increased oxidative stress. Expression of p53 and COX-2 showed transient elevation during the initial period of working but gradually declined as a result of acclimatization to benzene and other solvents. The levels of detoxifying agents like glutathione, superoxide dismutase, glutathione peroxidase were found to be decreased. It was also noticed that the levels of IgGs and immune cells like CD4+ were decreased.

Conclusion: The study shows that benzene and its metabolites significantly increased oxidative stress and immune parameters in petrol filling workers thereby making them more susceptible to diseases compared to the others with minimal exposure.

Free Paper Presentation 5 – HIV/AIDS and Viral Infection

**DL-037** Impact of malnutrition in survival of HIV-infected children after initiation of antiretroviral treatment (ART)

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Background: Malnutrition is a common condition in HIV-infected children; however, its impact in survival of HIV infected children after initiation of antiretroviral therapy is not well understood.

Objective: To assess the impact of malnutrition in survival of HIV infected children after initiation of antiretroviral treatment.

Methods: A retrospective cohort study was conducted in HIV infected children starting antiretroviral treatment at Zewditu memorial hospital, Addis Ababa, Ethiopia. Demographic, nutritional, clinical and immunological data were carefully extracted from the existing ART logbook and patient follow up cards. Nutritional status were defined with stunting (height for age Z score < -2), Wasting (weight for height Z score -2) and under weight (weight for age Z score < -2). Survival was defined as the time from nutritional and immunologic evaluation to death. Data were analyzed for univariate and multivariate analysis using Cox regression proportional hazard model. Survival rate was calculated and compared with the Kaplan Meier and log rank tests.

Results: A total of 475 HIV infected children starting antiretroviral treatment (ART) from March 21 2005 to 30 April 2008 were included in the study. Of whom 42 (8.8%) died during a median study follow up of 12 months. Independent baseline predictors of mortality were severe wasting (Hazard ratio (HR) = 4.99, 95% CI 2.4-10.2, P < 0.00), absolute CD4 below the threshold for severe immunodeficiency (HR = 3.02, 95% CI 1.02-8.96, P = 0.04) and low hemoglobin value (HR = 2.92, 95% CI 1.3-6.7, P = 0.001 for those hemoglobin value <7.0gm/dl).

Conclusion: Despite the apparent benefit of ART use on HIV related survival, severe wasting (WHZ < -3) appear to be strong independent predictor of survival in HIV infected children receiving ART.

**DL-038** Preparation of a human full-IgG antibody against CCR5 coreceptor

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CCR5 was identified as a key coreceptor for HIV-1 entry. A deletion of 32 base pairs was found in the CCR5 gene open reading frame in a few persons who were at high risk for HIV entry but who had remained free of infection. Thus, inhibition of CCR5 protects against acquisition of HIV infection. However, all previously reported anti-CCR5 gene antibodies were not humanized and not suitable for human application. In this study, One of our selected single chain antibodies (scFvs) to CCR5, termed A8, was mapped to the residues 9–13 of hCCR5 N-terminal (Nt) by using CCR5 mutagenesis and flow cytometric analysis. A8 binding on CCR5 did not affect chemokine-CCR5 activities and effectively blocked HIV-1 entry in vitro. A8 was then successfully converted into human IgG by cloned into an expressing vector TCAE 6. The role of human A8 IgG for inhibition of HIV entry was further characterized. The result revealed that A8 function of HIV-1 entry inhibition might be mediated by the blockage of a unique and a great conformational-dependent epitope of CCR5 Nt. The recognition of the epitope rendered A8 a higher affinity binding on a great proportion of cell surface CCR5 molecules when compared that of previously reported antibodies. Our study showed that human A8 IgG is functional antibody against CCR5 and is a great potential candidate for antibody therapy of human HIV infection in vivo.

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**DL-039** The theory study of “All-round responsibilities system” for the control emergency public health disasters

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Background: A new method, called “All-round responsibilities system” was firstly introduced into the control of “hand-foot-mouth” disease in 2008, but a lot of unsolved issues were found.

Objectives: This article presented firstly the detail methodology of the “All round responsibilities system”.

Methods: By use the literature analysis, field investigation and experts deeping talking methods, extensive issues were analyzed, and key issues of the methodology was described.

Results: “All round responsibilities system” was original from England more than 100 years ago, It was firstly used in control of emergency public health disaster in 2008. The key issues of the methodology were guarantee system which included financial, human sources, and ascertain where the responsibility lies.

Conclusions: The definition of the “All round responsibilities system” was given, and technological contents of the methodology were performed, and it could be used well for the future controlling of emergency public health disaster.

**DL-040** Sarcoïdosis in an HIV-positive patient presenting as a mediastinal mass

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Introduction: The immunological basis of sarcoidosis involves CD4 T lymphocytes for granuloma formation. Lack of CD4 cells with HIV infection has meant the association of HIV and sarcoidosis has rarely been described. Establishment of highly active anti-retroviral therapy causing immune restoration however, can result in concomitant sarcoidosis and HIV infection.