PP-013 **Occurrence of AmpC beta-lactamases among MDR gram negative urinary tract isolates in Nepal**

Bharat Mani Pokherel[1], Bal Krishna Awal[1], Janak Lal Pathak*[,2]. *[1]Department of Clinical Microbiology, Tribhuvan University Teaching Hospital (TUTH), Kathmandu, Nepal; [2]Department of Clinical Laboratory Medicine, Union Hospital, Huazhong University of Science and Technology, Hubei, Wuhan, China*

Objectives: AmpC beta-lactamases are clinically important cephalosporinases that confer resistance to wide variety of beta-lactam drugs, which result in considerable treatment failure and cannot be detected by routine antibiotic sensitivity screening methods. Research was designed to estimate emergence of AmpC beta-lactamase (AmpC) producing strains among multi-drug resistant (MDR) urinary tract isolates in Nepal.
Methods: 2837 urine samples were obtained for culture from clinically suspected urinary tract infection (UTI) patients from July, 2005 to March, 2007. Isolates were tested to detect antibiotic susceptibility. MDR gram negative isolates were screened for AmpC producers by modified double disk approximation method (MDMM) and confirmed by three dimensional extract method as described by American Society for Microbiology (ASM) and National Committee for Clinical Laboratory Standard (NCCLS).
Results: Among 2837 urine samples, 31.4% (891/2837) had significant bacterial growth with 825 (92.6%) non-repeat gram-negative isolates. Out of gram-negative isolates 67.1% (554/825) were MDR. 5.41% (30/554) of MDR were AmpC positive. Among Individual MDR isolates species, 6.1% *E. coli*, 8.33% *Klebsiella*, 3.12% *Pseudomonas* and 4.0% *Proteus* were AmpC producing.
Conclusion: These data confirm that AmpC is emerging cause of MDR in Nepal. We need to subject these strains for genetic study to acquire genetic make up. Failure to detect AmpC can contribute their uncontrolled nosocomial transmission, therapeutic failures and increased cost of management. Our results suggest to start screening of AmpC among MDR gram negative isolates in routine hospital practices in order to guide the choice of empirical therapy for such infections.

PP-014 **Phytochemical and antibacterial studies on the seed coat of *Detarium microcarpum* Guill and Sperr**

Godwin C. Ebi[1], Ozadheoghene E. Afieroho*[,2]. *[1]Department of Pharmaceutical and Medicinal Chemistry, University of Nigeria, Nsukka, Nigeria; [2]Department of Medicinal Chemistry and Quality Control, National Institute for Pharmaceutical Research and Development, Abuja, Nigeria*

Objectives: To investigate the antibacterial and phytochemical properties of the seeds coat of *Detarium microcarpum*.
Methods: Extraction was by exhaustive cold maceration in 90% aqueous methanol. Silica gel 60G TLC separation done with Butan-2-one: chloroform: acetic acid: water (40:40:2:1v/v) as mobile phase. Bands were visualised in daylight and UV light. Band B1 was further purified by precipitating with acetone to obtain the acetone soluble AS and insoluble AP isolates. Phytochemistry was by using standard phytochemical screening reagents, and UV spectroscopy. Antibacterial screening was by the agar diffusion method.
Results: On TLC, the ES fraction gave eight constituents B1 (Rf=0.000), B2 (Rf=0.079), B3 (Rf=0.250), B4 (Rf=0.286), B5 (Rf=0.500), B6 (Rf=0.686), B7 (Rf=0.814), and B8 (Rf=1.000). B1 retained the antibacterial activity spectrum, B2 and B3 showed residual inhibition against *B. subtilis*, B4-B8 were inactive. The AS isolate form B1 exhibited a higher activity than the AP isolate. From phytochemistry, B1 contained steroidal saponins and flavonoid, AP steroidal saponins, AS, B2 and B3 are flavonoids. B2 and B3 revealed the characteristic benzopyrone maxima (236nm-300nm). Against the selected bacteria, MIC range of 0.9053-3.5801mg/ml was observed.
Conclusion: This study revealed the antibacterial principles in the seed coat of *D. microcarpum* to be steroidal saponins and flavonoids with synergistic possibilities, and the lead optimisation potentials of phytoalexins in the seed coats of edible legumes.
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PP-015 **Sika deer as a new source of human infection by brucella**

Guofeng Li, Runping Gao*, Ruijuan Zhang, Yongguang Yang. *Dept. of Infectious Diseases, First Hospital Jilin University*

Background: The prevalence of brucellosis is increasing in China over the past several years. The purpose of this study was to investigate whether the sika deer serves as a source of human infection by brucella in Jilin Province of Northeast China.
Methods: Brucellosis was diagnosed in 57 patients during the periods from June 2007 through December 2008 in our hospital. The sources of infection and routes of transmission were investigated. Blood samples from these patients and 6 sika deer were obtained for *Brucella* antibody *testing and culturing bacteria.*
Results: Of the 57 patients, 3 (1 man and 2 women) were sika deer breeders. They were from two families, and each family has a herd of approximately 60 sika deer. They observed several abortions in their deer before they were sick. All 3 patients had prolonged intermittent fevers, night sweats, body aches, arthralgias, and weakness. Blood samples from these patients were negative for brucella culture, but positive for brucella antibodies in the agglutination test. In the 6 relevant sika deer (3 males and 3 females) examined, 1 presented with orchitis, 1 had right knee arthritis, and 1 showed progress body weight loss. However, all 6 sika deer were positive for brucella antibodies as determined by an agglutination test, and 1 of them was also positive for brucella bovis in the blood culture.
Conclusion: Sika deer can be infected with Brucella bovis, and serve as a bacteria reservoir and transmit the infection to human in Northeast China.

PP-016 **Molecular epidemiology of *Pseudomonas aeruginosa* in a burn unit, Tehran**

Parviz Owlia*[,1], Hassan Salimi[2], Bagher Yakhchali[2], Abdolaziz Rastegar Lari[3]. *[1]Dept. of Microbiology, Faculty of Medicine, Shahed University, Tehran, Iran; [2]National Institute of Genetic Engineering and Biotechnology, Tehran, Iran; [3]Antimicrobial Resistance Research Group, Iran University of Medical Sciences, Tehran, Iran*

Background: The burn wound represents a site susceptible to colonization of opportunistic pathogens, e.g. *Pseudomonas aeruginosa*. This study was planning to investigate drug susceptibility and routes of transmission by molecular epidemiology in *P. aeruginosa* isolated in a Burn unit.
Methods: To study the drug susceptibility and molecular epidemiology of *P. aeruginosa* colonization in the burn unit of Shahid Motahhari Hospital (Tehran), 127 clinical and 2 environmental *P. aeruginosa* isolates were collected during 6 months. All P. aeruginosa isolates were analyzed for drug susceptibility by disk diffusion method and molecular epidemiology assessment were done by random amplified polymorphic DNA (RAPD) analysis.
Results: Drug susceptibility tests were shown high resistance for ceftizoxime (86.8%), aztreonam (80.6%), kanamycin (79.8%), tetracycline (78.3%), and ceftazidime (75.2%), furthermore, high susceptibility for some antibiotics like imipenem (69.8%), piperacillin/tazobactam (65.9%), and amikacin (58.9%) was showed. In this study, 42 multidrug-resistant (MDR) *P. aeruginosa* isolates were recovered from clinical specimens and also, one isolate was recovered from environment. Molecular typing revealed eight different profiles that include two profiles, RAPD1