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Research Article

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[Co-extract mixture from *Strophanthus hispidus* \(roots\) and *Aframomum meleguta* \(seeds\) show phytochemical synergy in its anti-inflammatory activity](#)

Background: Combination of extracts from multiple plants are typically used in ethnomedicine to putatively offer more potent chemotherapeutic and chemopreventive effects than that of individual extracts from single plants. Aqueous extracts from two multipurpose plants *Strophanthus hispidus* (roots) and *Aframomum meleguta* (seeds) are topically co-administered in the nasal cavities for the ethnomedicinal management of chronic sinusitis.

Aim: This study assessed the potential phytochemical synergy between constituent extracts of *Strophanthus hispidus* (roots) and *Aframomum meleguta* (seeds) in its anti-inflammation, anti-microbial and anti-oxidant effects.

Methods and Materials: Broth dilution assay assessed anti-microbial activities. DPPH radical scavenging assay examined the scope of anti-oxidant activities and inhibition of carrageenan-induced 7-day old chick feet oedema revealed anti-inflammatory activities.

Results: Anti-microbial activities of individual plant extracts in broth dilution assay showed comparable potency to that of the co-extract mixture. Similarly, individual extracts showed levels of DPPH radical scavenging activities in anti-oxidant assay that was comparable to those found for the co-extract mixture. In contrast to these two effects, inhibition of carrageenan-induced 7-day old chick feet oedema revealed an anti-inflammatory activity evoked by co-extract mixtures that was greater than the sum of the individual potencies of the two extracts.

Conclusion: The potential phytochemical synergy of the two plants extracts in its anti-inflammatory response largely validates ethnomedicinal practice and generally confirms growing literature reports that ascribe the net pharmacological activities of herbal extracts to the combined multi-activities of unique phytochemical entities at multiple target sites.

Research Article

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[To legalize cannabis in Ghana or not to legalize? Reviewing the pharmacological evidence](#)

Background: Although illegal, Ghana has a long history of cannabis use. With changing perceptions, advocacy for legalization has increased globally. This study exams pharmacological evidence on the prospects and challenges of decriminalization and /or legalization of cannabis in Ghana.

Results: Cannabis and cannabinoids are a “pharmacological enigma” with unique ability to activate at least 3 of the 4 drug receptor super families. This include; inotropic Transient Receptor Potential Vanilloid 1 (TRPV1), metabotropic Cannabinoid Receptors (CB) and nuclear Peroxisome Proliferator Activator Receptors (PPAR). Cannabinoid receptors also dimerize with other receptors creating distinctly new signaling pathways. Cannabis and cannabinoids show good anti- nociceptive, anti-inflammatory, immunosuppressant anti-emetogenic activity and variable anticonvulsant activity. It can play important role in palliative care, some rare intractable epilepsy, multiple sclerosis, cachexia and Opioid Use Disorder. Cannabis precipitates psychosis in individuals with underlying genetic susceptibility. Chronic cannabis use alter the neurobiology of adolescent brain, predisposing them to amotivational syndrome characterized by depersonalization and inhibited motivation for goal directed behavior. Cannabis is also a “gateway drug”; ushering users to “harder” substances of abuse and reinstating extinguished drug seeking behaviours. The recent tramadol abuse in Ghana may have been precipitated by previous and concurrent cannabis use. Furthermore, Ghana’s cannabis may have a higher propensity to induce detrimental effects because of preferential accumulation the psychotropic delta-9-Tetrahydrocannabinol as a result of the high tropical temperature and humidity.

Conclusion: There is not sufficient pharmacological evidence supporting criminalization of medical cannabis in Ghana. However, the same evidence does not support legalization of recreational cannabis.

Research Article **Published Date:-2019-09-27 00:00:00**

[Screening of antibiotic residue in poultry in Kathmandu valley of Nepal: A cross-sectional study](#)

This cross-sectional study was conducted to screen the presence of antibiotic residue in poultry. A total of 60 samples (30 Muscle and 30 Liver) were taken from local meat shops from different parts of Kathmandu valley. Disc assay method was used. Escherichia coli (ATCC 25922) and Staphylococcus aureusi (ATCC 25923) were used as test organisms. The results revealed 8 positive samples (which is 13%). Among 30 Liver samples, 3 showed positive result, while only 2 muscle sample indicated positive result. Muscle has the highest percentage of positive results than liver. For S. aureus showed greater percentage of positive results than that of E. coli. The presence of antibiotic residue and its many pathological effects to public health demands the strict rules and regulations as well as surveillance from the concerned authorities.

Research Article **Published Date:-2019-09-20 00:00:00**

[The association between hypoxia, chronic ischemia and alters prostate structure and progress of chronic prostatic disease](#)

Chronic prostatitis today show high level of relapses and recurrent pathological events even if using the best pharmacological therapy. A better understanding of physiopathological effect of ischemic hypoxic condition (pelvic, prostate tissue) and the lymphatic congestion in same body region contribute in evolution of a complex condition. The same focusing the strategy in biofilm reduction or in leukocyte infiltration can be a right way to reduce relapses and progression of the prostatic disease. Hypoxia is also related to prostatic cancer progression and prostatic biofilm if responsible of making a new micro- environment often drug resistance. A deep knowledge in this kind of phenomena can improve the clinical effect of drug therapy.

