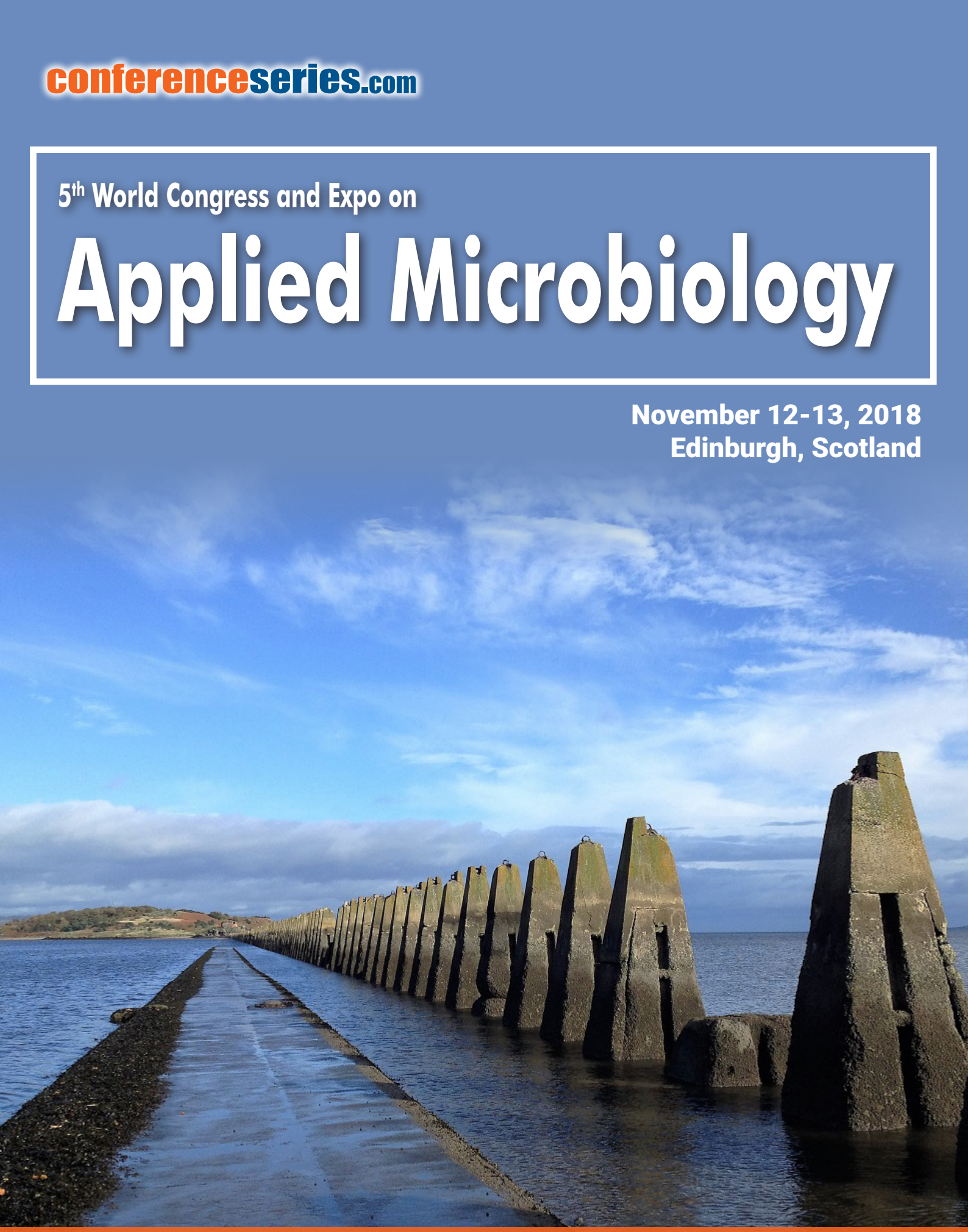
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5th World Congress and Expo on

Applied Microbiology

November 12-13, 2018
Edinburgh, Scotland



SCIENTIFIC PROGRAM

DAY 1
Monday 12th November

08:30-09:00 **Registrations**

09:00-09:30 **Introduction**

09:30-09:50 COFFEE BREAK

09:50-11:50 Meeting Hall 01 **KEYNOTE LECTURES**

11:50-13:10

MEETING HALL 01	MEETING HALL 02
Talks On: Medical Microbiology | Pharmaceutical Microbiology	**Talks On:** Drug discovery, Development and Molecular biology
Antibiotics, Antimicrobials & Chemotherapy	Drug Design and Drug Development
Stem cell therapy, Vaccines & Vaccinology	Pharmacovigilance and Drug Safety
Infection and Immunity	Recent Advances in Novel Drug Delivery Systems
Microorganisms in Pharmaceutical Industry	Microfactories-Microbial Production of Chemicals and Pharmaceuticals
Microbial Ecology and Next Gen Sequencing	Biosurfactants: Puroification, Mass Production, Applications

