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Sustainable Development of Bioenergy from Agriculture Residues and Environment

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This communication discusses a comprehensive review of biomass energy sources, environment and sustainable development. This includes all the biomass energy technologies, energy efficiency systems, energy conservation scenarios, energy savings and other mitigation measures necessary to reduce emissions globally. This study highlights the energy problems and their possible saving that can be achieved through the use of biomass energy sources. Also, this piece of work clarifies the background of the study, highlights the potential energy saving that could be achieved. The use of biomass energy source describes the objectives, approach and scope of the theme. However, to be truly competitive in an open market situation, higher value products are required. Results suggest that biomass technology must be encouraged, promoted, invested, implemented, and demonstrated as a whole while especially in remote rural areas.

Biography

Abdeen Mustafa Omer is an Associate Researcher at Energy Research Institute. He is qualified Mechanical Engineer with a proven track record within the water industry and renewable energy technologies. He has been graduated from University of El Menoufia, Egypt, BSc in Mechanical Engineering.

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Genome-Wide Association Study of milk production traits in the Russian Black-and-White cattle

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Genome-wide association studies (GWAS) have proven effective for exploring genomic regions associated with quantitative traits in dairy cattle. In this study, we conducted GWAS to seek the candidate genes that are associated with three of the most commonly evaluated milk production traits: daily milk yield (MY), percentage of milk fat (FP) and percentage of milk protein (PP). The dataset included in this study was derived from the national genetic evaluation program in Russia for the Black-and-White dairy cattle. The genotypic data for 644 animals (427 bulls and 217 cows) was used to estimate the effects of 52,445 SNP using weighted single-step GWAS (WssGWAS). SNPs with call rate < 0.90 and those with minor allele frequency < 0.05 were removed from the analysis. The results of the analysis were reported as proportion of the total genetic variance explained by 20 adjacent SNP windows. Only windows with largest proportion (>0.5%) were selected for further analyses of candidate genes. The biggest non-overlapping windows were located on chromosomes 7, 8 and 12 for MY, 10, 14, 18, 19 and 20 for FP and 10 for PP. They explained 1.83%, 10.29 % and 0.74% of the total genetic variation for MY, FP and PP, respectively. Different genes were detected within these regions and there are thought to be associated with the studied traits. These genes are involved in various biological processes related to growth, metabolism, control ion fluxes through membranes and hormone secretion.

Biography

Experienced Civil Project Manager with a demonstrated history of working in Roads, Structure, and infrastructure & Electro-Mechanical. Skilled in project management, Schedule & planning, Budgeting and costing, Surveying & QYTs, Invoicing and documents controlling, Precast, AutoCAD, Engineering "Design", materials and store management, and Site, staff, manpower, and equipment management. Strong engineering professional graduated from Mutah University in Jordan.

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Evolution of Antibiotics Future of Biotechnology in Healthcare

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A Finding shows that from the beginning in the 1940s, mass production of antibiotics involved the industrial scale growth of microorganisms to harvest their metabolic products. A huge environmental antibiotic pressure, resulting from industrial production and marketing of these drugs, has simultaneously contributed to the increase in the diversity of resistant phenotypes, to the selection of the fittest among them, and to the dispersal of resistance genes, which is expected to result in a significant acceleration of the rate of microbial evolution. New agents displaying innovative chemistry and modes of action are desperately needed worldwide to tackle the public health menace posed by antimicrobial resistance. The turn in cause to move circular direction to the study of antibiotic resistance in microbiology and medicine is examined, focusing on the realization that individual therapies targeted at single pathogens in individual bodies are environmental events affecting bacterial evolution. In the chemistry of antibiotics natural products is shaped by the unique evolution and ecology of their producing organisms, yet these influences remain largely unknown. The review the evolutionary process is underlying the chemical diversity and activity of microbe derived antibiotics including the dynamics of vertical and lateral transmissions of biosynthetic path ways and the evolution of efficacy, targeting specificity and toxicity. More action is needed to address antibiotic resistance, while the development of new treatments is one of these key actions, such investments must be coupled with dedicated efforts toward preventing infections in the first place, slowing the development of resistance through better antibiotic use. The number of drugs of biotechnological origin available for many different diseases has increased exponentially, including different types of cancer, diabetes mellitus, infectious diseases and etc. The pharmaceutical industry has used different technologies to obtain new and promising active ingredients, as exemplified by the fermentation technique, recombinant DNA technique.

