# 18th Annual Conference of the International Society of Exposure Science 2008

## **Exposure and Health in a Global Environment**

**Joint Conference with ISEE** 

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Volume 1 of 2

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Email: curran@proceedings.com Web: www.proceedings.com Conference Schedule Sunday

#### Sunday, Pre-Conference

**Workshops** (registration and workshop fees required)

Sunday, 8:30 AM - 12:00 PM

[WS2] Ultrafine and fine PM monitoring in exposure and epidemiology studies (8:30 AM – 12:00 PM)

[Room C104]

Instructors: Dane Westerdahl, Scott Fruin, Constantinos Sioutas

Sunday, 1:00 PM - 4:30 PM

[WS3] Airborne particles and settled dust in the indoor environment (1:00 PM – 4:30 PM)

[Room C104]

Instructor: Tunga Salthammer

[WS4] Using life-table methods with IOMLIFET for predicting mortality impacts in health impact assessments (HIAs), with particular focus on air pollution (1:00 PM – 4:30 PM)

[Room C103]

Instructor: Brian G. Miller

**Ancillary Meetings** (by invitation only)

(This list includes only workshops scheduled for the Convention Center)

Sunday, 8:30 AM – 3:00 PM

**National Institute for Environmental Health Sciences** 

[Room C101]

Sunday, 12:30 PM - 4:00 PM

National Children's Study

[Room C102]

Conference Schedule Sunday evening

#### Sunday, 5:00 PM - 5:30 PM

#### **Welcome and Conference Open**

[Auditorium]

Ed Avol, Conference Co-chair Dean Baker, Conference Co-chair

Anthony McMichael, President of International Society for Environmental Epidemiology Tina Bahadori, President-elect of International Society of Exposure Assessment

Sunday, 5:30 PM - 7:00 PM

#### **Opening Plenary Session**

#### California Perspectives on Environmental Policy and Protection

[Auditorium]

Conveners: E Avol, D Baker

Climate Change

Mary D. Nichols, Chair, California Air Resources Board

Green Chemistry

Maureen F. Gorsen, Director, California Department of Toxic Substances Control

The California Biomonitoring Program

Mark Horton, Director, California Department of Public Health

Sunday, 7:00 PM - 8:30 PM

**Welcome Reception and Student Poster Competition** 

[Pavilion]

Conference Schedule Monday morning

#### Monday, 7:30 AM - 8:20 AM

#### **Morning Training Sessions** (registration required with ticket)

[MTS01] Air Pollution and Mortality [Room C101]

Joel Schwartz, Harvard School of Public Health

[MTS02] Children's Micro-activities [Room C102]

Natalie Freeman, University of Florida

[MTS03] Asthma and Allergies: the Role of Birth Cohorts in the [Room C103]

**Search for Environmental Clues** 

Bert Brunekreef, Utrecht University, The Netherlands

[Room C104] Geo-Spatial Analyses

Michael Jerrett, University of California, Berkeley

#### Monday, 8:30 AM - 10:00 AM

#### **Plenary Session**

## Environmental Health Policies – How Societies Decide What to do [Auditorium] About Problems Unearthed by Epidemiologists and Exposure Scientists

Convener: Raymond Neutra

Poisoned for Pennies: Costs, Benefits, and Chemicals Policies

Frank Ackerman, Global Development and the Environment Institute, Tufts University, USA

Science and Policy: An Advocacy Coalition Perspective

Paul Sabatier, Department of Environmental Science and Policy, University of California, Davis, USA

Decision Analysis Under Uncertainty: to help the dialogue between stakeholders with different interests and ideologies

Detlof von Winterfeldt, School of Policy, Planning, and Development, University of Southern California

Monday, 10:00 AM - 10:30 AM

#### **Break**

Monday, 10:30 AM - 12:00 PM

#### **Symposia**

#### **Global Food Safety and Environmental Health** [S01]

[Room C211]

Convener: MC Tirado-von der Phalen

Global Food Safety and Environmental Health: Overview [S01-01]

Tirado-von der Pahlen MC

Exposure Assessments to Chemical Contaminants in Food [S01-02] Leonardi GS, Fletcher T, Gnagnarella P, Duarte-Davidson R

Industrial Food Animal Production: Food Safety, Socioeconomic, and Environmental Health Concerns [S01-03]

Silbergeld EK, Graham J, Price L, Liebler J, Evans S, Vailles R, Lackey L, Peterson A, Davis M, Arriola CS, Resnick C

Food Risk and Benefit Analysis: Case Study - Fish Consumption [S01-04] Tirado-von der Pahlen MC

## Environmental Justice at the United States-Mexico Border: California/Baja California Region [S02]

[Room C104]

Conveners: PJ Quintana, M Quintero-Núñez

NAFTA's Failure to Protect Public Health and the Environment: The Case of Metales y Derivados, Tijuana, Mexico [S02-01]

Simpson A

Case Study: Community Monitoring for Water Quality and Environmental Health in Baja California Indigenous Communities [S02-02] Stigler P

Air Quality in Mexicali, Baja California [S02-03] *Reyna M* 

Pesticide Exposures in Imperial County [S02-04] Al-Delaimy WK

## "Fishing For Solutions": Issues in Estimating Fish Consumption Rates for Exposure Assessment [S03]

[Room C103]

Conveners: A Wilkins, J Burger

Overview of Scenarios, Issues, Recommendations & Needs Pertaining to Estimating Fish Consumption Rates for Exposure Assessment [S03-01] *Wilkins A* 

Identifying High-End & Highly Impacted Fish Consumers: Methods for Assessing Exposure Risk for Populations with High Fish Consumption Rates [S03-02] Burger J, Harris S, Gochfeld M

Estimating Fish Consumption and Targeting High Risk Consumer Populations in NJ and NY: A Case Study [S03-03]

O'Neill M, Lobdell D, O'Shea M

Considerations for Using Surrogate Data for Estimating Seafood Consumption Rates [S03-04] Moya J

Use of Bayesian Models & Expert Elicitation for Estimating Fish Consumption Rates [S03-05] Schmitt KA, Choi T

Exposure Assessment of Methylmercury from the Consumption of Commercial Fish and Shellfish [S03-06]

\*\*Bolger PM, Carrington CD\*\*

#### **Space-time Statistics for Environmental Epidemiology** [S04]

[Room C105]

Conveners: P Goovaerts, M Serre

Environmental Public Health Tracking: A Case Study from Florida [S04-01] Gotway C

Accounting for Residential Mobility in Studies of Cancer [S04-02] Jacquez G

A Bayesian Maximum Entropy Approach to Adjust for the Sampling Variability of Space/Time Disease Data [S04-03]

Serre M

Geostatistical Analysis of Health and Exposure Data: State of the Art and Perspectives [S04-04] Goovaerts P

#### **Contributed Oral Sessions**

#### Air Pollution and Acute Cardiovascular Effects [MO1A]

[Room C106]

Chairs: J Peters, C Tonne

Increased Risk of Out-of-Hospital Cardiac Arrest is Associated with Short-Term  $PM_{2.5}$  Exposure [578]