13:10-13:15 GROUP PHOTO

13:15-14:00 LUNCH BREAK

14:00-16:00

MEETING HALL 01	MEETING HALL 02
Talks On: Microbial Biotechnology | Food Microbiology	**Talks On:** Petroleum and Biofuels Microbiology | Plant Pathology and Plant Microbiology
Quantitative Models and Bioinformatics in Microbiology	Alternative Feedstocks and Biofuels
Diagnostic-Microbiology	Improving Microbial Biofuel Production: Recent Developments
Bioremediation, Biodegradation & Biodeterioration	Plant Immune System and Plant Virology
Biofilms formation & Quoram Sensing	Molecular and genetic basis of plant-insect interaction
Food Preservation, Spoilage and Poisoning	Plant Microbial Interactions

16:00-16:20 COFFEE BREAK

MEETING HALL 01 (16:20-17:00)	MEETING HALL 01 (17:00-18:00)
Young Research Forum	Workshop

DAY 2
Tuesday 13th November

09:00-10:30 Meeting Hall 01 — **KEYNOTE LECTURES**

10:30-10:50 COFFEE BREAK

10:50-12:50	MEETING HALL 01	MEETING HALL 02
	Talks On: Water, Aquaculture and Marine Microbiology | Geomicrobiology	**Talks On:** Veterinary Microbiology| Analytical Imaging and Microscopy Techniques
	Structure and activities of microbial communities	Gene Therapy
	Microbes and surfaces (adhesion and biofilm formation)	Cell Therapy
	Microbial community genetics and evolutionary processes	Genome editing
	Microbial life in extreme and unusual little-explored environments	Molecular Therapy

12:50-13:35 LUNCH BREAK

13:35-15:55	MEETING HALL 01	MEETING HALL 02
	Talks On: Microbial Physiology, Metabolism and Gene Expression | Microbial Taxonomy, Microbes Identification & Microbial Characterization	**Talks On:** Paleomicrobiology, Archaeomicrobiology & Microbial Forensics | Biotechnology and Nanobiotechnology
	Pharmacotoxicology	Pharmacogenetics
	Clinical Pharmacology	Pharmacogenomics
	Drug Pharmacology	Pharmacotherapeutics
	Neuropharmacology	Immunopharmacology

15:55-16:15 COFFEE BREAK

MEETING HALL 01 (16:15-17:00)	MEETING HALL 01 (17:00-18:00)
Poster Presentations	Workshop

PROVISIONAL PROGRAM | TENTATIVE SPEAKERS

Title: Demand for Biogas: State of the Art and Future Perspective

Abdeen Omer, University of Nottingham

Abstract

Biogas from biomass appears to have potential as an alternative energy source, which is potentially rich in biomass resources. This is an overview of some salient points and perspectives of biogas technology. The current literature is reviewed regarding the ecological, social, cultural and economic impacts of biogas technology. This article gives an overview of present and future use of biomass as an industrial feedstock for production of fuels, chemicals and other materials. However, to be truly competitive in an open market situation, higher value products are required. Results suggest that biogas technology must be encouraged, promoted, invested, implemented, and demonstrated, but especially in remote rural areas.

Title: Role of bacterial antioxidant defense in their resistance to bactericidal antibiotics

A. C. Matin, Stanford University School of Medicine

Absract

Sigma S (ss) controls the synthesis of proteins that contribute to the resistance of bacteria like uropathogenic Escherichia coli (UPEC) in the stationary phase of growth, where bacteria are most virulent; ss is encoded by the rpoS gene. UPEC causes urinary tract infections (UTIs) and gentamicin (Gm) is used to treat this disease. We discovered that deletion of rpoS gene rendered UPEC more sensitive to bactericidal antibiotics: Gm, ampicillin and norfloxacin. The presentation will focus on Gm, but the findings by and large apply also to the other bactericidal antibiotics. Proteomic analysis suggested involvement of a weakened antioxidant defense in increased sensitivity. Use of the psfiA genetic reporter, 3-(p-hydroxyphenyl) fluorescein (HPF) dye, and Amplex Red showed that Gm generated more reactive oxygen species (ROS) in the mutant. HPF measurements can be distorted by cell elongation, but the antibiotics did not affect stationary-phase cell dimensions Co-administration of the antioxidant N-acetyl cysteine (NAC) decreased drug lethality particularly in the mutant, as did Gm treatment under anaerobic conditions that prevent ROS formation. Greater oxidative stress, due to insufficient quenching of endogenous ROS and/or respiration-linked electron leakage, therefore contributed to the greater sensitivity of the mutant; infection by a uropathogenic strain in mice showed this to be the case also in vivo. Disruption of antioxidant defense by eliminating the quencher proteins, SodA/SodB and KatE/SodA, or the pentose phosphate pathway proteins, Zwf/Gnd and TalA, which provide NADPH for ROS decomposition, also generated greater oxidative stress and killing by Gm. Thus, besides its established mode of action (inhibition of protein synthesis), Gm also kills stationary-phase bacteria by generating oxidative stress and targeting the antioxidant defense of E. coli can enhance its efficacy. Accordingly, using bioinformatic approaches, we have identified small molecule compounds that inhibit proteins of antioxidant defense of UPEC; initial results have given promising results. In space flights, astronauts often suffer from UTIs. Bacterial gene regulation can differ in normal vs. microgravity (MG) experienced during space flights. However, the EcAMSat mission, using a highly sophisticated microfluidic system for autonomous determination of UPEC sensitivity to Gm during space flight showed that ss controlled Gm resistance also in MG. We have also developed method for determining resistance at single cell level.

