The 43rd APACPH Conference
(Asia–Pacific Academic Consortium for Public Health)

Date: October 20–22, 2011
Venue: Graduate School of Public Health, Yonsei University
Oral Session C5 – Environmental Health II  
14:00 – 15:30

Co-Chair: TBD

Oral C5.a  Piraya Aungdonpukdee, Lecturer (Naresuan University, Thailand)  
“A Seasonal Comparison of Exposure Assessment on BTEX among Bangkok Slum People”

Oral C5.b  Budi Haryanto, Chair, Dept of Environmental Health (University of Indonesia, Indonesia)  
“Personal Exposure Measurement of PM2.5 for Assessing Human Health Risks in Jakarta”

Oral C5.c  Suqing Wang, Professor (Wuhan University, China)  
“TCDD and Rapamycin cooperatively suppress C3H10T1/2 cell adipogenesis by restoration of cell adhesion”

Oral C5.d  Anwar Daud, Coordinator (Hasanuddin University, Indonesia)  
“Relationship Between Increased Incidence of Asthma in Houses Built on the Former Dump Area in Makassar City, Indonesia”

Oral C5.e  Nayar Sultana, Ph.D. Candidate (University of Tokyo, Japan)  
“Exposure to Inorganic Arsenic through Drinking Water and Oxidative Stress in Southern West Part of Bangladeshi Population”

Oral C5.f  Hong Wang (School of Public Health, Wuhan University, China)  
“Role of MAPKs in the Effect of Low Concentration of Benzene Metabolites, Namely Hydroquinone and Phenol in Human HL60 Cells”

Oral Session C6 – Environmental Health III  
16:00 – 17:30

Co-Chair: TBD

Oral C6.a  Amar Muntaha, Professor (Bina Husada College of Health Science, Indonesia)  
“Water Quality and Waterborne Diseases at the Lowland Ecosystem, South Sumatera”

Oral C6.b  Martya Rahmati, Lecturer (University of Indonesia, Indonesia)  

Oral C6.c  Guangqin Fan, MD, Ph.D. (Nanchang University, China)  
“Lead-induced ER Calcium Release and Inhibitory effects of Methionine Choline in Cultured Rats Hippocampal Neurons”

Oral C6.d  Nitin Joseph, Assistant Professor (Kasturba Medical College, Manipal University, India)  
“Prevalence of Depression Among Pre-University College Students in an Urban Area of South India”

Oral C6.e  Phairapol Jantaratamane, Ph.D. Candidate, (Chulalongkorn University, Thailand)  

Oral C6.f  Enkhjargal Gombojav (Health Sciences University of Mongolia, Mongolia)  
“Wintertime Air Pollution Concentrations and Variability in Ulaanbaatar, Mongolia”
Y27632), were also observed. Rapamycin and TCDD, each suppress 10T1/2 cells adipogenesis dose-dependently while inhibiting PPARγ expression. Rapamycin and TCDD also function synergistically in enhancing this inhibition. The major loss of cell adhesion prior to the increase in PPARγ is blocked by TCDD with essential cooperation from Rapamycin, as measured by disruption of stress fibers (Phalloidin) and focal adhesion complexes. The restoration of cell adhesion by TCDD and Rapamycin is partially blocked by PP2, inhibition of Src activity, and partially by Y27632, a Roh kinase inhibitor. Our findings suggest that cell adhesion plays an important role in this stromal cell differentiation with PPARγ as an integrator between Rapamycin and TCDD.

Oral C5.e

Exposure To Inorganic Arsenic Through Drinking Water And Oxidative Stress In Southern West Part Of Bangladesh

Population

Nayara Sultan, Chiho Watanabe, Hana Furusawa, Masahiro Umezaki, Tsukasa Inaoka,
1. Dept. of Human Ecology, University of Tokyo, Japan
2. Dept. of Environmental Sciences, Faculty of Agriculture, Saga University, Japan

Groundwater arsenic in elevated concentrations poses a public health threat to millions of Bangladeshis since last two decades. It has been reported that arsenic exposure causes many diseases including cardiovascular diseases, hypertension, liver diseases, as well as skin lesions or cancers. Arsenic acts as a carcinogen at least partly due to the generation of reactive oxygen species (ROS). Little is known regarding arsenic-induced oxidative stress on Bangladeshi population in arsenic-contaminated area. Objective: The objectives of the study are to examine the level of oxidative stress biomarkers, namely—urinary 8-OHdG and F2-isoprostane, in relation to the urinary arsenic in arsenic-exposed population in Bangladesh. Method: Data were obtained from 219 healthy participants, aged 18-45 years, from two communities of southern-west part of Bangladesh in August 2009. One hundred four participants were participated from high arsenic-contaminated area and other 115 participants from a control area. The ethical committee of University of Tokyo, (Japan) was approved the study protocol. Measurements: Urinary arsenic was measured by ICP-MS (Agilent 7500ce). Urinary 8-OHdG concentrations were measured by HPLC-ED (EICOM, JAPAN) and urinary F2-isoprostanes were measured by ELISA (Oxford Biomedical Research, Oxford, MI). Results: Urinary arsenic was positively associated with oxidative biomarkers, 8-OHdG and F2-isoprostane (r=0.59, p<0.001 and r=0.43, p<0.001, respectively). The exposed group showed higher urinary arsenic (mean