Rosenthal FS, Carney JP, Olinger ML

The Time-Lagged Effect of Exposure to Air Pollution on Heart Rate Variability [878] Gemperli A, Felber Dietrich D, Schindler C, Barthelemy JC, Gaspoz, JM, Liu LJS, Ackermann-Liebrich U

Temperature and Air Pollution Effects on ECG-Parameters Transmitted via Telephone [902] Schneider A, Hampel R, Brüske-Hohlfeld I, Zareba W, Cyrys J, Rückerl R, Breitner S, Korb H, Wichmann H, Peters A

Association of Short-Term Exposure to Air Pollution and Heart Rate Variability among Cardiovascular Elderly in Beijing, China [1337]

Huang W, Zhu T, Yang H, Pan X, Hu M, Li C, Wang T, Jia Y, Zhang L, Chen Y, Liu X, Zhang Y, Tang X

Genes in the Pathways of Inflammatory Lung Diseases, Particulate Air Pollution and Heart Rate Variability [1431]

Park S, Wilker EH, Alexeeff SE, O'Neill MS, Litonjua AA, Poon A, Vokonas PS Sparrow D, Suh H, Schwartz J

#### Air Pollution and Childhood Asthma [MO1B]

[Room C102]

Chairs: A Heinrich, O von Ehrenstein

Repeated Hospital Encounters for Children with Asthma and Traffic-Related Air Pollution in Orange County, California [1641]

Delfino RJ, Ren C, Chang J, Wu J, Nickerson B, Cooper D, Gillen DL

Childhood Asthma and Ambient Air Pollution in Warm and Cold Seasons [1689] Sinclair A, Tolsma D, Wyzga R, Edgerton E

Childhood Asthma and Early Life Exposure to Air Pollution [1665] Clark NA, Demers P, Karr C, Koehoorn M, Lencar C, Tamburic L, Brauer M Early-Life Exposure to Air Pollution and Allergic Sensitization in Children with Asthma [915] Mortimer KM, Neugebauer R, Lurmann F, Alcorn S, Balmes J, Tager B

Air Pollution and the Related Asthma-Burden for Children in Two Impacted Communities of Southern California [787]

Perez L, Künzli N, Hricko A, Avol E, Lurmann F, McConnell R

#### Perinatal Effects of Air Pollution – I [MO1C]

[Room C107]

Chairs: R Slama, M Wilhelm

Air Pollution and Preeclampsia Among Pregnant Women in California, 1996-2004 [1486] Woodruff TJ, Morello-Frosch R, Jesdale B

Association Between Local Traffic-generated Air Pollution and Preterm Delivery in the South Coast Air Basin of California [905]

Ren C, Wu J, Chung JH, Delfino RJ, Ritz B

Air Pollution and Preterm Birth in Mexico City, Mexico, 1992-2002 [1670] Davis BM, O'Neill MS, Sánchez BS, Escobar JD, Ettinger AS, Mercado-García A, Hernández-Avila M, Hu H, Téllez-Rojo MM

Association Between Black Smoke and Birth Weight: Variation Across Three Decades [640] Ghosh R, Glinianaia S, Rankin J, Pearce MS, Pless-Mulloli T

Association Between GIS-Based Exposure to Traffic-Related Air Pollution During Pregnancy and Birth Weight in Sabadell, Spain [1132]

Aguilera I, Sunyer J, Garcia-Esteban R, Alvarez-Pedrerol M

#### Risk Assessment [MO1D]

[Room C207]

Chairs: B Miller, L Perez

Addressing Uncertainty and Variability in Ecological and Human Exposure Assessment: A Comparison [1354]

McKone TE, Sohn M, Maddalena R, Vallero D

Drinking Water Regulation in New EU Accession States of Estonia and Lithuania: Policy Implications of Scientific Controversies [1714]

Kangur K, Saava A

Health Risk Assessment of Urban Agriculture Sites Using Vegetable Uptake and Bioaccessibility Data – an Overview of 28 Sites with a Combined Area of 48 Hectares [874] Bramwell L, Pless-Mulloli T, Hartley P

Designing a Methodology to Measure the Health Effects of Air Pollution in Southern Israel: Estimation of Attributable Morbidity, Mortality and Healthcare Consumption [719] *Gdalevich M, Broday D, Yuval, Scharf S, Huerta M* 

Health Risks of Heavy Metals from Long-Range Transported Air Pollution in Europe [955] Hänninen OO, Kim R, Krzyzanowski M Conference Schedule Monday morning

#### **Ionizing and Non-Ionizing Radiation** [MO1E]

[Room C101]

Chairs: D Wartenberg, M Roeoesli

Prenatal and Postnatal Exposure to Cell Phone Use and Behavioral Problems in Children [612] Divan HA, Kheifets L, Obel C, Olsen J

Updated Meta-Analysis of Mobile Phone Use and Brain Tumors [1282] Kucera GP, Kelsh M, Erdreich L

Health Effects in a Population Cohort Exposed to *Cesium 137* in the Goiania Radiological Accident: Offspring Growth and Development During Childhood and Adolescence [1110] *Koifman S, Koifman RJ, Ferreira J, Curado M* 

Incidence of Malignancies in Relation to Terrestrial Gamma Radiation in Two Swedish Counties 1973-2000 [1730]

Tondel M

Modelling Short-Term Ultraviolet Exposure as an Alternative to Individual Dosimetry [1002] Vernez D, Milon A, Moccozet L, Bulliard J, Droz P

#### **Assessment of Indoor Air Pollutants** [MO1F]

[Room C208]

Chairs: J Waldman, A Ibrahim

Exposure to Phthalate Emitted from Vinyl Flooring and Sorbed to Interior Surfaces, Dust, Airborne Particles and Human Skin [1413]

Little JC, Xu Y, Cohen Hubal E, Clausen P

German Environmental Survey for Children (GerES IV): Exposure via Indoor Air [1400] Conrad A, Seiwert M, Schulz C, Becker K, Hünken A, Kolossa-Gehring M

The German Environmental Survey for Children (GerES IV): Socio-Economic Status and Exposure to Pollutants [1255]

Seiwert M, Conrad A, Becker K, Hünken A, Schulz C, Kolossa-Gehring M

Exposure Characterization and Health Risk of Volatile Organic Chemicals in the Indoor Air in Europe [1640]

Sarigiannis D, Kotzias D, Gotti A, Liakos I, Katsogiannis A, Barrero-Moreno J, Geis O, Tirendi S

Monday, 12:00 PM - 1:30 PM

Lunch [Pavilion]

**New Investigator Best Abstract Awards (ISEE)** 

To be announced

#### **Student Poster Competition Awards**

To be announced

#### Monday, 1:30 PM - 3:00 PM

#### **Symposia**

## The Relationship among Surrogate Measures of Exposure to Air Pollution in Rapidly Developing Countries [S05]

[Room C211]

