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## Identification of Uropathogens using Faco's Media: A comparative study with other conventional media

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Faco's medium is a novel, differential culture medium obtained from the mixture of extracts of Acha (*Digitariaexilis* and *Digitariaiburua*) and pooled human urine that is claimed to facilitate the isolation and presumptive identification of some clinical important bacterial isolates from clinical samples. The microbiological performance and efficacy of Faco's medium was compared to that of blood and MacConkey agar for the isolation and presumptive identification of bacteria responsible for urinary tract infections. This study included consecutively collected midstream and/or catheter-catch urine samples obtained from patients. All urine samples were inoculated on Blood agar, MacConkey agar, and Faco's medium and incubated overnight aerobically at 37<sup>o</sup> C and examined. Of the 2700 urine samples tested, 71.3% produced significant growth on the test media and about 14 potentially significant organisms were recovered on at least one of the three media. 743(95.8%) were uni-microbial, 32(4.12%) were poly microbial. Faco's medium succeeded in detecting all the urine pathogens that were detected by the reference media, including Gram-negative *bacilli*, *Staphylococci*, *Streptococci* and *Yeasts*. Colony colour and morphology on Faco's medium agar accurately differentiated *Escherichia coli*, *Proteus species*, *Klebsiella*, *Pseudomonas* and *Acinetobacterspp*. The result suggests that Faco's medium agar media can be used as a single medium for the isolation of uropathogens. Presumptive identification of isolates is time consuming and requires a great deal of experience when using traditional media. On Faco's medium it is easier and will improve the quality of urine culture by contributing to a more uniform interpretation of Uropathogens on culture media. The performance of Faco's medium was also determined using bacterial growth curve and the result obtained showed that there was significant increase in the performance of Faco's media compared to that of Nutrient Broth. The result obtained also showed that there was significant difference ( $P < 0.05$ ) between the growths of *E. coli* when grown in Faco's media containing two different substrates. Growth in medium containing Nitrophenyl-B-D-galactoside was better than the growth of *E. coli* in the medium containing glucose. The activity of the enzyme B-galactosidase induced was then determined. The implications of the results are discussed.

### Biography

Festus Chukwuemeka Onwuliri has obtained his PhD from University of Jos, Nigeria. He has completed his BSc, MSc and AIML from the University of Nigeria Nsukka, University of Jos and Medical Laboratory College Vom, Nigeria respectively. He has acquired a wide range of administrative experience. He was the Head of Department of Plant Science and Technology, University of Jos and is the Director of Victory Medical Laboratory Service, Nigeria. He has published about 65 papers in both national and international journals. He has served in several committees, both ad-hoc and statutory, within the University of Jos and other Universities in Nigeria. He has several memberships including Association of Medical Laboratory Scientists of Nigeria, Nigerian Society for Microbiology, Nigerian Mycological Society, Botanical Society of Nigeria and Nigerian Society for Parasitology, Biotechnology Society of Nigeria and International Biotechnology.

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