Title: The Rust Fungus of *Puccinia Xanthii* f. sp. *Ambrosiae-trifidae* Being a Good Biocontrol Agent of Giant Ragweed

Guozhong Lyu, Dalian Minzu University

Biography

Guozhong Lyu got his PhD at the age of 28 years from Shenyang Agricultural University and studied fungal biodiversity as a visiting scholar in CABI Bioscience, UK during 2001-2002. He is the dean of the College of Environment and Resources of Dalian Minzu University. He has published more than 160 papers in academic journals and has been serving as an editorial board member of Mycosytema and Journal of Fungal Research.

***In vitro* human Probiotic Potential of *Lactobacillus tucceti* CECT 5920 and *Lactobacillus mindensis* TMW isolated from Nigerian Fermented foods**

Obi, C. N, Michael Okpara University of Agriculture

Abstract

In vitro Probiotic potentials of Lactic acid bacteria (LAB) isolated from traditional fermented foods were studied. Serial dilution of each of the samples was performed and 0.1ml of appropriate dilution was streaked on De Man Rogosa Sharpe (MRS) agar containing 50mg of nystatin for the isolation of LAB. Forty-eight LAB isolates were recovered from samples and were screened for bacteriocin production by the Agar Well Diffusion assay and two best bacteriocin producers characterized by molecular method as *Lactobacillus tucceti* CECT 5920 and *Lactobacillus mindensis* TMW were tested for their human probiotic potentials. *Staphylococcus aureus* NCTC 8325 and *Escherichia coli* 0157:H7 cultures were used as test pathogens. *L. tucceti* and *L. mindensis* had the same level of bacteriocin production and antimicrobial activity ($P \leq 0.05$). The LAB isolates resisted the pH range of 2-8 for 24 hrs while higher bile salt assimilation was shown by *L. tucceti*. Both LAB strains tolerated pepsin enzyme after 72 hrs. Cholesterol assimilation was better with *L mindensis*. Both LAB strains did not show any haemolytic effect. *L. tucceti* was sensitive to Cotrimoxazole while *L mindensis* was resistant to all the antibiotics tested. *L. tucceti* gave better results in all the bacteriocin and probiotic potentials tested.

Title: Biofilm testing of microbiota: An essential step during corneal scrap examination in Egyptian acanthamoebic keratitis cases

Khalil HSM, Helwan University

Biography

Khalil HS has completed her MD from Tanta University. She is the acting head of Microbiology & Immunology department, Faculty of Medicine, Helwan University since November 2017. Faculty of Medicine, Helwan University is the only governmental faculty which started its academic undergraduate program at 2016 with an integrated modular curriculum. She is a member of the faculty council & the education council.

Title: The protective effect of Lactobacillus rhamnosus exopolysaccharide against keratinocyte damage caused by Staphylococcus aureus

Mohammad Rabbani, University of Isfahan

Biography

Mohammad Rabbani Khorasgani has DVM and PhD in Microbiology degrees. He has published more than 50 papers in ournals especially about evaluation and application of natural materials for improving the health and prevention and control of diseases especially infectious diseases . Many of his researches has focused on probiotics and bovine colostrum.

Title: FATTY ACID METHYL ESTER ANALYSIS OF OLIVE OIL DEGRADED BY CANDIDA PARAPSILOSIS

Popoola, B. M., University of Ibadan

Abstract

Fatty acids are the major components of lipids; and the physical, chemical and physiological properties of a lipid class depend primarily on its fatty acid composition. Gas chromatography method can be used for the identification of microbiological degraded fatty acids in vegetable oils as methyl ester.

In this work, olive oil degraded by lipase of Candida parapsilosis grown in two different mineral salt medium, one consisting of (g/L) of KH2PO4, 7.584; K2HPO4, 0.80; MgS04 .7H20, 0.80; CaCl2, 0.16; (NH4)2N03, 0.80; FeS04, 0.16; and olive oil 2%, PH maintained at 7.0. The second one is also a modification of the first medium consisting (g/L) of KH2PO4, 7.584; K2HPO4, 0.80; MnS04.4H20, 0.80; NaCl, 0.16; (NH4)2N03, 0.80; Fe2(S04)3, 0.08; and olive oil, 2%, pH maintained at 7.0 was studied over 25 days. The fatty acid profiles of the oils and methyl esters were determined by chromatography analyzer. Olive oil was analyzed for fatty acids commonly present in olive oils which normally are Myristic, Palmitic, Stearic, Oleic, Linoleic, Linolenic, Behenic and Lignoceric, which have specific carbon number and their values in approximate percentage are C14:0 (0.4), C16:0 (14.0), C18:0 (5.5), C18:1 (76.4), C18:2 (3.4), C18:3 (0.1), C22:0 (0.1) and C24:0 (0.1) respectively. Oleic acid percentage is high in olive oil which contained considerable amount of 76.4%.

The reduction of fatty acid by Candida parapsilosis after 20 days was 6.7 % in the media used. Lipase from Candida parapsilosis had potential for degradation of fatty waste. It could therefore be employed in environmental cleanup of oil spill site.