Conveners: S Mehta, J Spengler

Spatial and/or Temporal Patterns of Air Pollution in Two Low-income Neighborhoods of Accra, Ghana [S05-01]

Dionisio KL

Differential Exposure Misclassification by Socio-economic Position and Location of Residence in Ho Chi Minh City, Vietnam [S05-02]

Mehta S, Tuan ND, Brauer M, Dan VX, Cohen AJ

Addressing Exposure Misclassifications in Environmental Health Assessments in India [S05-03] Balakrishnan K

## Ethical Considerations in the Conduct of Epidemiological and Human Exposure Research: Privacy and Confidentiality [S06]

[Room C104]

Conveners: P. Lewis, R Fortmann

Ethical Principles of Privacy and Confidentiality [S06-01]

Packman S

Implications of Emerging Technologies in Observational Exposure Research on Privacy and Confidentiality [S06-02]

Quackenboss J

Practical Considerations of Privacy and Confidentiality: The National Children's Study as a Case Study [S06-03]

Fleischman A

Practicalities Addressing Confidentiality and Privacy in Environmental Epidemiology and Exposure Assessment Research [S06-04]

Soskolne CL, Al-Delaimy WK

## Reconstructing Lifetime Exposure to Low to Moderate Concentrations of Arsenic in Drinking Water in Case-Control Studies in USA and Europe [S07]

[Room C103]

Convener: JR Meliker

Arsenic Exposure Assessment in the New England Bladder Cancer Study [S07-01]

Nuckols JR, Beane-Freeman L, Baris D, Lubin JH, Ayotte JD, Schwenn M, Johnson A, Karagas M, Colt J, Silverman DT, Cantor KP

Addressing Space-Time Variability and Uncertainty in Reconstructing Exposure to Arsenic in Drinking Water in Michigan [S07-02]

Meliker JR, Slotnick MJ, Avruskin GA, Schottenfeld D, Kaufmann A, Goovaerts P, Wilson M, Jacquez GM, Nriagu JO

Lifetime Exposure to Arsenic in Residential Drinking Water in Central Europe [S07-03]

Fletcher T, Leonardi G, Hough R, Goessler W, Gurzau E, Koppova K, Kumar R, Rudnai P, Vahter M

## State-of-the-Science Probabilistic Aggregate and Cumulative Residential [Room C105] Exposure Models and Recent Residential Exposure Measurement Studies: How the Data and Models Compare [S08]

Conveners: V. Zartarian, NS Tulve, C Lunchick

Introduction: History of Aggregate/Cumulative Risk Assessment and Future Direction *Miller DJ* 

Overview of the Five Probabilistic Pesticide Exposure Models [S08-02] *Evans J* 

Dermal, Inhalation, and Incidental Exposure Results from the Models: How Did They Handle the Data? [S08-03]

\*Driver J\*

Relationships between Environmental Concentrations and Absorbed Dose Levels [S08-04] *Ross J* 

Conclusions and Recommendations *Miller DJ* 

#### **Contributed Oral Sessions**

#### Air Pollution and Cardiovascular Disease [MO2A]

[Room C106]

Chairs: N Künzli, A Zonobetti

Season, Gender, Age, and Education as Modifiers of the Effects of Outdoor Air Pollution on Daily Mortality in Shanghai, China: The Public Health and Air Pollution in Asia (PAPA) Study [591] *Kan H, London SJ, Chen G, Zhang Y, Song G, Jiang L, Zhao N, Chen B* 

Associations of Endothelial Dysfunction with Exposure to Ambient Fine Particles in Diabetic Subjects: Are the Effects Modified by Patient Characteristics? [884]

Schneider AE, Neas L, Herbst MC, Williams RW, Cascio W, Hinderliter A, Holguin F, Buse J, Dungan K, Styner M, Peters A, Devlin RB

PM Exposure Increases Coagulation Function. A Study Among Highly Exposed Steel Workers in Italy [986]

Bonzini M, Baccarelli A, Pegoraro V, Cantone L, Grillo P, Bertazzi P, Tripodi A, Artoni A, Mannucci P, Apostoli P

Long-term Exposure to Air Pollution and Increased Mortality in Lupus [1104] Chen J, Cooper GS, Yu H, Christakos G

Long-Term Exposures to Air Pollution and Retinal Micro-Vascular Caliber: The Multi-Ethnic Study of Atherosclerosis (MESA) [1576]

Adar SD, Klein R, Klein B, Cotch M, Wong T, O'Neill MS, Shrager S, Siscovick D, Daviglus M, Kaufman J

#### Respiratory Effects in Children [MO2B]

[Room C102]

Chairs: CB Fahrlander, J Kim

Effects of the Social Environment on Incident Asthma in Childhood: Associations with School Title I Funding and Crime in the Community [1221]

Shankardass K, Jerrett M, Milam J, Richardson J, Berhane K, McConnell R

Association Between Ambient Pollution and Respiratory Health Effects in Elementary School Children in Beijing, China [1368]

Zhu T, Huang W, Lin W, Hu M, Li C, Wang T, Su Y, Wang A, Liu X, Zhang Y, Tang X

Associations of Child Care Center Carbon Dioxide and Bacteria with Lower Respiratory Infections Among Attending Preschool Children [1378]

Zuraimi MS, Tham K, Koh D, Sundell J

Integrating Demographic, Clinical, and Environmental Exposure Information to Identify Genomic Biomarkers Associated with Subtypes of Childhood Asthma [1516]

Reif DM, Heidenfelder B, Edwards S, Gallagher J, Hudgens E, Neas L, Rogers J, Williams A, Cohen Hubal E

A Panel Study on Lung Function Among Children Living in a Polluted Area in Sardinia (Italy) [1594]

Catelan D, Accetta G, Rusconi F, Di Felice E, Greco P, Murgia P, Paladini L, Pistelli R, Barbone F, Biggeri A

#### Perinatal Effects of Air Pollution – II [MO2C]

[Room C107]

Chairs: B Brunekreef, I Aguilera

Is Exposure to Particulate Air Pollution During Pregnancy Associated with Risk of Stillbirth? The UK PAMPER Study, 1961-92 [630]

Pearce MS, Glinianaia SV, Rankin J, Pless-Mulloli T

Oral Cleft Defects and Maternal Exposure to Ambient Air Pollutants in New Jersey [783] Marshall E, Harris G, Wartenberg D

A "Natural Experiment": Preterm Delivery Rates Drop During Utah Valley Steel Mill Closure [965]

Parker JD, Mendola P, Woodruff

Maternal Residence near Municipal Waste Incinerators and Risk of Urinary Tract Birth Defects [1207]

Cordier S, Lehébel A, Amar E, Anzivino-Viricel L, Hours M, Robert-Gnansia E

#### Risk Analysis—Exposure Assessment [MO2D]

[Room C207]

Chairs: M Martuzzi, T McKone

The Use of Exposure-Response-Functions within Integrated Assessments for Policy Decision Support - A European Perspective [742]

Friedrich R, Preiss P, Klotz V

Conducting Risk Assessments of Chemicals in Consumer Products [922]

