

1768th Conference

INFECTION CONTROL & MICROBIAL PATHOGENESIS 2018



3rd International Conference on
Infection, Disease Control and Prevention
&
2nd International Conference on
Microbial Pathogenesis & Infectious Diseases
June 25-26, 2018 | Vancouver, Canada

Scientific Tracks & Abstracts

Day 1

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Association of *Helicobacter pylori* biofilm with enterovirus 71 prolongs viral viability and survival

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Viruses are unable to replicate outside their hosts, and thus the transition time during which a virus leaves its host and infects the next susceptible host is critical for virus survival. Closely associated with hand, foot and mouth disease with occasional neurologic complications, enterovirus 71 (EV71) is stable in aqueous environments. However, its survival in the environment and interactions with bacteria are not well-established. On the other hand, *Helicobacter pylori* is a well-known and highly successful gut bacterial pathogen that infects 50% of individuals, with its capacity to form biofilms being linked with its transmission. We hypothesized that bacterial biofilm may play a significant role in the survival of EV71 in the external environment. In this study, we examined the interactions of EV71 with the biofilm of *H. pylori*. The results reveal that EV71 associated with *H. pylori* biofilm as observed under confocal and scanning electron microscopy. Furthermore, the presence of biofilm prolonged viral viability as demonstrated by virus plaque assays. Interestingly, the viability of the virus was dependent on the quantity of *H. pylori* biofilm formation. Taken together, the ability of bacterial biofilm in extending EV71 viability for prolonged periods may partially contribute to EV71 outbreaks, and implies that the association of the virus with bacterial biofilm may serve as a potential pathway of EV71 transmission.

Biography

Vincent TK Chow, MD, PhD, FRCPath completed his postgraduate studies at the National University of Singapore (NUS) and the University of London, UK. He is an Associate Professor of Microbiology and Principal Investigator of the Host And Pathogen Interactivity Laboratory, NUS. Dr Chow has published more than 250 papers in international journals, and has been awarded several research prizes and patents.

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Examining the effect of climate variability on malaria transmission using a dynamic mosquito-human malaria model

Gbenga J Abiodun

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The reasons for malaria resurgence mostly in Africa are yet to be well understood. Although the causes are often linked to regional climate change, it is important to understand the impact of climate variability on the dynamics of the disease. However, this is difficult due to the unavailability of long-term malaria data over the study areas. In this study, we develop a climatebased mosquito-human malaria model to study malaria dynamics in the human population over KwaZulu-Natal, one of the epidemic provinces in South Africa, from 1970-2005. We compare the model output with available observed monthly malaria cases over the province from September 1999 to December 2003. We further use the model outputs to explore the relationship between the climate variables (rainfall and temperature) and malaria incidence over the province using principal component analysis, wavelet power spectrum and wavelet coherence analysis. The model produces a reasonable fit with the observed data and in particular, it captures all the spikes in malaria prevalence. Our results highlight the importance of climate factors on malaria transmission and show the seasonality of malaria epidemics over the province. Results from the principal component analyses further suggest that, there are two principal factors associated with climates variables and the model outputs. One of the factors indicate high loadings on Susceptible, Exposed and Infected human, while the other is more correlated with Susceptible and Recovered humans. However, both factors reveal the inverse correlation between Susceptible-Infected and Susceptible-Recovered humans respectively. Through the spectrum analysis, we notice a strong annual cycle of malaria incidence over the province and ascertain a dominant of one year periodicity. Consequently, our findings indicate that an average of 0 to 120-day lag is generally noted over the study period, but the 120-day lag is more associated with temperature than rainfall. This is consistence with other results obtained from our analyses that malaria transmission is more tightly coupled with temperature than with rainfall in KwaZulu-Natal province.

Biography

Gbenga J. Abiodun, PhD is a young scientist whose research interest focuses on biomathematics, epidemiology and mathematical modelling of the impacts of climate (variability and change) on vector-borne and infectious diseases. He completed his Masters and Doctoral degrees in Mathematics at the University of the Western Cape (UWC) in 2012 and 2016, respectively. Dr. Abiodun has worked extensively on infectious diseases and published peer-reviewed papers in highprofile international journals.

