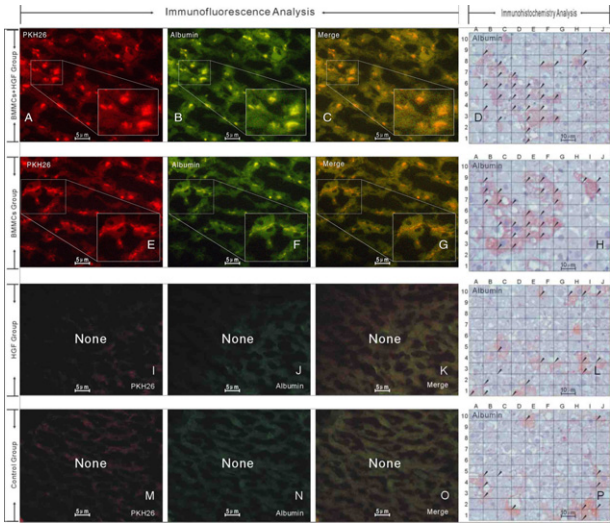
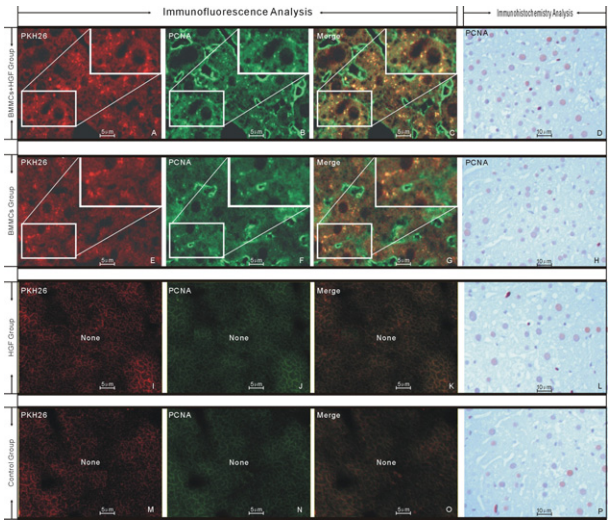
OL-045 **Hepatocyte growth factor promotes liver regeneration induced by transfusion of bone marrow mononuclear cells in a murine acute liver failure model**

S.-Z. Jin[1]*, X.-W. Meng[1], X. Sun[2], M.-Z. Han[3], B.-R. Liu[3], X.-H. Wang[1], F.-H. Pei[1]. *[1]Department of Gastroenterology, The First Hospital, Jilin University, [2]Department of Pathology, The First Hospital, Jilin University, [3]Department of Gastroenterology, The Second Affiliated Hospital, Harbin Medical University, China*

Background: Bone marrow mononuclear cells (BMMCs) transplantation is a potential therapy for acute liver failure; however, its therapeutic efficacy requires improvement.
Methods: We established a murine acute liver failure model induced by CCl4 administration. The effect of BMMCs transplantation in combination with hepatocyte growth factor (HGF) was studied. Recipient mice were transfused with PKH26-labeled BMMCs (5×10^6) with HGF (50 ng/kg.d $\times$7 days) (BMMCs + HGF group). BMMCs only, HGF alone, and 0.9% NaCl alone were included as control groups. To assess the effect of donor BMMCs in liver regeneration, quantitative image analysis with immunohistochemistry for PKH26, proliferating cell nuclear antigen (PCNA), and albumin expression was performed after transplantation.





Result: PKH26 positive cells were detected in liver tissues, and most of them expressed PCNA. The expression of PCNA and albumin in BMMCs + HGF groups increased significantly compared with three control groups. Liver function, as monitored by serum aminotransferase activity, was significantly improved in the BMMCs + HGF group compared with the control groups.
Conclusion: In summary, this study suggests that BMMC transplantation combined with HGF has much higher therapeutic efficacy and may become a safe and efficient strategy for treatment of acute liver failure in clinical practice.

Free Paper Presentation 10: Antibiotics including MRSA

Sunday, July 18, 2010, 07:30–08:30
Convention Hall 2B

PL-010 **Antibiotic susceptibility patterns and β-lactamase genotype of recent isolates of ESBL-producing *Klebsiella pneumoniae* in the ICU of neonatology department**

K.-S. Chen[1]*, Y. Hu[1], X. Guo[2], F. Guo[3]. *[1]Clinical laboratory, the First Affiliated Hospital of Nanchang University, [2]The Affiliated Hospital of Jiujiang University, [3]Burns Institute, the First Affiliated Hospital of Nanchang University, China*

Background: Extended spectrum β-lactamases (ESBLs) mediates resistance to new generation of cephalosporins. In the present study we investigate the antibiotic susceptibility and the prevalence of the antibiotic resistance genes in clinical ESBL-producing *Klebsiella pneumoniae* isolates from the ICU of Neonatology Department, the First Affilated Hospital of Nanchang University.
Methods: The clinical isolates of *Klebsiella pneumoniae* were obtained during November 2009 to February 2010. The strains were identified by VITEK-2 System and the antibiotic susceptibility patterns of isolates were determined by Kirby-Bauer method. Phenotypic confirmatory test (PCT) was carried out for screening of ESBLs. Subsequently, the isolates were subjected to polymerase chain reaction (PCR) targeting bla_{CTX-M}, bla_{TEM}, bla_{SHV}, bla_{PER-1}, bla_{VEB}, bla_{GES} and bla_{OXA} genes.
Results: The most ESBL-producing *Klebsiella pneumoniae* isolates showed the least sensitivity to ampicillin and cefazolin (0.00% and 2.13%); they showed highest susceptibilty to Imipenem (97.97%) followed by meropenem (97.87%), ertapenem (93.75), tetracycline (70.21%), ceftazidime (31.91%), amikacin (31.25%), levofloxacin (31.25%), SMZco (31.25%), ciprofloxacin (29.17%), aztreonam (23.40%), cefepime (21.28%), piperacillin (12.77%), ceftriaxone (10.64%), amoxicillin/clavulanic (10.64%) and gentamicin (10.42%). Of the 47 ESBL-producing *Klebsiella pneumoniae* strains, 30 were bla_{CTX-M} positive, 14 were bla_{SHV} positive, and 12 were bla_{TEM} positive, 6 were bla_{GES} positive, only 1 was bla_{PER-1} positive, and 3 were negative. Additionally, the bla_{GES} positive strains were all harboring bla_{CTX-M} gene.
Conclusions: The ESBL genes have high prevalence among clinical isolates of *Klebsiella pneumoniae* in the ICU of Neonatology Department. ESBL-producing *Klebsiella pneumoniae* had excellent susceptibility to carbapenem antibiotics and the drug susceptibility of the rest antibiotics except tetracycline was lower than 40%. Among the β-Lactamase resistance genes, bla_{CTX-M} *was the most common one. Furthermore, 74% of* ESBLs carry at least two β-Lactamase resistance genes.