Sweet L Jr, Unice K, Panko J, Paustenbach D

New Approaches and Emerging Sciences Shape the Update to the EPA Risk Assessment Forum's Guidelines for Exposure Assessment [1022]

Bangs GW, Olsen M, Tulve N, Hofmann L

Exposure Informed Testing under REACH [1060]

Bruinen de Bruin Y, Vermeire T, van Engelen J, van de Bovenkamp M, Bessems J, Hagens W, Marquart H

Conference Schedule Monday afternoon

Integrating Stereochemistry into Modern Risk Assessment: Implications for Exposure and Pharmacokinetic Modeling [1300]

Goldsmith MR, Ulrich EM, Chang DT, Dary CC, Tornero-Velez R

#### **Biomarkers of Exposure and Effect** [MO2E]

[Room C101]

Chairs: M Morgan, NC Deziel

Biological Monitoring and Surveillance Results of Human Exposure to Naturally-Occurring Uranium in New Mexico [1536]

Gallagher K, Flowers M, Mills D, Myers O

Urinary Biomarkers of Diesel Exhaust Exposure [1583]

Zhang JJ, Tong J, Zhang L, Ohman-Strickland P, Laumbach R, Stern A, Fiedler N, Kipen H

Biomarkers of Inflammation and Antioxidant Activity, and Exposure to Indoor and Outdoor Home Air Pollution in Elderly People with Coronary Artery Disease [1636]

Delfino RJ, Staimer N, Tjoa T, Polidori A, Arhami M, Gillen DL, Sioutas C

Malondialdehyde (MDA)-dG Adducts Among Schoolchildren Resident in a Petrochemical Site in Respect to Those Living in a Rural Area (Sardinia, Italy) [1625]

Biggeri A, Peluso M, Rusconi F, Catelan D, Munnia A, Piro S, Accetta G, Di Felice E, Murgia P, Paladini L, Pistelli R

Effects of Particulate Matter on Genomic DNA Methylation Content and iNOS Promoter Methylation [1286]

Baccarelli A, Tarantini L, Bonzini M, Apostoli P, Pegoraro V, Bollati V, Marinelli B, Cantone L, Rizzo G, Hou L, Schwartz J, Bertazzi P

#### In-Home Air Quality [MO2F]

[Room C208]

Chairs: J Spengler, ME Gordian

The Impact of Woodstove Technology Upgrades on Air Quality in British Columbia Homes [1679]

Allen R, Leckie S, Millar G, Jackson P, Brauer M

Contributions of Diesel Truck Emissions to Indoor Elemental Carbon Concentrations in Homes Proximate to Ambassador Bridge [1265]

Baxter LK, Barzyk TM, Vette AF, Croghan CW, Williams RW

Trends in Formaldehyde Concentrations and Exposures in California Residences [1684] Jenkins PL

Pesticide Use in California Homes with Small Children [1534]

Bennett D, Ritz B, Cassady DL, Lee K, Frost JD, Logsden-Sackett N, Hertz-Picciotto I

VOCs in Indoor Air of New California Homes, Garages, and Vehicles [1637] Johnson RD, Jenkins PL, Phillips TJ

Monday, 3:00 PM - 4:30 PM

**Poster Viewing and Afternoon Break** 

[Pavilion]

#### Monday, 4:30 PM - 6:00 PM

#### **Symposia**

## The Relationships Among Surrogate Measures of Exposure to Air Pollution in Developed Countries [S09]

[Room C211]

Conveners: DA Kaden, J Spengler

A Comparative Analysis of Monitored Ambient Hazardous Air Pollutant Levels with Modeled Estimates from the Assessment System for Population Exposure Nationwide [S09-01] *Lupo PJ, Symanski E* 

Assessing the Variability in Daily and Time-Averaged Exposure to Ambient PM: Results from Exposure Assessment Panel Studies in Four U.S. Cities [S09-02]

Sarnat JA, Brown KW, Bartell S, Sarnat SE, Wheeler A, Suh HH, Koutrakas P

Measurement and Modelling of Exposure to Air Toxic Concentrations for Health Effect Studies and Verification by Biomarker (MATCH Study) [S09-03]

Saborit JMD, Aquilina N, Baker S, Meddings C, Harrad S, Matthews I, Anderson R

## **Insulating Environmental Health Research from Conflicting Interests** [S10]

[Room C104]

Convener: D Michaels

Doubt is Their Product: Public Health and Manufactured Uncertainty [S10-01] *Michaels D* 

Corruption of the Research Process [S10-02]

Soskolne CL

What the History of Epidemiology and Toxicology Teaches Us About Ethics [S10-03] Davis DL

Poisoned Profits [S10-04]

Shabecoff A

The Contamination of Scientific Advisory Committees: A Case Study of Industry Influence on the Prevention of Childhood Lead Poisoning [S10-05]

\*\*Lanphear B\*\*

## Factors Controlling the Absorption of Arsenic from Soil: Emerging Research, Policy, and Data Gaps [S11]

[Room C103]

Conveners: YW Lowney, PE Rasmussen, M Cave, K Bradham, R Schoof

In Vivo Database on the Relative Oral Bioavailability of Arsenic from Soils: WhatWe Know Now [S11-01]Lowney YW

A Calibrated-Validated In Vitro Method for Arsenic: What's Been Done – Where Are We – What's Next? [S11-02]

\*\*Drexler JW\*\*

Soil Chemical Controls on Arsenic Bioaccessibility and Bioavailability [S11-03] Basta NT, Scheckel KG, Bradham KD, Richey JS, Dayton EA, Whitacre SW, Casteel SW Update on Bioaccessibility Testing of Inorganic Elements: Comparison of Methods and Reproducibility [S11-04]

Reimer KJ

Use of Bioavailability Information in Site-Specific Risk Assessment [S11-05] Beringer M, Yeow A

A Lines of Evidence Approach to the Assessment of the Bioaccessibility Arsenic in Soils in the UK [S11-06]

Cave M, Palumbo-Roe B, Klinck B, Wragg J

## Characterizing Global Exposures to Persistent Organic Pollutants (POPS): The Role of Models [S12]

[Room C105]

Conveners: TE McKone, C Cowan-Ellsberry, DA Vallero

Tracking the Sources, Transport, and Fate of Persistent Pollutants at Regional, Continental, and Global Scales [S12-01]

MacLeod MJ, Arnot J, McLachlan M, Wania F

Characterizing Source-to-Dose Relationships for Persistent Pollutants [S12-02] McKone TE, Arnot J, Sohn M, Vallero D

The Role of Models in an International Framework for Characterizing Persistence, Long-Range Transport and Exposure for POPs [S12-03]

Cowan-Ellsberry C, McLachlan M, MacLeod M, Arnot J

#### **Contributed Oral Sessions**

## Investigating Air Pollution and Cardiovascular Disease Endpoints with Improved Assessment of Exposure [MO3A]

[Room C106]

Chairs: J Kaufmann, B Hoffmann

Fine Particulate Air Pollution and Its Components in Association with Cause-Specific Emergency Admissions in 26 U.S. Cities [1504]