Title: New “Cancer Pill” renders Chemo OBSOLETE

Rahul Hajare, Indian Council of Medical Research

Biography

Dr. Rahul Hajare is a bright student of Renowned Immunologist Respected Dr. R.S.Paranjape,, Retired Director & Scientist ‘G’ National AIDS Research Institute India. Rahul Hajare has completed his Ph.D at the age of 32 years from Vinayaka Mission University and postdoctoral studies from Indian Council of Medical Research Delhi The National AIDS Research Institute Pune on transcutaneous DNA vaccination. He is working on Nipah Drug delivery systems, new cancer drug delivery systems and specific antibodies attached drug delivery systems and DNA vaccination.

Title: Comparative Metagenomic study of Mangrove Microbiome: Reveals High Abundant Heavy Metal and Antibiotic Resistance Genes across Different Ecosystems Irrespective of Anthropogenic Activities

Ranjith Kumavath, Central University of Kerala

Abstract

Mangrove forests are part of a complex ecosystem that is critical to subtropical and tropical regions. As range of these forests decreases, there is an increasing urgency to understand the factors that support and underlie it, and the microbial communities that both depend and support this ecosystem are not understood. However, the existing rate of mangroves destruction has ignited the need for mangroves preservation. The importance of mangroves is well known yet little is known on its microbial community using state of art whole metagenome sequencing. In this study, we have analyzed mangrove sediments from Kerala (India) using de novo whole metagenome next generation sequencing and compared it to Brazil and Saudi Arabia mangrove. Proteobacteria and Euryarchaeota were the most profuse phylum within and between the samples for bacterial and archaeal domain respectively. The samples exhibited 593 bacterial and 61 archaeal genera. The core bacterial microbiome comprised of 97.9% of the overall bacterial diversity covering over 99.97% ± 0.01 of the bacterial abundance indicating the commonness of microbial diversity in mangrove environment irrespective of geographical location. Functionally, 1942 genes were shared in all the samples out of 7410 functions within the mangrove sediments. Analysis of the resistance genes in comparison to ocean as well as Land (Agricultural, Forest and Grassland) brought froth distinct patterns where the mangroves and land samples were enriched in heavy metal resistance genes while the Ocean samples were enriched in drug resistance genes. The ocean had fluoroquinolone and Methicillin resistance gene as high as 28.178% ± 3.619 and 10.776% ± 1.823 respectively while Cobalt-zinc-cadmium resistance genes were higher in mangroves (23.495% ± 4.701) and land (27.479% ± 4.605). Our study shows the widespread antibiotic resistance genes in nature irrespective of ecosystems.

Title: Evaluation of Plasma Interleukin-10 Levels among Chronic Hepatitis B Patients Attending Total Lab Care Laboratories in Khartoum State

Wafa Ibrahim, Elhag,-AL Neelain University

Biography

Wafa Irahim Elhag Abd Elrahman, I have completed my PhD at the age of 30 years at Sudan University of sciences & technology – Sudan (2010). I am associate professor in microbiology department Faculty of Medical Laboratory sciences, Al Neelain university- Khartoum- Sudan.

And also- dean of the faculty. I have published more than 50 papers and one book, Am supervisor of more than 12 M.Sc. students complementary researches. All researches cocrning with infectious disease and their diagnosis based on conventional molecular technique like HIV, anti retroviral drug resistance, Hepatitis B, Mec A gene detection among MRSA, Genotyping of rota virus, Molecular Detection of Human Papillomavirus Type-16 and 18 DNA in Cervical Cancer Tissue Biopsies using real time PCR.

Title: Hepatitis B virus genotypes in patients with liver cirrhosis and hepatocellular carcinoma

Dr. Yassir Hamadalnil

Abstract

Background:

Hepatitis B virus is a hepatotropic virus, clustered in 10 genotypes which play a major role in the outcome and long term outcome of HBV infection such as liver cirrhosis and hepatocellular carcinoma (HCC).

Objectives:
The aim of this study is to determine the frequency of different genotypes of HBV among Sudanese patients with liver cirrhosis and HCC.
Methods:
Thirty five patients were included in this study, of them 28 were diagnosed with liver cirrhosis, 4 with HCC, and 3 were in active carrier. Blood serum samples were collected and DNA extracted from sera by using commercial DNA extraction kits, HBV S gene was amplified using primer based PCR. Obtained DNA amplified with 6 genotypes using multiplex PCR. Then, the genotypes present in the sample identified.
Results:
Of the 35 patients enrolled in this study. HBV genotype D was detected in 35.7% of the patients with liver cirrhosis. But in patients with HCC the genotype A was detected in 50% of patients, two patients diagnosed as liver cirrhosis of unknown cause discovered to be HBV positive and genotypes identified.
Conclusion:
In our study, HBV genotype D associated eAg negative is more common in patients with liver cirrhosis; more over genotype A is predominant in patients with HCC. More studies needed in this area.

Title: Sustainable production of biochemicals from sugarcane bagasse by Streptomyces coelicolor strain COB KF977550 isolated from a tropical estuarine.

O.M. Buraimoh

Biography

Olanike Buraimoh completed her Ph.D in the year 2014 from the University of Lagos, Akoka, Nigeria. She was a visiting scholar to Ohio Agricultural Research Development Centre (OARDC), Ohio State University, Wooster, USA. She is currently a lecturer/researcher in the Department of Microbiology, University of Lagos. She has published more than 13 papers in reputed journals and has presented several conference papers. She a reviewer to several reputable journals. She is a member, Organization for Women in Science for Developing World (OWSD) and Society for Applied Microbiology (SFAM) among others. She is a mother of three children.