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Silver nanoparticles as a therapeutic agent in experimental cyclosporiasis

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Cyclosporiasis is an emerging worldwide infection caused by an obligate intracellular protozoan parasite, *Cyclospora caytenensis*. The standard treatment for cyclosporiasis is a combination of two antibiotics, trimethoprim and sulfamethoxazole. Many side effects were reported with this combination with no alternative drug treatment option. In this study, silver nanoparticles were chemically synthesized to be evaluated for the first time for their anti-cyclospora effects in both immunocompetent and immunosuppressed experimental mice in comparison to the standard treatment. The effect of silver nanoparticles was assessed through studying stool oocysts' load, oocysts' viability, ultrastructural oocysts' changes, and estimation of serum gamma interferon. Toxic effect of the drug was evaluated by measuring liver enzymes, urea and creatinine in mice sera. Results showed that silver nanoparticles had promising anti-cyclospora potentials. The animals that received these nanoparticles showed statistically significant decrease in the oocysts' burden and number of viable oocysts in the mice stool and a statistically significant increase in serum gamma interferon in comparison to the corresponding group receiving the standard treatment and to the infected non-treated control group. Scanning Electron microscopic examination revealed mutilated oocysts with irregularities, poring and perforations. These effects were more pronounced in immunosuppressed animals. Biochemical results showed no evidence of toxicity as mice sera showed a statistically significant decrease in liver enzymes, and statistically non-significant decrease in urea and creatinine. Thus, silver nanoparticles proved their effectiveness against *Cyclospora* infection and this will open the way to its use as an alternative to the standard therapy.

Biography

Mona El-Temsahy is currently working in the Medical Parasitology Department, Faculty of Medicine, Alexandria University, Egypt. She is an expert in different diagnostic techniques in parasitological diseases and also in application of new lines of treatment such as nanoparticles.

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Infectious diseases caused by occupational and work-related situations

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In today's world, due to the importance of occupational health and the prevention of such outbreaks, this group of diseases has been considered by the centers of decision making, and health care. In some occupations, owing to the conditions of work, the type of activity, as well as the production or consumption of different substances, people are exposed to harmful biological agents and become infected with the disease. Among work-related infectious diseases, there is a group of infectious diseases caused by various occupational travels which is of particular importance to the general public since there are a lot of jobs which need travel. Special attention to the prevention and treatment of these diseases can reduce the risks and threats in various societies in this regard. To achieve this significant goal, the identification of work-related infections attributed to travelling, the identification of biological agents, the conditions for the development of diseases, and the ways of prevention, transfer and new treatments are discussed in this study.

Biography

Ali Yousefi received his doctoral degree from Shahid Beheshti University of Medical Sciences, Tehran, at 1995. He served as the president of Medical Council of Nazarabad for three terms from 2004 to date. Dr. Yousefi has served as the Head of the board of directors of health care co-operative of Atyeh Novin from 2012 to 2016. He has been a respected Occupational Health Practitioner and Technical Supervisor of Health Care Center for the past 15 years. Currently, Dr. Yousefi is the director of Markazi 24 hours Clinic of Nazarabad

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Malaria surveillance system evaluation, sunyani municipality, Ghana-2017

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Malaria, a preventable mosquito-borne disease, constitutes a major public health problem globally, particularly in Africa where it kills an estimated 394,680 people annually. In Ghana, Malaria accounts for 38.9% of all outpatient illnesses and 38.8% of admissions. Malaria is a priority disease under surveillance. The objective of the study was to evaluate the effectiveness of the surveillance system and assess the attributes and make appropriate recommendations. We interviewed stakeholders and key informants using semi-structured questionnaires to understand the system operations. We reviewed and compared 2012-2016 malaria registers and reporting forms with existing data in the DHIMS 2. Using SPSS version 21, descriptive data analysis was done. CDC updated guidelines for evaluating public health surveillance system was used in assessing the attributes. Positive malaria cases declined from 50,504 in 2012 to 43,467 in 2013, continual increased to 56540 (47.1%) in 2016. Under 5 positive cases recorded, 2012 recorded 17,852 (35%), 2015 and 2016 recorded 17,611 (32.8%) and 18,475 (32%) respectively. Age group, 1-4 have the highest positive malaria cases, with mean 5,919. Of 88,103 malaria cases treated in 2014, 38.1% (n=33532) were not tested, 13% (n=8739) of 67,295 cases treated were not tested in 2016. Reporting rate of malaria datasets was 97.5%, three (3) out of (30) facilities do not report cases. The system is flexible, sensitive and stable. Timeliness (86%), Completeness (20) and predictive positive value 53,567 (49%) were poor in 2015. The surveillance system is meeting its objectives. Improvement on data completeness and timeliness needs to be done. Suspected malaria should be tested before treatment and followed up. Rigorous supervision on proper documentation and timely reporting should be enforced in the Municipality.