Zanobetti A. Franklin M. Schwartz J

Synoptic Circulation Patterns Associated with Air Pollution and Asthma/Myocardial Infarction Hospital Admissions [1545]

Yeatts K, Zhu Z, Xiu A, Pinto J, Meng Q, Hanna A

A Spatio-Temporal Study Design to Assess the Relationship Between Traffic-Related Air Pollution and Emergency Hospitalizations: An Application to London Around the Introduction of the Congestion Charge Scheme [1199]

Tonne C, Beevers S, Kelly F, Jarup L, Wilkinson P, Armstrong B

Air Pollution and Myocardial Infarction - a Small-Area Case Crossover in Strasbourg, France: Influence of Individual and Area Characteristics [1055]

Havard S, Pédrono G, Deguen S, Schillinger C, Ségala C, Rivière E, Arveiler D, Bard D

Chronic Fine and Coarse Particulate Exposure, Mortality and Coronary Heart Disease in the Nurses' Health Study [1570]

Puett RC, Schwartz J, Hart JE, Yanosky JD, Speizer FE, Laden F

#### Air Pollution and Asthma [MO3B]

[Room C102]

Chairs: F Gilliland, B Jacquemin

Adult Onset Asthma Among Never-Smokers is Associated with Air Pollution [890] Künzli N, Liu S, Bridevaux P, Garcia R, Schindler C, Gerbase M, Keidel D, Rochat T

Traffic-Related Air Pollution, Acculturative Stress, and Childhood Respiratory Health in Urban New Zealand: The Pacific Islands Families Study [828] Clougherty JE, Garrett N, Gao W, Borrows J, Paterson J

Why Peaks Matter: Linking Asthma Attacks to Exposure Distributions [1645] Smith TJ, Kriebel D

Outdoor Air Pollution and Severe Asthma in the San Joaquin Valley, California [1332] Meng Y, Rull RP, Wilhelm M, Lombardi C, Ritz B

Association Between Total IgE and Ozone in Asthmatic Adults from the EGEA Study Stratified by Allergic Rhinitis or Atopy [879]

Jacquemin B, Rage E, Siroux V, Nadif R, Oryszczyn M, Kauffmann F, Künzli N

## **Exposures during Pregnancy and Fetal Growth: Extending the Methodology** [MO3C]

[Room C107]

Chairs: G Windham, J Herbstman

The Impact of Active and Passive Smoking on Fetal Growth Assessed by Ultrasounds During Pregnancy [769]

Iñiguez C, Ballester F, Murcia M, Rebagliato M, Urgal A

Maternal Passive Smoking Exposure and Offspring Birthweight:

A Gene-Environment Study [588]

Slama R, Graebsch C, Cyrys J, Herbarth O, Bauer M, Wichmann H, Heinrich J

Effect of Environmental Factors and Maternal Mercury Level on Birth Weight Using a Structural Equation Model (SEM) [1675]

Kim B, Ha E, Park H, Ha M, Kim Y, Hong Y, Lee B, Seo J, Chang M

The Association of Maternal Exposure to HCHO and Birth Weight Using Path Analysis: MOther and Children's Health and Environment (MOCHE) [1390] *Chang M, Ha E, Park H, Ha M, Kim Y, Hong Y, Roh Y, Lee B, Seo J, Kim B* 

Exposure to Bisphenol A in Pregnant Women and Early Fetal Growth [1677] Lee B, Ha E, Park H, Kim B, Seo J, Chang M, Ha M, Kim Y, Roh Y, Hong Y

#### Risk Analysis—Burden of Disease [MO3D]

[Room C207]

Chairs: A Cohen, K Nachman

Quantifying Mortality Effects in Health Impact Assessments – Quantifying Attributable Deaths and/or Life Years and Their Value [1203] Miller BG, Hurley JF, Walton H, Maynard RL

Environmental Burden of Disease Assessment for the Republic of Ireland [1262] *O'Connell E, Staines A* 

Estimation of Burden of Disease Attributable to Indoor Air Pollution in Andhra Pradesh, India [1370] Ramaswamy P, Balakrishnan K Health Impacts of Trade: Integration of Multimedia Multi-Continental Model and a Global Input-Output Trade Model [1692]

Shaked S, Friot D, Humbert S, Margni M, Schwarzer S, Wannaz C, Jolliet O

Assessing Economic Costs of Health Impacts of Environmental Risk Factors: What's in It for Epidemiologists? [1698]

Martuzzi M

## Biomarkers of Exposure of Polyfluoroalkyl Compounds and Other Pollutants in Mothers, Young Children, and Others [MO3E]

[Room C101]

Chairs: R Clickner, L Quiros-Alcalca

Serum Concentrations of Polyfluoroalkyl Compounds in Pre-Adolescent Children Pooled Samples [1185]

Kato K, Wong L, Needham L, Calafat A

Pilot Study of Serum Biomarkers of Polyfluoroalkyl Compounds in Young Girls [1489] Pinney SM, Biro FM, Yaghjyan L, Calafat AM, Windham G, Brown MK, Hernick A, Sucharew H, Succop P, Ball K, Kushi LH, Bornschein R

Perfluoroalkyl Acids in the Serum and Milk of Breastfeeding North Carolina Women [1580] von Ehrenstein OS, Hines EP, Kato K, Kuklenyik Z, Calafat AM, Fenton SE

Perinatal Exposure to Perchlorate, Thiocyanate and Nitrate Compared with Iodide Levels in New Jersey Mothers and Newborns [892]

Blount B, Valentin-Blasini L, Lashley S, Ledoux T, Hore P, J Smulian, Robson M

Seasonal and Inter-Personal Variability of 1-hydroxypyrene in Urine [1463] Han I, Duan X, Yang H, Zhang L, Ohman-Strickland P, Wei F, Rhoads G, Zhang J

#### **Indoor Cooking and Heating** [MO3F]

[Room C208]

Chairs: J Waldman, A Northcross

The Potential Impact of Residential Wood Burning Regulations in a California Region:
Concurrent Wintertime Reductions in Ambient Pollution and Cardiovascular Mortality [1263]

Gilbreath S, Yap P

Evaluation of Metrics Used to Assess Improved Stove Interventions in Mexico [1508] Johnson MA, Eads A, Ho J, Rose J, Sacks G, Gomez F, Masera O, Edwards RD

The Impact of the Introduction of an Improved Stove (PATSARI) on Urinary Polycyclic Aromatic Hydrocarbons (PAHs) Biomarkers of Exposure [1292]

Romieu I, Schilmann A, Marrón T, Sjodin A, Riojas-Rodríguez H

Determinants of Exposure in Households Cooking with Biomass in Ghana [1231] van Vliet E, Whyatt R, Jack D, Owusu-Agyei S, Asante K, Kinney P

