

## SHORT COMMUNICATION

### **Microbiological characteristics and antimicrobial potential of fermenting infusion of *Cola nitida* and *Cola acuminata* husk and testa**

Arotupin, D. J. and T.B. Fabunmi

Department of Microbiology, School of Sciences, Federal University of Technology, P.M.B 704 Akure. Ondo State Nigeria.

#### **Abstract**

*The need to ascertain the array of microorganisms associated with fermenting infusion of Cola nitida and Cola acuminata husk and testa as either playing beneficial or benign role is important for its use. This research focused on isolating microorganisms associated with fermenting husk and testa of the mentioned species, its microbial population, microbial occurrences and its antimicrobial potency. The samples were subjected to solid and liquid state fermentation for a period of ten days during which isolation were made. The array of microorganisms consisted of a heterogeneous mixture, with Bacillus and Aspergillus species accounting for a major portion of the total isolates. Antimicrobial potency of infusion generated from liquid state fermentation was determined by testing it against typed pathogenic cultures and some of the isolates, with commercial antibiotics used as the control. The infusion showed antimicrobial activity against some of the typed cultures and isolate. Salmonella typhi (ATCC) 6539 was recorded to have highest susceptibility with a zone of inhibition measuring 19mm and Aspergillus fumigatus was the only fungi recorded to be susceptible from the tested isolates. There is a possibility of harnessing the antimicrobial potency of the infusion for the development of antimicrobial agents to combat resistant pathogenic organisms tested for.*

**Key words:** *Cola nitida* and *Cola acuminata*, husk, testa, fermentation

**Email:** daniel\_juwon@yahoo.com, olaitanbunkolami@yahoo.com

**Received:** 2014/10/12

**Accepted:** 2015/03/20

**DOI:** <http://dx.doi.org/10.4314/njtr.v10i1.9>