Biography

Joseph Effah-Acheampong is a public health researcher at a reputable non-governmental organization in Ghana. He holds a BSc in public health and currently pursuing a Master of Philosophy degree in Applied Epidemiology and Diseases Control at the School of Public Health, University of Ghana. With the rudiments in public health he has acquired, he has been involved in a lot of community health with much emphasis on infectious disease and control. He is currently the head of the public health unit of Anidaso Ghana ev. Mr Effah-Acheampong holds a certificate in monitoring and evaluation which gives him the skills to effectively monitor and evaluate interventions which are been implemented at all levels of the disease prevention and control cycle.

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Association of P2X7 1513A/C polymorphism with susceptibility to tuberculosis among sudanese patients

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Background: Tuberculosis is a chronic, systemic infectious disease caused by *M. tuberculosis* mostly infecting the lung to cause pulmonary tuberculosis or localize in alternate body sites leading to extra-pulmonary tuberculosis (EPTB). The P2X7 receptor expressed in a wide variety of normal and disease-associated cell types, activated by extracellular adenosine 5'-triphosphate results in numerous events including the release of pro-inflammatory mediators, cell proliferation or death, and killing of intracellular pathogens. A deficiency of P2X7-mediated control of mycobacterial infection within macrophages in the lung may permit spread to extrapulmonary sites where the infection either progresses to post-primary TB disease.

Methods: One hundred and twenty tuberculosis patients with 46 apparently healthy controls were included for genotyping of the P2X7 polymorphism using Polymerase chain reaction and restriction fragment length polymorphism (PCR-RFLP) and confirmed by sequencing a subset of samples.

Results: This study found that the P2X7 1513A/C polymorphism is significantly associated with tuberculosis infection (CC, AC OR=4.615, 2.058). The pulmonary tuberculosis was the most predominant in the study population but the CC, AC allele had statistical significant association with the Extra-pulmonary tuberculosis infections (OR=2.65). Another polymorphisms rs2230912 was detected from sequencing results may be associated with TB infections.

Conclusion: The CC genotype is associated with susceptibility to TB infections among Sudanese patients and associated with the extrapulmonary TB. **Keywords:** TB, P2X7, susceptibility, pulmonary TB, Extra-pulmonary, PCR, RFLP.

Biography

Hajir is working at National center of neurological sciences, Sudan & also she is the faculty of medical laboratory sciences, Al-Neelain University-Sudan and also faculty in the department of surgery, faculty of medicine, university of Khartoum-Sudan.

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Clients' satisfaction with HIV treatment services in Bamenda, Cameroon: A cross-sectional study

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Background: Clients have explicit desires or requests for services when visiting hospitals; inadequate discovery of their needs may result in dissatisfaction. Patient satisfaction influences retention in HIV care, adherence to HAART and serves as determinant to HIV suppression. This study's objectives were to quantify clients' satisfaction with HIV services in Bamenda and determine relationship between satisfaction and clients' socio-demographic/structural characteristics.

Methods: A cross-sectional study was conducted on HIV-positive patients followed-up, on treatment and who consulted in the Bamenda Regional Hospital treatment centre between July and August 2014. Participants consent was sought and data collected on client's level of satisfaction to staff-patient-communication, staff attitudes, privacy and confidentiality and staffing and amenities situations in the hospital. Data was collected using a structured questionnaire interviewer-administered by investigator and trained health personnel. Collected data was analyzed using Epi Info version 3.5.4 and clients' satisfaction measured using frequencies and percentages.

Results: A total of 384 participants took part in this study and their median age was 37 years (IQR: 29-46). Two hundred and seventy-four (71.4%) participants were females. Overall satisfaction with HIV services was 91.2% and participants reported less satisfaction with overall staffing and amenities situation of the centre (3.6%). In the multivariate analysis, only being female, employed and perceiving high number of nurses working at the treatment centre remained significant predictors of overall satisfaction with HIV services.

Conclusion: A high proportion of participants expressed satisfaction with HIV services. However, some dissatisfaction is masked in this high satisfaction level. This dissatisfaction underscores need to improve staff attitudes, staff-patient-communication, employ more staff and build better patient facilities. Future studies need to focus on assessing long-term progression of satisfaction levels with services and determinants of satisfaction involving larger samples in many treatment centres.