Chronic Obstructive Pulmonary Disease in Biomass Fuel Users in Tamil Nadu - a Pilot Study for Assessment of Prevalence and Implications for the Burden of Disease in Rural Women [1373] Johnson P, Sadasivam M, Ghosh S, Ramaswamy P, Balakrishnan K, Sathyasekaran B, Thanasekaraan V Conference Schedule Monday afternoon

Monday, 6:00 PM - 7:30 PM

International Society for Environmental Epidemiology [Room C102]
General Membership Meeting

International Society of Exposure Analysis [Room C104]
General Membership Meeting

Conference Schedule Tuesday morning

#### Tuesday, 7:30 AM – 8:20 AM

#### Morning Training Sessions (registration required with ticket)

**Biomonitoring** [Room C103] [MTS05] Larry Needham, Centers for Disease Control and Prevention [MTS06] Cardiovascular Epidemiology [Room C207] Annette Peters, German Research Center for Environmental Health [MTS07] Passive Samplers: Can they meet your expectations? [Room C208] Jim Zhang, University of Medicine and Dentistry of New Jersey School of Public Health **Multi-level Modeling for Epidemiological Analyses** [Room C211] [MTS08]

Tuesday, 8:30 AM - 10:00 AM

#### **Highlighted Symposia**

#### Advances and Challenges in Long-term Air Pollution Cohort Studies [S13]

[Room C106]

Conveners: SL Liu, B Brunekreef

Air Pollution Studies Using the Harvard Six-Cities and the ACS Cohorts: What

Kiros Berhane, University of Southern California

We Have Learned and What We Still Don't Know [S13-01]

Pope C III

Advances and Challenges in the Swiss Long-term Air Pollution Cohort Study (SAPALDIA) [S13-02] Liu LJS, Felber D, Schindler C

The Multi-Ethnic Study of Atherosclerosis and Air Pollution: An Update [S13-03] Kaufman J

Design of a Multi-cohort Study of Air Pollution Effects in Europe: The ESCAPE Study [S13-04] Brunekreef B

#### **Epigeneomic Changes Related to Environmental Exposures in** Children [S14]

[Room C107]

Convener: FD Gilliland

Introduction to Environmental Epigenetics [S14-01]

Yang A

Genetic and Environmental Determinants of Global and CpG Methylation in Children's Respiratory System [S14-02]

Gilliland F

Prenatal Exposure to Airborne PAHs and Alterations in DNA Methylation in Cord Blood in Prospective Cohort Studies [S14-03]

Perera F

Role of Epigenetics in Environmental Neuroepidemiology [S14-04] *Wright R* 

#### **Global Goods Movement, Local Environmental Health** [S15]

[Room C104/C105]

Conveners: N Künzli, E Avol

Global Trade Comes Home: The Impacts of International Trade and

Goods Movement [S15-01]

Hricko A

The Economic Perspective: Local Facts and Fiction [S15-02]

Haveman J

The Environmental Health Perspective: A Closer Look at Ports [S15-03]

Avol E

Environmental Health Challenges of Ports - a Dutch Perspective [S15-04]

Lebret E, van Doorn R

#### **Infectious Diseases in the Global Environment** [S16]

[Room C101/C102]

Convener: MC Tirado-von der Pahlen

The Rise of Environmental Influences on Infectious Diseases: Implications for Prevention [S16-01]

McMichael AJ

Climate Change and Emerging Infectious Diseases - Present Situation and Research Needs [S16-02]

Ebi KL

Impacts of Animal Farming Systems on Food Borne Infectious Diseases and Environmental Health - The Way Forward [S16-03]

Tirado-von der Pahlen MC

The Global Emergence and Spread Of Highly-Pathogenic H5N1 Avian Influenza—How Can Environmental and Infectious Disease Epidemiologists Join Forces [S16-04] *Layne S* 

Tuesday, 10:00 AM - 10:30 AM

Break

#### Tuesday, 10:30 AM - 12:00 PM

#### **Symposia**

#### Enhancing Exposure Assessment for Air Pollution Health Studies [S17] [Room C106]

Convener: H Özkaynak, T. Watkins

The Use of Spatial Exposure Predictions in Health Effects Models:

An Application to PM Epidemiology [S17-01]

Coull B, Gryparis A, Paciorek C, Suh H, Schwartz J

The Use of Improved Exposure Factors in the Interpretation of Air Pollution Epidemiological Results [S17-02]

Baxter L, Neas L, Schultz B

On the Use and Interpretation of Land Use Regression Estimates in Chronic Air Pollution Epidemiology [S17-03]

Jerrett M

Development of Alternative PM and Ozone Exposure Prediction Methodologies for Environmental Epidemiology and Public Health Tracking Studies [S17-04] Garcia V, Özkaynak H, Dimmick F, Holland D, Hall E, Linn S

Enhancing Spatial Aspects of Air Pollution Epidemiological Studies [S17-05] Marshall JD, Setton E, Brauer M

Applying Alternative Approaches to Characterizing Air Pollution Exposure in An Epidemiologic Study in Atlanta [S17-06]

Sarnat SE Sarnat JA, Klein M, Goldman G, Mulholland J, Russell AG, Flanders WD, Waller LA, Tolbert PE

Panel Discussion: Sverre Vedal, Michelle Bell, Helen Suh, Lianne Sheppard

## Environmental Factors Associated with Development Delays and Disorders Among Children and Adolescents [S18]

[Room C107]

Convener: K Gray

PCBs and PCBEs & Attention and Impulsivity: Mechanistic Studies in Animals [S18-01] Schantz S

Neurodevelopmental Health Effects of Organopesticides and Organochlorine Pesticide Exposure in Mexican-American Young Children [S18-02]

Eskenazi B

Effects Of Prenatal Chlorpyrifos Exposure on 5 and 7-year Neuropsychological Functioning [S18-03]

Rauh VA

Introduction to Environmental Influence on Psychiatric Disorders in Children and Adolescents [S18-04]

Hertz-Picciotto I

## Individual-level Interventions to Reduce Exposure to Pesticides and Other Household Contaminants [S19]

[Room C104]

Convener: RE Dodson

Development of an Evidence-based Intervention Study to Reduce Exposures to Contaminants in Consumer Products [S19-01]

Dodson RE, Standley LJ, Brody JG, Rudel RA

The Attribution of Urban and Suburban Children's Exposures to Common Pesticides Present in the Environment [S19-02]

Lu C, Barr D, Pearson M, Waller L, Brovo R

A Case Study Examining the Effects of Integrated Pest Management on Pesticide Residues and Residents' Pest Control Practices [S19-03]

Julien R, Adamkiewicz G, Levy JI, Hynes HP, Spengler JD

Residential Pesticide Use Patterns Among an Inner-City Cohort in New York City and the Impact of an Intervention to Reduce Pesticide Use and Exposure [S19-04] Williams MK, Barr DB, Camann DE, Evans D, Kinney P, Rundel AG, Perera FP

Reporting Individual-level Exposure Measurements to Participants in Intervention Studies for Emerging Contaminants [S19-05]