Title: Entomopathogenic infections to control the sunflower moth

Alán Rivero-Aragón, Universidad Central Marta Abreu de Las Villas

Biography

Alán Rivero-Aragón has completed his PhD from Universidad Central Marta Abreu de Las Villas (UCLV). Has worked, as specialist of the Pesticide Development Group of the Center for Chemical Bioactives of the UCLV, was head of the acarology an entomology departament in the Provincial crop protection aboratory (LPSV) of Villa Clara, Cuba, and later Technical Director of the Center for Environmental Studies and Services (CESAM) belonging to the Ministry of Science, Technology and Environment (CITMA). Is currently head of the Department of Biology at the UCLV, one of the most important universities in Cuba.

Title: Expressway for identification of viral suppressor of RNA silencing
Anurag Kumar Sahu, International Centre for Genetic Engineering and Biotechnology

Biography

I Anurag, DBT-Research Associate at International Centre for Genetic Engineering & Biotechnology, New Delhi. Crop improvement and biotic stress matters are of interest because as pathogen infection (viral & Fungal) causes serious economic damages in agricultural and environmental fields in India, therefore research to understand the molecular mechanism of interaction between host plant and pathogen is significant, and also fruitful in development of strategies to increase broad spectrum resistance to viruses through the use of pathogen derived resistance and silencing approach.

Title: Molecular detection and sequencing of Carbapenemase-Encoding Genes in Clinical strains of Pseudomonas aeruginosa
Ayman Kamal El Essawy, Ain Shams University

Biography

Ayman K. El Essawy has Ph.D in Microbiology, (Ain Shams University, Egypt), a diploma in Hospital Infection Control (Claude Bernard-Lyone 1 University, France) and a Diploma in Biostatistics (Ain Shams University, Egypt). He is fellow of Microbiology at Ain Shams University, Egypt. He worked at Al Azhar University & American Naval Medical Research Unit No.3 (NAMRU-3) and Ain Shams University Genetic Engineering/biotechnology center, Egypt. He is head of laboratory and infection control at Magrabi Hospitals, KSA. He is publishing in the field of Microbiology and Molecular Microbiology. He is particularly interested in the study of bacterial resistance to antibiotics

Title: Anti-mycobacterial efficiency of three essentials oils from medicinal plants currently used to treat traditionally tuberculosis in Cameroon
Betote Diboué Patrick Hervé, University of Yaounde

Biography

I'm a PhD student in Biochemistry (Option: Medical Microbiology and Pharmacognosy) from the Faculty of Medicine and Biomedical Sciences at Yaoundé I University. My research area is the interface of chemistry and biology applied to infectious diseases caused by mycobacteria (tuberculosis, Buruli Ulcer and other mycobacterial infections) Drugs and design. I have published 04 papers in reputed journals and 05 papers being submitted. My work environment has allowed me to develop leadership and innovation capacities and challenges. My qualities, I am rigorous, sharp, meticulous and curious.

Title: Effects of different levels of salinity upon antifungal activity of essential oil from Thymus against *Fusaruim oxsysporum*
Boualem Boumaaza, University of Abdelhamid Ibn Badis

Biography

BOUMAAZA BOUALEM has completed his PhD at the age of 32 years from Mostaganem University. He is Associate Professor& Researcher (Ph.D.) / Agronomy, Plant Protection Department of N.T.A.A. University of Ibn Khaldoun , Tiaret-Algeria. He has been serving as a member of National Committee for Evaluation and Programming of University Research.

Title- Mechanistic insights into chemical induced denaturation of Glutaredoxin 1 protein from E. Coli

Keshav Tiwari, Centre for Interdisciplinary Research in Basic Sciences

Biography

He has received his Bachelor's (Hons.) degree in Microbiology from University of Delhi, India and now a last semester student of M.Sc. (by Research) Microbial Biotechnology at Amity Institute of Microbial Biotechnology, Noida (U.P.). He is currently doing dissertation from Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia. He has actively participated in the various conferences and workshops and has presented a poster presentation entitled "Reverse Vaccinology: A novel approach in diminishing the potent infections" at World Biotechnology Congress held from 20th- 21st Feb, 2017. He has contributed an article entitled "Fermented food products and traditional practices of Indian origin" in International magazine "The Seoul Times".

Title: Biodesulphurisation of benzothiophene and dibenziothiophene by rhodococci isolated from oil contaminated soil

Selva M Athi Narayanan, Edinburgh Napier University

Biography

Selva is a PhD student at the Edinburgh Napier University, UK. He has worked on applied microbiology research projects including bacterial biodesulphurisation, peptide antibiotic producing bacteria, for several years, and has co-authored 2 papers in reputed journals during the time.

Title: Large Scale Production of 2-pyrone-4,6-dicarboxylic acid as a platform chemical from Lignin

Yuichiro Otsuka, Masaya Nakamura, Tokyo Universiy of Agriculture and Technology

Biography

Yuichiro Otsuka has completed his PhD at the age of 27 years from Tokyo Universiy of Agriculture and Technology and postdoctoral studies from Jikei University School of Medicine. He is the senior researcher of Forestrv and Forest Products Research Institute.

