

Evaluation of Interaction between Amoxicillin and HydroEthanolic Extracts *Annickia chlorantha*

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The discovery of antibiotics has contributed considerably to up the life of the world population. Nowadays, the emergence of multi resistant strains of bacterium worldwide may be a major concern because it dramatically reduces the selection of effective antibiotics for interference and treatment of a awfully common infection in each hospitals and our native communities. The aim of this study was to judge the in vitro interaction of Polymox and *Annickia chlorantha* against some Multi resistant bacterium strains. The interaction between Polymox and *Annickia chlorantha* was studied victimization the gameboard technique. incomplete restrictive Concentration (FIC) indices showed that Amoxicillin/*Annickia chlorantha* combination was synergistic against the clinical stock of salmonella at concentrations of 5: fifteen and twenty five mg/mL. The extracts of the stem barks of *Annickia chlorantha* decreased the minimum restrictive concentration (MIC) of Polymox against salmonella by 2: four and sixty six folds severally. At a similar concentrations the mix showed no distinction against the reference stocks of staph aureus and a dose dependent antagonism against clinical stock of *Escherichia coli*. The results of this study discovered that the concomitant use of *Annickia chlorantha* and Polymox could raise and restore the medicament impact of Polymox against resistant strains of salmonella. this suggests that the intake of *Annickia chlorantha* in ancient medicines could have an effect on the effectiveness of a co-administered Polymox, that makes this plant a decent, environmentally friendly associate degreed promising candidate for the event of an improved ancient medication.

Materials and ways

Study sites and plant identification *A. chlorantha* (Annonaceae) may be a tree of concerning 12-30 m tall. The plant bark was harvested at Kala mountain within the Centre Region of Cameroon and a sample was known within the National Herbarium beneath the voucher range HNC 2133. the remainder of the study was conducted at the various laboratories in Cameroon, the extraction of the crude product was dispensed within the Pharmacognosy and medicine research lab of the school of drugs and medical specialty Sciences Yaoundé-Cameroon, and also the antimicrobial activity was tested within the laboratory of biological science, (Clinique Universitaires des Montagnes), Bangangté-Cameroon.

Standardization of check small organisms The check organisms utilized in this investigation were elect on the premise of their clinical significance, these embody, *S. aureus* (ATCC BAA 1026), and clinical stocks of *E. coli* and *S. typhi* each proof against Polymox, amoxicillin-clavulanic acid fluoroquinolon that were obtained from the laboratory of biological science, (Clinique Universitaires des Montagnes) (Université des

Montagnes, Bangangté-Cameroon). All strains utilized in this experiment were genteel on Mueller Hinton agar (Liofilchem) and incubated at 37°C for 18-24 h. From the ensuing long pure culture, a microorganism suspension capable zero.5 McFarland (106- 108 cells/mL) was ready and adjusted to the ultimate Diamond Statensity needed for status tests consistent with the (Comité Diamond State l'Antibiogramme Diamond State la Société Francaise de Microbiologie, CA-SFM (2014).

Susceptibility check Antimicrobial status check of the isolates was performed by Kirby- Bauer Diffusion technique , during which the check isolate was swabbed uniformly onto the surface of the Muller Hinton Agar plates. Antibiotic and plant extract sterile disc were then placed on the plate.

Following incubation, a microorganism field appeared on the plate with zone of inhibition round the antibiotic discs.

Phytochemical composition of hydro ethanolic extracts of *A. chlorantha* The phytochemical screening of the bark extract of *A. chlorantha* showed the presence of alkaloids, flavonoids and polyphenols as shown in Table one, that was aligned with previous studies conducted by Dawudo et al. and Salman et al The idea of compound that inhibits resistance in a very bacteria which can use with a traditional antibiotic is illustrated by clavulanic acid a microbic derived substance of beta lactamase that is employed together with Polymox to extend the steadiness of this antibiotic to its degradation by the beta lactamase accelerator . Piperine, associate degree organic compound isolated from (Trikatu) glycyrrhizin isolated from roots of licorice ar samples of plants derived resistance modifying agents.

Conclusion Our results showed that the concomitant intake of *Annickia chlorantha* and Polymox could lead on to the synergy of the medicament impact of Polymox on multi resistant strains of salmonella , no impact on staph aureus and just about antagonism on multi-resistant strains of *Escherichia coli* . These results could imply employing a lower dose of Polymox to realize a similar therapeutic impact once given together with *Annickia chlorantha* . This study showed a promising potential ancient use of this plant extract to treat totally different infectious diseases and conjointly suggests that together with Polymox may restore the medicament activity of Polymox with relevancy resistant strains. The results obtained indicate that *A. chlorantha* may function a supply of plant derived natural product with antibiotic resistance-modifying activity to be used against multi-resistant bacterium. it's so a decent candidate to cut back the drug dose towards circumventing the matter of drug resistance and also the different facet effects potential throughout anti-infective medical aid.

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