Biography

Amos Wung Buh is currently pursuing his doctoral studies in Population Health at the University of Ottawa, Canada. He is a service-oriented public health practitioner with six years background in clinical and teaching environments. Core competencies include clinical management of patients, computing and conducting research as well as excellent communication and time management skills. He is also competent in statistical data analysis softwares such as Epi Info and STATA. His research interests focus on issues concerning HIV, Tuberculosis and other infectious disease epidemiology and control especially in the context of developing countries; but he is also interested in global research, evaluation of health interventions, and under-taking systematic reviews. He holds an MPH degree.

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Elizabeth De Nardo

GOJO Industries Inc., USA

Hand hygiene for infection prevention: Key considerations for selecting appropriate hand antiseptics

The use of Alcohol Based Hand Rubs (ABHR) has become the international standard for proper hand hygiene in healthcare settings. Both the Centers for Disease Control and Prevention and the World Health Organization recommend them as the primary means of hand hygiene when hands are not visibly soiled. Selecting an appropriate antiseptic hand rub is an important decision because the clinical effectiveness of ABHR in reducing healthcare associated infection (HAI) is a result of several components including product formulation, antimicrobial efficacy, and hand hygiene compliance by health care workers (HCW). ABHR are complex formulations, combining ethyl alcohol with other ingredients to create specific attributes including antimicrobial efficacy, skin tolerance, and aesthetic properties. These contribute to the end-user experience and acceptance of the product, leading to either improvements in or impediments to hand hygiene compliance in health care facilities. Among HCWs, there are misconceptions about the effect ABHR may have on the skin with many believing that ABHR is harsher than soap and water. Understanding the differences these products have on the skin can help HCWs change their hand hygiene practices and break the cycle of skin damage. Hand hygiene compliance is perhaps the most critical component to achieving clinical effectiveness. Therefore, the most effective ABHR ensure maximum compliance to hand hygiene practices by balancing antimicrobial efficacy with skin performance and HCW acceptability. When selecting ABHR, health care facilities should consider product acceptability, cost (including a risk benefit analysis associated with treating preventable HAIs), and relevant data from product manufacturers.

Biography

Elizabeth De Nardo. joined GOJO Industries, Inc. in March 2008 as a Senior Scientist, conducting research projects in collaboration with experts in the areas of infection control, hand hygiene, Norovirus and Microbiome from different US Institutions. She holds a PhD in General Microbiology with expertise in Virology with more than 20 years of experience as a researcher acquired in previous jobs.

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The importance of neutrophil extracellular traps and vascular leakage in pneumonia caused by influenza virus and *pneumococcus*

Vincent TK Chow

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Excessive host inflammatory responses negatively impact disease outcomes of pneumonia. To better understand host-pathogen interactions during the critical inflammatory and repair phases of pneumonia, we investigated the role of neutrophils, neutrophil extracellular traps (NETs) and c-angiopoietin-like 4 (cANGPTL4) in the pathogenesis of influenza and pneumococcal pneumonia. The presence of NETs and the effects of cANGPTL4 were studied in mouse models of primary infection with influenza virus H1N1 and/or H3N2, and secondary pneumococcal pneumonia. Excessive infiltration of neutrophils and significant formation of NETs were associated with severe influenza and pneumococcal pneumonia. Intense pulmonary NETs generation, elevated myeloperoxidase activity, cytokine dysregulation, pneumococcal capsule thickness determined the disease severity. Influenza infection stimulated the expression of cANGPTL4 via a direct mechanism mediated by interleukin-6 and STAT3. cANGPTL4 enhanced pulmonary tissue leakiness and exacerbated inflammation-induced lung injury. Treatment of infected mice with neutralizing anti-cANGPTL4 antibody significantly accelerated lung recovery and enhanced lung tissue integrity. The cANGPTL4-deficient mice also displayed diminished lung damage and recovered more rapidly from influenza pneumonia compared to their wild-type counterparts. Retrospective examination of lung biopsies and clinical samples from patients with infection-induced pneumonia with tissue damage revealed elevated expression of cANGPTL4 compared to normal or uninfected samples. These observations highlight the important roles that NETs and cANGPTL4 play in pulmonary infection and damage, and may facilitate the development of novel biomarkers and intervention strategies to improve the management of pneumonia. From the infection control perspective, the research also emphasizes the clinical importance of improving the coverage of influenza and pneumococcal vaccination especially among high-risk individuals.