Title: Escherichia coli antibiotic resistance: bioactivity and utilization of novel biotechnological approaches to control infections

Cristina Paiva de Sousa, Federal University of Sao Carlos

Biography

Cristina Paiva de Sousa has completed his PhD from University of Sao Paulo, SP, Brazil and postdoctoral studies from Université de Montréal, QB, Canada. She is a Microbiology Professor. She has published more than 70 papers in reputed journals and has been serving as the Coordiantor of Post Graduation Biotechnlogy Program since 2016, directing students in Masters and PhD levels.

Title: Prevalence, HIV Co-infection and Multi-drug resistance of smear positive Pulmonary tuberculosis in prison settings of Northwest Ethiopia

Teklay Gebrecherkos, University of Gondar

Biography

I have at the age of 27 years a B.Sc. degree in medical laboratory sciences and M.Sc. degree in Medical Microbiology from Haramaya University and University of Gondar, Ethiopia, respectively. I have been working as instructor researcher, community service provider and in the University of Gondar, Ethiopia since 2011. I have published 8 papers in peer reviewed journals and currently I win three mega projects with my colleagues, and the project titles are bacterial drug resistance in inanimate objects from the Hospital environment, North west Ethiopia, water analysis and coliforms in rural and urban areas of Ethiopia and Molecular Epidemiology, Molecular distribution, Bacterial drug resistance and associated risk factors of N.gonorhoea and C.trachomatis among pregnant mothers attending in Amhara regional state Referral Hospitals, Northwest Ethiopia.

Title: Monilinia fructicola and Monilinia laxa isolates from stone fruit orchards sprayed with fungicides display a broader range of responses to fungicides than those from unsprayed 'organic' orchards

T. T. Tran, Murdoch University

Abstract

Monilinia fructicola and Monilinia laxa are causal agents of brown rot, the most serious fungal disease of stone fruit (Prunus species). The disease is controlled primarily by applying fungicides. It was hypothesised that Monilinia isolates exposed to a regime of fungicidal sprays would exhibit greater tolerance to those compounds than isolates that had not experienced them. Sixty-six M. fructicola and 52 M. laxa isolates were collected from fungicide-sprayed and unsprayed 'organic' commercial and domestic orchards. The fungicides propiconazole, iprodione, and mixture of fluopyram and trifloxystrobin were used regularly on all the sprayed orchards tested, and these were used to challenge all Monilinia isolates in vitro. As expected, isolates collected from sprayed orchards were on average more tolerant to the fungicides, as measured by effective concentration of fungicide reducing mycelial growth by 50% (EC50). This trend was evident for both fungal species tested, but it was statistically significant only for M. fructicola. M. laxa isolates were on average more tolerant to propiconazole than were M. fructicola isolates, while average responses to iprodione and fluopyram + trifloxystrobin were similar for both species. Although tolerant and sensitive isolates were identified under both sprayed and unsprayed regimes, there was a greater range of responses to all three fungicides by isolates from sprayed orchards. Isolates with tolerance to two fungicides were not exclusively from sprayed orchards, but occurred more frequently there.

Title: Implementation of new concentration technologies for microbiological recoveries in a drinking water system from Aquavalens Project

G. Saucedo, Aigües de Barcelona

Biography

Gemma Saucedo completed her Biology degree at the age of 24 at University of Barcelona and at Institute of Molecular Biology at Vienna Biocenter (University of Vienna). She is working in Aigües de Barcelona since

22 years ago, including 8 years at the Drinking Water Treatment Plant at Sant Joan Despí. She is now responsible for molecular biology at Microbiology Laboratory. She has published some papers related to drinking water treatment and distribution and she has participated in several European projects during these years.

Title: Exploring the Active Center of the LSD1/CoREST Complex by Molecular Dynamics Simulation Utilizing Its Co-crystallized Co-factor Tetrahydrofolate as a Probe.

Hiba M. Zalloum, The University of Jordan

Abstract

Epigenetic targeting of cancer is a recent effort to manipulate the gene without destroying the genetic material. Lysine-specific demethylase 1 (LSD1) is one of the enzymes associated with the chromatin for post-translational modifications, where it demethylates lysine amino acid in the chromatin H3 tail. Many studies showed that inhibiting LSD1 could potentially be used to treat cancer epigenetically. LSD1 is associated with its corepressor protein CoREST, and it uses tetrahydrofolate as a cofactor to accept CH2 from the demethylation process. In this study, the co-crystallized co-factor tetrahydrofolate was utilized to determine possible binding regions in the active center of the LSD1/CoREST complex. Also, the flexibility of the complex has been investigated by molecular dynamics simulation and subsequent analysis by clustering and principal component analysis.

This research supported other studies and showed that LSD1/CoREST complex exists in two main conformational structures: open and closed. Furthermore, this study showed that tetrahydrofolate stably binds to the LSD1/CoREST complex, in its open conformation, at its entrance. It then binds to the core of the complex, inducing the closed conformation. Furthermore, the interactions of tetrahydrofolate to these two binding regions and the corresponding binding mode of tetrahydrofolate were investigated to be used in structure-based drug design.

The next part of work aims to investigate the activity of hits predicted as active inhibitors of LSD1/CoREST complex. These hits are available from structure-based in-silico screening for some available (NCI, Drugs). In this part we strated testing the cytotoxicity for some of predicted active compounds against leukaemia cell line K562, prostate cancer cell line PC3, neuroblastoma SH-SY5Y, and normal fibro blast cells (which contains different expression levels of LSD1).