Brody JG, Altman RG, Morello-Frosch R, Brown P, Adams C, Rudel RA

#### New Approaches for Addressing Microbial Exposure Assessment [S20] [Room C102]

Conveners: GN Stelma, FS Hauchman

Application of a Multiplex Immunoassay for Detection of Salivary Antibody Responses to Selected Potentially Waterborne Pathogens [S20-01]

Hunt S, Fout GS, Chen I, Wade TJ, Egorov A

Development and Evaluation of Salivary Antibody Assays for Enteric Viruses [S20-02] *Moe CL, Leon JS, Liu PB* 

Interferon Gamma as a Biomarker of Exposure to Enteric Viruses [S20-03] Dufour AP, Li L

Evaluating Virulence of Waterborne Bacteria Isolates Using Gene Expression [S20-04] *Hayes S* 

Molecular Tools for Typing Mycobacterium Avium-intracellulare Organisms [S20-05] Behr MA

#### **Contributed Oral Sessions**

#### Cardiovascular Effects of Traffic [TU4A]

[Room C211]

Chairs: I Tager, DF Dietrich

Traffic-Related Air Pollutants and Cardiovascular Mortality in Central Taiwan [1433] Tsai D, Wang J, Chuang K, Chan C

Residential Proximity to Heavy-Duty Diesel Traffic and Subclinical Atherosclerosis [649] Hoffmann B, Moebus S, Möhlenkamp S Dragano N, Nonnemacher M, Erbel R, Jöckel K Genetic Polymorphisms, Proximity to Traffic, and Left Ventricular Mass: The Multi-Ethnic Study of Atherosclerosis and Air Pollution [805]

Van Hee VC, Adar SD, Szpiro AA, Barr RG, Diez Roux A, Bluemke DA, Sheppard L, Gill EA, Bahrami H, Wassel-Fyr C, Sale MM, Mychaleckyj JC, Rich SS, Rotter JI, Kaufman JD

Mexico City Traffic-Related Air Pollution Exposures and Changes in Heart Rate Variability in a Young Population [1272]

Cavallari JM, Holguin F

T-Wave Alternans, Air Pollution and Traffic in Patients with Recent Coronary Events [1514] Zanobetti A, Stone PH, Nearing BD, Coull B, Suh HH, Speizer FE, Schwartz J, Verrier RL, Gold DR

## Respiratory Effects of Occupational and Environmental Exposures in Adults [TU4B]

[Room C207]

Chair: S London

Intervention Study to Reduce Tannery Worker Exposures in Ulaanbaatar, Mongolia [801] Lkhasuren O, Ochir C, Erdenebayr E, Sereenen T, Riederer AM

Inflammation of Airways Occurs Soon After Inception of Exposure to Flour Dust and Airborne Irritants in Bakery, Pastry Cooking and Hairdressing Apprentices:

A Follow-Up Study of the Risk of Occupational Asthma [985]

Tossa P, Remen T, Acouetey S, Michaely J, Demange V, Wild P, Paris C, Zmirou D, Bohadana A

Predictors of Self-Reported Chronic Respiratory Symptoms in an Occupational Cohort [1546] Laden F, Hart JE, Componeschi K, Garshick E

Exposure of Cyclists to Fine and Ultrafine Particles Along Routes of Different Traffic Intensity [856] Strak MM, Hoek G, Meliefste K

#### Occupational Epidemiology: Chemical and Microbial Hazards [TU4C]

[Room C208]

Chairs: JM Wright, Chih-Hong Pan

Chromosomal Aberrations and Aneupoidies in the Sperm of Chinese Men Occupationally Exposed to Benzene [817]

Marchetti F, Weldon RH, Xing C, Cabreros D, Kurtovich E, Schmid T, Young S, Zhang L, Rappaport S, Li G, Wyrobek AJ, Eskenazi B

Glutathione S-Transferase Genetic Polymorphisms Modify the Effect of Exposure to Solvents During Pregnancy on Risk of Birth Defect [1384]

Chevrier C, Garlantézec R, Coiffec I, Célébi C, Monfort C, Rouget F, Cordier S

Biohazard Evaluation for Hospital Workers [1238]

Pan C, Chen C, Chang K, Lin K, Ku C

Dental Disorders Among Chinese Restaurant Cooks Cohort: Result from the National Health Insurance Data [1125]

Yang Y, Wu T

Exploring the Untapped Potential of the "Ranch Hand" Data and Biospecimens [1088] Butler DA

#### **Environment & Cancer** [TU4D]

[Room C105]

Chairs: G Collman, J Heck

The Role of Environmental and Genetic Host Factors in Cervical Cancer Development Among Women from Rio De Janeiro, Brazil [557]

Silva IF, Koifman RJ, Souza CQS, Neto OFA, Koifman S

Cadmium and Breast Cancer Risk [698]

Strumylaite L, Bogusevicius A, Ryselis S, Poskiene L, Kregzdyte R, Abdrakhmanov O

Residential Proximity to Industrial Facilities and Risk of Non-Hodgkin Lymphoma [996] De Roos AJ, Davis S, Colt JS, Blair A, Airola M, Severson RK, Cozen W, Cerhan JR, Hartge P, Nuckols JR, Ward MH

House Refurnishing Related Indoor Environmental Hazards and the Risk of Childhood Leukemia [668] Tian Y, Yang Y, Wu M, Yan C, Jin X, Tang J, Tong S, Luo H, Shen X

A Persistent Worldwide Environmental Hazard: Former Manufactured Gas Plant (FMGP) Sites Association of an FMGP Site with Childhood Neuroblastoma [914] Zambelli-Weiner A, Kramer S, Moller S, Hawkins M

#### Issues of Spatial Analysis [TU4E]

[Room C101]

Chairs: L Shepherd, G Wellenius

Accuracy of Automated and E911 Geocoding Methods for Rural Addresses [1630] Vieira V, Fraser A, Webster T, Howard GJ, Bartell S

Characterizing the Spatial Accuracy of Geocoding for Exposure Assessment:

The Multiethnic Study of Atherosclerosis and Air Pollution (MESA Air) [1574] Stamper EE, Adar SD, Auchincloss A, Pearson AL, Diez Roux A, Yi M, Kaufman JD

A Comparison of Estimated Versus Actual K-Anonymity When Geomasking Sensitive Health Data [1075]

Fitch MK, Allshouse WB, Hampton KH, Gesink Law DC, Doherty IA, Leone PA, Serre ML, Miller WC

Health Effect Estimates from Kriged Exposures Depend on Spatial Structure [1248] Kim S, Sheppard L

Ecologic Measures of Exposure: Can They Cause Ecologic Bias? [1350] Webster TF, Vieira VM, Weinberg J, Aschengrau A

#### **Exposure Assessment for Epidemiological Studies** [TU4F]

[Room C103]

Chairs: E Avol, J Sarnat

The SUPERB Study: An Overview [824]

Hertz-Picciotto I, Bennett DH, Cassady D, Lee K, Ritz B, Logsden-Sackett N, Teague C

Variability in Activity Levels as Measured with Actical Monitors Between Individuals, Days, and Seasons [1586]