Biography

Vincent TK Chow is a medical virologist and molecular biologist who graduated with MD, PhD, FRCPATH, MBBS, and MSc qualifications. Currently, he serves as an Associate Professor of Microbiology and Principal Investigator of the Host And Pathogen Interactivity Laboratory at the Yong Loo Lin School of Medicine, National University of Singapore (NUS). Since 1996, he established the Human Genome Laboratory in the Department of Microbiology at NUS that has isolated and characterized several novel human genes and proteins. Dr Chow previously served as President of the Asia-Pacific Society for Medical Virology as well as Chair of the Virology Section of the International Society of Chemotherapy. His laboratory has published over 250 articles in international refereed journals. He has received several awards and honors (including the Murex Virologist Award for Rapid Viral Diagnosis, the Special Commendation Award and Faculty Research Excellence Award from NUS, the Singapore Society of Pathology – Becton Dickinson Award, the Chan Yow Cheong Oration at the 6th Asia-Pacific Congress of Medical Virology). His research interests in the past several years have focused on the molecular genetics and infectomics of influenza pneumonia and of hand, foot and mouth disease, specifically on the cellular, molecular, and viral pathogenesis of severe influenza and enterovirus 71 infections.

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Do alcohol based hand rubs have efficacy against multidrug-resistant organisms?

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Background: Multidrug-Resistant Organisms (MRO) including Vancomycin-Resistant *Enterococci* (VRE), *Staphylococcus aureus* and the new yeast *Candida auris* (MDRCA) are often passed from person to person by the contaminated hands of caregivers.^{1, 6,7,8,9} Hands become contaminated by contact with patients infected with MRO or contaminated surfaces. Cleaning hands with soap and water or use alcohol-based hand rubs (ABHR) are the main recommendation of WHO² for preventing the spread of MRO in health care settings. However, the efficacy of ABHR against MRO is not well documented³

Objectives: Determine the efficacy of different formulations of ABHRs (gel and foam) against different strains of MDRO such as VRE, MRSA, Klebsiella and the recent discovered multidrug-resistant yeast *Candida auris*.

Methods: Three ABHR ranging from 62% to 70% alcohol content in gel and foam format were evaluated using a 15 second *in vitro* Time-Kill (ASTM E 2315)⁴ against several strains of *S. aureus*. In addition, two formulations of ABHR (gel and foam 70%) were tested against more than 40 strains of antibiotic susceptible and resistant bacteria. For *C. auris* a different formulation of ABHR was also included. Statistical comparison of log₁₀ reductions (LR) was performed using the Fisher's LSD Test (p<0.05).

Results: ABHR formulations gel or foam from 62-70% ethanol content, reduced all strains of bacteria antibiotic sensitive or resistant as well as *C. auris* tested by $\geq 6 \log_{10}$ ($\geq 99.9999\%$) in 15 seconds.

Conclusions: No differences in susceptibility to alcohol were shown by antibiotic resistant bacteria when compared to the sensitive strains. Alcohol 60% or higher showed the same level of efficacy. The emerging multidrug-resistant yeast *Candida auris* also showed complete susceptibility to the 3 formulations tested. These results support WHO recommendations for use of ABHR by healthcare personnel for preventing the spread of MRO.

Biography

Elizabeth De Nardo, joined GOJO Industries, Inc. in March 2008 as a Senior Scientist, conducting research projects in collaboration with experts in the areas of infection control, hand hygiene, Norovirus and Microbiome from different US Institutions. She holds a PhD in General Microbiology with expertise in Virology with more than 20 years of experience as a researcher acquired in previous jobs.

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Frequency of *PmrA*, *PmrB* and *mcr-1* genes in *pseudomonas aeruginosa* isolates from cystic fibrosis patients of mofid children hospital, Tehran, Iran

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Introduction: The emergence of multidrug-resistant (MDR) in gram negative pathogens such as *P. aeruginosa* has become an important challenge to worldwide public health, recently (1). Colistin as a last line of treatment against MDR gram negative bacteria has been propounded (2). Recent studies have been demonstrated that colistin resistance is adaptive and regulated via *PmrA* and *PmrB* as a two component regulatory system (3). The plasmid borne colistin resistance gene *mcr-1* was primarily recognized from China (4). Due to the raising of antibiotic resistance, in this study prevalence of *mcr-1* gene and the mutation in *pmrA* and *pmrB* genes in *P. aeruginosa* isolates from sputum of Cystic Fibrosis (CF) patients was investigated.

