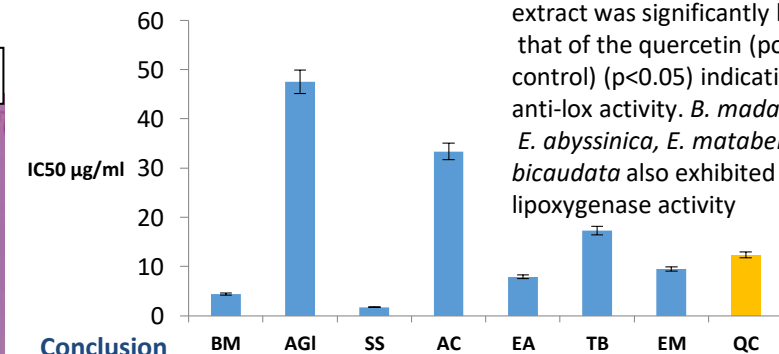


ABTS assay



IC₅₀ values of acetone extracts of *B. madagascariensis*, *S. singueana*, *A. chabaudii*, *E. abyssinica*, *E. matabelensis*, *T. bicaudata* and those of positive controls (ascorbic acid and trolox) in both the DPPH and ABTS assay were not statistically different ($p > 0.05$)

LOX assay



The IC₅₀ value of the *S. singueana* extract was significantly lower than that of the quercetin (positive control) ($p < 0.05$) indicating potent anti-lox activity. *B. madagascariensis*, *E. abyssinica*, *E. matabelensis*, *T. bicaudata* also exhibited good anti-lipoxygenase activity

Conclusion

Acetone extracts of *S. singueana*, *B. madagascariensis*, *E. abyssinica*, *T. bicaudata* and *E. matabelensis* exhibited strong antioxidant activity and notable anti-lipoxygenase activity indicating anti-inflammatory potential. The study supports further investigation on the suitability of these plant species for the development of poultry phytogetic feed additives