Research Article **Published Date:-2019-07-16 00:00:00**

[The relationship between serum and sputum levels of azithromycin and clinical endpoints in patients with bronchiectasis using azithromycin maintenance treatment](#)

Background: Azithromycin (AZM) is a macrolide antibiotic with distinct pharmacokinetic properties and is increasingly used as maintenance treatment in patients with bronchiectasis in order to reduce infectious exacerbations and improve pulmonary symptoms. The exact mechanism of action is not known and the relation between azithromycin dose level, local and systemic drug levels and clinical effect however, has not been extensively studied yet.

Objectives: To explore the relation between AZM serum and sputum concentrations, clinical effect parameters and side effects.

Methods: Azithromycin concentrations were measured in serum and sputum samples of bronchiectasis patients receiving one year of AZM treatment (250mg OD) enrolled in the Bronchiectasis and Azithromycin Treatment (BAT) trial, a double blind, randomised placebo-controlled trial. Results were correlated with data on AZM dose level, exacerbation frequency, lung function (forced expiratory volume in 1 second (FEV1) and forced vital capacity (FVC), quality of life and symptoms collected within the same year.

Results: 83 sputum samples from 31 patients and 151 serum samples from 43 patients were available for analysis. Mean AZM dose-level ranged from 18.8 to 39.8 mg/kg body weight/ week, generating mean AZM concentrations of 7.57 mg/L (SD 9.49) in sputum and 0.11 mg/L (SD 0.085) in serum. No correlation was found between side effects and AZM dose level, sputum- or serum concentrations. Significant correlation was found between AZM sputum concentration and CRP-level ($r = -0.6$).

Conclusion: High and stable AZM sputum levels were reached during long term treatment, as opposed to low AZM levels in serum. Apart from CRP-levels to AZM sputum concentration, no other outcome parameter showed significant correlation to AZM serum- or sputum levels. AZM dose- or exposure levels were not predictive for the occurrence of side effects.

Review Article **Published Date:-2019-07-08 00:00:00**

[Pharmacodynamics of cannabinoids](#)

“Pharmacodynamics of cannabinoids “(i.e. a set of biological effects elicited in the living organism by interaction with its biochemical and biophysical functions up to the cellular level) is studied for a long time during both, physiological and pathological conditions. Cannabinoids received their names according to their natural occurrence as constituents of *Cannabis sativa* L. (marijuana).

Research Article **Published Date:-2019-02-17 00:00:00**

[Stepwise regression modeling on the monitoring of separation of Salvianolate through macroporous resin chromatographic column using UV spectral data](#)

Aim: Study the monitoring method of separation of Salvianolate through macroporous resin chromatographic column using UV spectral data.

Method: HPLC was used to determine the concentration of Salviol B in the eluent liquid of macroporous resin chromatographic column. The UV spectrum of the eluent liquid was measured using portable UV spectrometer. Stepwise regression was used to develop the model to predict the concentration of Salviol B in the eluent liquid of macroporous resin chromatographic column using the UV spectral data.

Result: Stepwise regression model was developed to predict the concentration of Salviol B in the eluent liquid of macroporous resin chromatographic column. RMSE was 0.3263, MAP was 0.2323 and CV was 0.1796.

Conclusion: Stepwise regression model could be used to predict the concentration of Salviol B in the eluent liquid of macroporous resin chromatographic column using UV spectral data

Research Article **Published Date:-2018-08-15 00:00:00**

[Discovering the right treatments for diabetes \(2\), blood's pressure, and relating diseases](#)

For last decades diabetes type 2, blood's pressure (especially hypertension) and relating diseases are most serious problems for much people over the world. These diseases are not like other different diseases then for studying them very accuracy, this research choose sample from different societies a small city called "Al-Mejar Al-Kabeer" in south of Iraq. People of this city do same activities than other Iraqi cities and during the last twenty years the only change happened in this city is; they changed them drinking water from tap water to commercial water called it R.O. Population of this city is about 70000 persons and about 20000 from them have diabetes that means more than 28% from all people of this city have this disease, this ratio or may be more for hypertension.

Results of this research show that the main reason for diabetes type 2, blood's pressure and relating diseases is civilization. It shows according good evidences that the right treatment for diabetes, hypertension and relating diseases is about 5g/day potassium ions (K⁺) with less amounts from sodium ions such as 2:1. In fact, insulin forming from known amino acids so each body need sufficient amounts from these acids therefore the right treatment for diabetes type 2 is not only potassium it must there sufficient amounts from proteins each day or each three days.

References of this research indicated; Diabetes and hypertension are well understood but this research find that these diseases need a chemist touch to be fully understood.