Methods: 41 isolates of *P. aeruginosa* from sputum of CF patients in Mofid Children Hospital during Apr-Sep 2017 were collected. According to CLSI guideline 2017, antibiotic susceptibility test (AST) was applied by using the disk diffusion method. Detection of *pmrA*, *pmrB* and *mcr-1* genes was performed by PCR and further sequencing was administrated for finding the mutations.

Results: Among 41 isolates of *P. aeruginosa* 22 (53.65%) were resistant to Amikacin, 21 (51.21%) to Ofloxacin and Cefepime, 20 (48.78%) to Imipenem, 19 (46.34%) to Ceftazidime and Ciprofloxacin, 18 (43.9%) to Aztreonam, 17 (41.46%) to Piperacillin, 16 (39.02%) to Gentamicin, 14 (34.14%) to Piperacillin-Tazobactam and 1 (2.43%) to Colistin. PCR results showed that all of the isolates had *pmrA* and *pmrB* genes and all of them were negative for *mcr-1*. One of the isolates show some mutations in *pmrB* gene.

Conclusion: The results of this study showed that colistin is the best choice for treatment. Using the molecular tests is necessary and have a determinative role to prescription of antibiotics by physicians.

Biography

Mojdeh Hakemi Vala is working at Department of Microbiology, Medical school, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

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**Molecular mechanism of low temperature-induced lifespan extension in pine wood nematode
(*Bursaphelenchus xylophilus*)**

Wang Bowen
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As one of the most dangerous invasive species in the world, Pine Wood Nematode (*Bursaphelenchus xylophilus*) is the causal agent of pine wilt disease which causes enormous ecological and financial losses by damaging the pine forest resources in Asia, North America and Europe. It has been reported that pine wood nematode has infested to the area where climate is relatively cold, and infestation area will continue expanding to colder regions of Asian and Europe. Our hypothesis is that low temperature-induced lifespan extension is not a passive thermodynamic process but an active one which can be promoted by genetic programs at low temperature. To decipher the low temperature induced lifespan extension in pine wood nematode, my group studied the molecular mechanism of this phenomenon. The results show that the cold induced lifespan extension is regulated by several genetic pathways including cGMP pathway. This study provided new ideas for the control of this devastating plant parasite nematode.

Biography

Wang Bowen is a Ph.D. candidate in Northeast Forestry University School of Forestry, China. He took a successive postgraduate and doctoral program in September 2015, doing research in molecular mechanism of anti-adversity ability of plant parasite nematode. He has published more than 10 papers in academic journals and has been one of the most excellent Ph.D. candidate in Northeast Forestry University.

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Acute kidney injury in patients attending the infectious disease intensive care unit of the clinique de l'Ogooue Port-Gentil, Gabon

Beltus Ngulefac

Clinique de l'Ogooue Port-Gentil, Gabon

Acute kidney injury is a frequent and potentially fatal complication in infectious diseases. The aim of this study was to investigate the clinical aspects of AKI associated with infectious diseases and the factors associated with mortality. This retrospective study was conducted in patients with AKI who were admitted to the intensive care unit (ICU) of the Clinique de l'Ogooue Port-Gentil, Gabon, from January 2013 to January 2017. The major underlying diseases and clinical and laboratory findings were evaluated. A total of 253 cases were included. The mean age was 46 ± 16 years, and 72% of the patients were male. The main diseases were human immunodeficiency virus (HIV) infection, HIV/acquired immunodeficiency syndrome (AIDS) (30%), tuberculosis (12%), malaria (11%) and Hepatitis B (4%). The patients were classified as risk (4.4%), injury (63.6%) or failure (32%). Mortality was higher in patients with HIV/AIDS (76.6%, p -value=0.02). A multivariate analysis identified the following independent risk factors for death: oliguria, metabolic acidosis, sepsis, hypovolemia, the need for vasoactive drugs, and the need for mechanical ventilation. AKI is a common complication in infectious diseases, with high mortality. Mortality was higher in patients with HIV/AIDS, most likely due to the severity of immunosuppression and opportunistic diseases.

Biography

Beltus Ngulefac is a Cameroonian born medical laboratory professional with ample experience in clinical diagnostic techniques. He completed a Higher Professional Diploma in Medical Laboratory Sciences from the St Louis University Institute of Health and Biomedical Sciences, Bamenda, Cameroon. He is presently Head of Clinical Laboratory Diagnosis at the Clinique de l'Ogooue Port-Gentil, Gabon.

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