Title: Comparative anti-proliferative effects of potential HER2 inhibitors on a panel of breast cancer cell lines

Hiba M. Zalloum, The University of Jordan

Abstract

The human epidermal growth factor receptor 2 (HER2) is a member of the erbB class of tyrosine kinase receptors that have been clinically validated as targets for cancer therapy. The gene of this protein (HER2/neu) is found to be amplified in 30% of breast cancers and a variety of cancers. Breast tumors are subtype specific, i.e. breast cancer subtypes have different expression patterns for ErbB receptors. In our initial work we used QSAR equations and their associated pharmacophore models to screen the national cancer institute (NCI) list of compounds and Drug Bank database to search for new promising HER2 structurally diverse inhibitory leads. Inhibitory activities of the resulted compounds were tested

against HER2-overexpressing SKOV3 Ovarian cancer cell line and promising IC50 values were scored. In this study we have explored these active hits on different normal and breast cancer cell lines that represent different breast cancer subtypes with distinguished expression level of HER2 and HER1.
One of our compounds selectively inhibited the growth of SKBR-3 cells and upon testing against fibroblast which is a model for normal tissue it has shown minimal toxicity with a selectivity index of 8. Further molecular studies were done to prove its activity against HER2 positive breast cancer.

Title: EVALUATION OF HISTOPATHOLOGICAL EFFECTS OF WISTAR RATS LIVER TREATED WITH UNEXPIRED PENICILLIN g INJECTION

TAKON IQUO ASU, UNIVERSITY OF CALABAR

Biography

Iquo Asu Takon has a Ph.D in industrial Microbiology and a minor in Pharmaceutical Microbiology. She is also a Lawyer with 15years post call. She is a Senior Lecturer at University of Calabar-Nigeria with over 18years experience covering research, teaching and learning and has published research works widely in both local and internationally recognized Journals. She currently has over 27 publications and has authored 3 books with 1 currently in press. She is happily married with 3 children.

Title: Antimicrobial potential of aerial parts of Dichanthium annulatum and Ochthocloa compressa

Iram Fatima, Quaid-i-Azam University

Biography

Iram Fatima is doing Ph.D from Quaid-e-Azam University, Islamabad. She is currently doing part of her Ph.D Research work at Newcastle University, UK under the HEC (Higher Education Commission of Pakistan) International Research Support Initiative Program (IRSIP). She has published five papers in reputed journals and has presented her work in various International Conferences.

Title: Microbocenosis of undergraund land and factors determinate they structure (south Karelia, Ruskeala)

Medvedeva Maria, Laboratory for Forest Pedology and Forest Research Institute KarRC RAS

Biography

Medvedeva Maria has completed her PhD at the age of 33 years from Moscow State University M. A. Lomonosov. She is Senior Research Associate in the Laboratory for Forest Pedology Forest Research Institute KarRC RAS. She has more than 130 publications, co-author of 5 collective monographs: "Ecological and microbiological assessment of the state of soils of the city of Petrozavodsk "(2005), "Soil diversity and biodiversity in forest ecosystems of the middle taiga" (2006), "Formation of forest communities on technogenic lands of the North-West of the taiga zone of Russia" (2011), "Modern problems of environmental pollution and ways to solve them" (2012), "Heavy metals in the soils of Karelia" (2015). She is the co-executor of BSUIN-project.

Title: Ecological and microbiological studies of underground mine workings and soils of the Karelian Ladoga area

Bachmet Olga, Russia, Laboratory for Forest Pedology and Forest Research Institute KarRC RAS

Biography

She has completed hir PhD at age of 30 years from Moscow State University M. A. Lomonosov Faculty of Soil Science and postdoctoral studies Petrozavodsk State University O.V. Kuusinen. She is Acting President in the KarRC RAS, Chief Research Associate in the Laboratory for Forest Pedology Forest Research Institute KarRC RAS, Head of the Laboratory for Forest PedologyForest Research Institute KarRC RAS, Head of the Department of Multidisciplinary Scientific Research KarRC RAS , Chief Research Associate in the Department of Multidisciplinary Scientific Research KarRC RAS. She has published more than 35 papers in reputed journals, more than 7 monographers

Title: Specificity and performance evaluation of a novel RNA-FISH probe for the identification of Rhodotorula sp. in Cultural Heritage materials

P. Branco, Évora University

Biography

Master in molecular biology by the institute of health Egas Moniz, Monte da Caparica, Portugal and PhD in food engineering by the Instituto Superior de Agronomia (ISA), School of Agriculture, University of Lisbon, Portugal. She has published 8 papers in peer-reviewed journals. Since May of 2017, researcher in the HERCULES Laboratory at Évora University where she is focused on the development of new RNA-FISH probes for identification and detection of microorganisms involved in biodeterioration of Cultural Heritage in the MICROTECH-ART project funded by FCT.