Biography

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Antifungal and antibacterial activities of crude extracts of *Phellinus* spp. and *Coltricia fragilissima* (Basidiomycota, Hymenochaetaceae) from Cameroon and Democratic Republic of Congo

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Antifungal and antibacterial activities of crude extracts of *Phellinus extensus*, *Phellinus gilvus*, *Phellinus pachyphloeus*, *Phellinus senex* and *Coltricia fragilissima* were investigated on eleven species of bacteria and three of fungal human pathogens. The Minimum Inhibitory Concentration (MIC) was determined by the microdilution method and the results of this study reveals that: the MIC of the crude extract of *Phellinus extensus* was recorded to be 6.25 mg/mL on all bacteria strains such as *Bacillus subtilis*, *Enterococcus faecalis*, *Staphylococcus epidermidis*, *Enterobacter cloacae*, *Klebsiella aerogenes*, *Staphylococcus aureus*, *Mycobacterium smegmatis*, *Proteus vulgaris*, *Staphylococcus aureus*, *Proteus mirabilis*, *Escherichia coli* and 0.39 mg/mL on all species of fungal pathogens namely *Candida albicans*, *Aspergillus ochraceus* and *Aspergillus fumigatus*. The MIC of *P. gilvus* was 6.25 mg/mL on all bacteria strains except *M. smegmatis* which has a MIC of 12.5 mg/mL, and 0.39 mg/mL on all strains of fungi. The MIC of *P. pachyphloeus* was 6.25 mg/mL on all bacterial strains except *E. faecalis*, *S. aureus*, *K. aerogenes* and *E. cloacae* with each a MIC of 12.5 mg/mL; then 0.39 mg/mL on *C. albicans*, *A. ochraceus* and 1.56 mg/mL on *A. fumigatus* fungal strains. The MIC of *P. senex* was 6.25 mg/mL in all bacterial strains except *P. vulgaris* and *P. mirabilis* each having a MIC of 3.13 mg/mL, then 0.39 mg/mL on all fungal strains. The MIC of *C. fragilissima* was 6.25 mg/mL on all bacterial strains except *S. epidermidis*, *K. aerogenes* each which a MIC of 12.5 mg/mL and *E. cloacae* which a MIC of 3, 13 mg/mL. However, there was a MIC of 0.39 mg/mL on *C. albicans*, *A. fumigatus* and a MIC of 3.13 mg/mL on *A. ochraceus* strains of fungi. Its data have been revealed that, the antimicrobial activity of the crude extracts of *Phellinus* and *Coltricia* is stronger on pathogenic fungi than on bacteria. However, the activity of the crude extract of *C. fragilissima* is weak on *Aspergillus ochraceus* as long as that of the crude extract of *P. pachyphloeus* is moderate on *Aspergillus fumigatus*. *Coltricia fragilissima* being of the same family as *Phellinus* and having recorded the values of MIC eminently close to those of the latter may also be used for medicinal purposes like several known *Phellinus* species. Being highly represented in the sub-Saharan regions, these Hymenochaetacea are now part of the non-exhaustive list of medicinal mushrooms in the region and may constitute a new source of natural molecules that may be more active than synthetic products against certain fungal and bacterial contaminations.

Biography

I have completed my master at the age of 26 years old from Azad University of Medical Sciences. Blondo-Pascal Metsebing; Romuald Oba Dominique Claude Mossebo. Preparation and preliminary evaluation of bio-nanocomposites based on hydroxyapatites.

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Preparation Nano emulsions containing rosemary and examination of it effect on nerve cells of the CA1 hippocampus male rat following transient pervasive ischemic/ reperfusion Evaluation the protective effect of nano emulsions containing rosemary on CA1 hippocampus neurons ischemic/ reperfusion injury

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Background: Stroke is an important cause of mortality and morbidity worldwide but effective therapeutic strategy for the prevention of brain injury in patients with cerebral ischemia is lacking. Regard to know the mechanism of injury, the use of plant medicine can help, rosemary is a plant that is accessible and unexpansive that have strong antioxidant and anti-inflammatory effects, that may be helpful.

Material and method: This study had two main parts: in vivo and in vitro. In in vivo part, we divided wistar rats into 8 groups (control, ischemia/reperfusion, 3 dose of alcoholic extracts of rosemary and 3 dose of aqueous extracts of rosemary), after 21 days of rosemary administration the ischemia and reperfusion was done, finally apoptosis gene and neurons death were assayed in hippocampus and in in vitro part we cultured hippocampus neurons (in 7 groups: control, 3 dose of aqueous extracts of rosemary and 3 dose of alcoholic aqueous extracts of rosemary) and then cell viability was assayed.

Results: We demonstrated that 200 mg/kg aqueous extracts of rosemary decrease the apoptosis gene expression and increase the anti-apoptosis gene expression in compare to ischemia ($p < 0.05$) and decrease the neuron death in CA1 region in hippocampus ($p < 0.05$). The neurons viability in culture group with 200 mg/ml alcoholic aqueous extracts of rosemary had no significant difference with control.

Conclusion: Present study demonstrated that cerebral ischemic tolerance induced by rosemary extracts pretreatment, the alcoholic aqueous extracts of rosemary in 200 mg/kg dose was more effective to protect of hippocampus.

Biography

I have completed my master at the age of 26 years old from Azad University of Medical Sciences. I am working as a lab director in tehran and educating students.

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