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## Gut histopathology of broiler chicks fed sodium propionate supplemented diets

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The indiscriminate use of antibiotics in poultry production has been considered to have negative implication on humans. Therefore, the use of a viable alternative becomes necessary. The objective of this study was to investigate the effects of graded levels of sodium propionate on gut histopathological condition of broiler chicks in an experiment that lasted for 21 days. Three hundred and thirty six one-day old Arbor Acre broiler chicks were randomly allotted to 7 dietary treatments with 6 replicates of 8 birds each in a completely randomized design. Treatment 1 was the basal diet/control diet (corn-soyabean), treatment 2 was antibiotic diet (0.11%). Treatments 3, 4, 5, 6 and 7 contained the basal diet and 0.1%, 0.2%, 0.3%, 0.4% and 0.5% sodium propionate inclusion respectively. At day 21, two birds per replicate were sacrificed and about 5cm of

the ileum was excised for histopathological examinations. Sample sectioning of the ileum of birds fed basal diet revealed sloughing of surface enterocytes, cryptal and villi epithelia necrosis while those on antibiotic diet showed mild villi atrophy, clubbing of villi and cryptal villi epithelia necrosis. Birds fed with 0.1% and 0.2% sodium propionate diets showed moderate villi atrophy and sloughing surface of enterocytes, clubbing and fusion of villi. However, ileum sectioning of birds fed 0.3% - 0.5% sodium propionate supplemented diets revealed no observable lesions and moderate villi atrophy. There was improvement in the integrity of the ileum as well as host health as the level of sodium propionate inclusion increases across the dietary treatments. .

### Biography

Adebisi Favour Agboola is a nutritional biochemist and feed biotechnologist has completed her PhD at the age of 37 years from University of Ibadan. She holds various administrative positions in the University. She has published more than 30 papers in reputed journals and has been serving as a reviewer for more than five reputable Journals. Dr. Agboola is a versatile scientist who strives daily to expand her professional horizon through networking and exchange of ideas with colleagues from all over the world in a bid to contribute her quota in poverty alleviation through animal nutrition.

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