Title- Comparative account of exopolysaccharides produced by soil microorganisms isolated from two different **regions in India.**

Purva Asrani, Amity University

Biography

She has received her Bachelor's (Hons) degree in Microbiology from University of Delhi, India, and currently pursuing her M.Sc. (by Research) in Microbial Biotechnology at Amity University, Noida (U.P.), India with a six months dissertation programme at the Centre for Interdisciplinary Research in Basic Sciences at Jamia Millia Islamia, New Delhi. She has been regularly contributing articles for International magazine (The Seoul Times) and has actively participated in various symposia including presentation at Young Scientist Forum of World Biotechnology Congress which was held at JNU, New Delhi from 20th - 22nd February, 2017. In addition, she has actively participated in a number of hands on training workshops during the period of her studentship. Her publications include a review paper in "Veterinary Research International" and a chapter (communicated) in International Book "Elsevier" in the area of Microbial Biotechnology.

Title: Production of Antibody Fragments with Plasmid-based and Genome Integrated T7 E. coli Expression Systems – Evaluation of Systems Performance in Microtiter Fed-batch like Cultivations

Sophie Vazulka, University of Natural Resources and Life Sciences.

Biography

Sophie Vazulka is currently PhD candidate at the University of Natural Resources and Life Sciences, Vienna in the Christian Doppler Laboratory for production of next-level biopharmaceuticals in *E. coli* at the Department of Biotechnology (Fermentation technology Group), Vienna.

Title: Protein Tyrosine Kinase A Modulates Intracellular Survival of Mycobacteria through Galectin-3

Swati Jaiswal, CSIR-Central Drug Research Institute

Biography

Swati Jaiswal, CSIR-Senior Research Fellow, received my B.Sc. and M.Sc. degrees in Biotechnology from the T M Bhagalpur University of Bihar, India. Currently I am persuing my PhD from CSIR-Central Drug Research Instiurte in Lifescience. I have published several research paper in reputated journals.

Title: Arbuscular mycorrhizal fungi (AMF) inoculation on yield and Mycorrhizal Spores population and diversity in Chickpea varieties

Tabassum Yaseen, Bacha Khan University

Abstract

A pot experiment was conducted to evaluate the effect of arbuscular mycorrhizal fungi (AMF) fungal species on different varieties of chickpea (Cicer arietinum L) Chana Punjab 2008, Chana Dasht and Chana bakar 2011 and lentil (Lens culinaris) Masoor-Markaz- 09, Masoor-2002) The experiment was carried out in completely randomized Block design (RCBD) with AMF treatments and replications three times repeated under natural condition during Rabi season 2014-2015 at Department of Botany Bacha Khan University Charsadda, Khyber Pakhtunkhwa-Pakistan. The pots were filled with processed soil and each pot having 4Kg of phosphorus deficient soil (1.43 mg kg-1). Size of each pot (23cm x 19.5cm). Some pots were inoculated with arbuscular mycorrhizal fungi and twenty seeds were sown per pot. These plants were thinned up to 05 plants in three stages from germination to maturity. . Our ANOVA result showed that there is no significant interaction of plant height among the treatment at vegetative stage ($P \leq 0.2992$). Plant height of chickpea at flowering stage was high significant ($P \leq 0.0007$) and also significant at fruiting stage respectively ($P \leq 0.0023$). Result of ANOVA for number of flower showed high significantly ($P \leq 0.0000$) affected by AM fungal inoculation. Similarly for number of pod showed significantly ($P \leq 0.0000$) effected at fruiting. Number of Seeds were also significantly ($P \leq 0.0023$) affected by AM fungal inoculation. Data for shoot fresh weight at vegetative stage showed that treatments were significantly ($P \leq 0.0540$) affected by AM fungi. Data for shoot fresh weight at flowering stage showed that treatments were significantly ($P \leq 0.0037$) affected.

Shoot dry weight at vegetative stage showed that treatments were significantly (P≤0.0540) affected. The results for flowering stage of three different varieties of Chickpea are significantly (P≤ 0.0494) affected. The result of shoot dry weight at fruiting stage (P≤ 0.0482). Root fresh weight at vegetative stage are significantly (P≤ 0.0449) effected. Results showed the effect of AMF inoculation in flowering stage is significantly (P≤ 0.0037) significant effects of inoculation on roots fresh weight at fruiting (P≤0.0335).Mycorrhizal dependency of Chana Punjab 2008 was 43%, Chana Bakar 2011was 37% and Chana Dasht 13%.

Title: ISOLATION AND IDENTIFICATION OF FUNGI PRODUCING XYLANASE USING PALM OIL MILL EFFLUENT AS SUBSTRATE

Okwute, Ojonoma Loretta, University of Abuja

Biography

Dr. O.L. Okwute completed her PhD in 2013 with emphasis on the bioremediation of soil polluted by palm oil mill effluent from the Federal University of Technology, Minna, Nigeria. She is a Senior Lecturer in the Department of Microbiology, University of Abuja, Nigeria. She has published several papers in reputed journals in her area of research in addition to undergraduate and postgraduate teaching.

Title: PA Probiotics, as A Sustainable Option For Food Safety And Preservation in Africa

Sonagnon Kouhounde, University of Abomey-Calavi

Biography

Sonagnon Kouhounde have completed his PhD at the age of 30 years from Joseph-Kerbo University in Burkina-Faso (West Africa country) and postdoctoral studies from Liege University at Gembloux Agro Bio Tech, in Microbial Processes and Interactions laboratories. He is the Lecturer at University of Abomey-Calavi since two years. He has published more than 10 papers in reputed journals and has supervised a few research topic since two years relative to Microbial Ecology and Food Biotech.

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Edinburgh Attractions



Glimpses of Applied Microbiology Conferences















