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Phytochemicals in *Khaya senegalensis* ameliorates gastrointestinal oxidative stress associated with coccidiosis in broiler chickens

Forcados Gilead Ebiegberi, Tanko J T, Gotep J G, Oladipo O O, Ozele N, Makoshi M S, Ochigbo G O, Aladelokun O B, Dapuliga C C, Atiku A A, Shamaki D, Nduaka C I, Bot D and Muraina I A

National Veterinary Research Institute, Nigeria

There is growing scientific evidence for the role of phytochemicals in the prevention and control of diseases. Coccidiosis is a parasitic disease in poultry characterized by intestinal lesions, inflammation and oxidative stress, responsible for considerable economic loss due to resulting morbidity and mortality. There are unsatisfactory results from the use of live attenuated vaccines, while ionophore antibiotics are limited against antibiotic-resistant *Eimeria* strains in addition to growing public health concerns about the use of antibiotics in chickens due to drug residues in meat. These limitations necessitate studies on the potential of phytocompounds as anti-coccidial agents. In this study, the aqueous stem bark extract of *Khaya senegalensis* (200, 400, 800 mg/Kg) was evaluated for its efficacy against experimentally infected chickens using oocyst count, oxidative stress markers and hematological parameters. The positive control group consisted of infected birds treated with Amprolium (250 WSP, Kepro* B.V., Holland), while negative control was untreated. Phytochemical analysis of *Khaya senegalensis* showed the presence of tannin and saponin. There was a significant reduction in oocyst count and an increase in weight gain, enhanced antioxidant activity with increased glutathione, catalase, superoxide dismutase activity and decreased malondialdehyde (P<0.05) in gastrointestinal homogenates across the *K. Senegalensis* treated groups. There was marked increase in PCV, RBC, WBC and Hemoglobin concentration. The results show that the aqueous extract of *K. senegalensis* ameliorated clinical signs of coccidian infection via its antioxidant properties and may be promising for the development of phytochemical based anticoccidial therapy.

Biography

Forcados Gilead Ebiegberi is currently a PhD student at the Ahmadu Bello University, Zaria, Nigeria and an elective PhD student of University of Pretoria. He works with the National Veterinary Research Institute Vom in Nigeria and has published papers in reputed journals. His research interest examines the role of phytochemicals in the amelioration of human and veterinary diseases.

gileadforcados@yahoo.com

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