Bennett DH, Lee K, Teague CH, Frost JD, Ritz B, Cassady DL, Hertz-Picciotto I

How Quality Exposure Assessment Elucidates Epidemiological Relationships,

e.g., Between Secondhand Smoke and Breast Cancer [1335]

Hammond K

Conference Schedule Tuesday morning

The Need for Speciation of Organometallic Contaminants in Biomonitoring, aka It's Not Just the Metal, It's What It's Wearing [1720] Buckley BT, Xie R, Tu Q, Stiles R, Spayd S

Estimation of Daily Inhalation Rate of Preschool Children by Using Tri-Axial Accelerometer [829] Kawahara J, Tanaka C, Tanaka S, Aoki Y, Yonemoto J

Tuesday, 12:00 PM - 1:30 PM

Lunch [Pavilion]

Tuesday, 1:30 PM - 3:00 PM

#### **Symposia**

## Challenges and Opportunities for the Use of Source Apportionment Methods in Air Pollution Epidemiology [S21]

[Room C106]

Conveners: AC Rohr, JA Sarnat

Strategies for Integrating Advanced Chemical Analysis Measurements into Epidemiological Studies [S21-01]

Schauer J.J.

Development of Novel Source Indicators for Linking Air Quality Data with Health Endpoints [S21-02]

Russell A

Fine Particle Sources and Cardiorespiratory Morbidity: An Application of Chemical Mass Balance and Factor Analytical Source Apportionment Methods [S21-03]

Sarnat JA

Issues in the Interpretation of PM Components' Associations with Health Outcomes [S21-04] *Ito K* 

The Acute Effects of Fine Particle Species on Cardiovascular Hospital Admissions in California [S21-05]

Ostro B

Comparison of Source Apportionment Approaches for Mortality Data for St. Louis, MO and Phoenix, AZ [S21-06]

Wyzga RE

## Addressing Challenges in Study Design and Methods for the National Children's Study [S22]

[Room C107]

Conveners: D Baker, J Quackenboss

Overview and Current Status of the National Children's Study [S22-01] *Quackenboss J* 

Strategies and Methods for Population-based Sampling in the National Children's Study [S22-02] Baker D Community Outreach and Engagement for the National Children's Study [S22-03] Winseck K

Challenges and Strategies for Exposure Measurement in the National Children's Study [S22-04] Dellarco M

Challenges and Strategies for Outcome Measurement in the National Children's Study [S22-05] *Fields NA* 

#### Global Assessment Lessons from Environmental Health Disasters [S23] [Room C104]

Convener: ER Svendsen

Lessons in Outcome and Exposure Assessment from the Bhopal Gas Disaster [S23-01] Dhara VR

Influence of Local Environmental Conditions on Exposure and Child Morbidity after the Chernobyl Accident [S23-02]

Naboka MV

Methodology Challenges and Strategies on Assessing Respiratory Health Among the Residents Living Near the Former World Trade Center [S23-03]

Lin S

#### **Assessing Seasonality for Environmental Epidemiology** [S24]

[Room C102]

Convener: E Naumova

Principles of Seasonality Assessment [S24-01]

Naumova E

Seasonality of Rotavirus Diarrhea: A Call for Interdisciplinary Approach [S24-02] Kang G

Variations in Seasonal Patterns of Gastrointestinal Infections within a Watershed [S24-03] Jagai J

Temporal Variations in Salmonella Infections in the U.S. Elderly, 1991-2004 [S24-04] *Chui KKH* 

Visualization of Spatial and Temporal Data with Dynamic Maps [S24-05] Castronovo D

#### **Contributed Oral Sessions**

#### In-Vehicle & On-Roadway Exposures [TU5A]

[Room C211]

Chairs: A Peters. M Wilhem

Parameters Affecting In-Cabin to On-Roadway (I/O) Ultrafine Particle Concentration Ratios [881]

Zhu Y, Xu B

Determination of In-Vehicle Exposures of Particulate Matter and Black Carbon [1168] *Sohn H, Putti K, Lee K* 

Using a Mobile Monitoring Platform to Characterize Pollution Concentrations On and Near Heavily-Traveled Roadways in Communities Adjacent to the Ports of Los Angeles and Long Beach [1171] *Kozawa KH, Fruin SA, Winer AM* 

Size-Dependent Characteristics of Metals in Particulate Matter Exposures from Traffic-related Emissions [1178]

Wu C, Li Y, Hsu S

Spatial and Temporal Distribution of Vehicle Exhaust Emission Gradients Near Highways in Somerville, Massachusetts [1469]

Ash C, Durant J, Brugge D, Zamore W, Wood E, Herndon S, Jayne J, Kolb C, Knighton W

#### Work and Carcinogens [TU5B]

[Room C207]

Chairs: T Smith, A Salvatore

Cancer Incidence and Mortality Among Workers Exposed to Benzidine and 3,3-Dichlorobenzidine [702]

Brown SC, Schoenberg M

Benzene Exposure in Refinery Workers (1976-2006) [864]

Gaffney SH, Kreider ML, Unice KM, Burns AM, Paustenbach DJ, Booher LE, Gelatt RH, Panko JM

Temporal Variation in the Association Between Benzene and Leukemia Mortality [1505] Richardson D

Development of Baseline Environmental and Occupational Exposure Measurement Strategies for the Population-Based Ontario Cancer Cohort: Recommendations Resulting from an International Workshop [1531]

Harris SA, Ritter L, Kreiger N, Leatherdale S, McLaughlin J

Biological Monitoring for Carcinogens: Evidence for Exposure and Risk Reduction [852] Cocker J, Jones K, Keen C, Morton J, Wheeler J

## Disinfection By Products in Water: Measurement, Exposure and Health Effects [TU5C]

[Room C208]

Chairs: J Jaakkola, S Cordier

Measurement of Water Consumption Behavior by Questionnaire and Diary for Estimation of DBP Absorption in Sydney, Australia [1405]

Rahman MB, Cowie C, Driscoll T, Armstrong BK

Trihalomethane Levels in Exhaled Breath as Indicators of Exposure to Disinfection

By-Products in Indoor Swimming Pools Using Chlorine and Bromine as Disinfectants [1031]

Lourencetti C, Fernández P, Marco E, Ballesté C, Grimalt JO, Font L, Villanueva C, Kogevinas M

Acute Exposure to Disinfection By-Products in Swimming Pools and Short-Term Changes in Respiratory Biomarkers [675]

Villanueva CM, Font-Ribera L, Gómez FP, Barreiro E, Zock J, Nieuwenhuijsen MJ, Heederik D, Grimalt JO, Kogevinas M

Lifetime Swimming Pool Attendance, Asthma, Eczema and Respiratory Symptoms in School-Age Children [835]

Font-Ribera L, Villanueva CM, Zock J, Nieuwenhuijsen M, Heederik D, Grimalt JO

The Effects of Maternal Exposure to Disinfection By-Products in Drinking Water on Small for Gestational Age Births [1235]

Summerhayes R, Lincoln D, Morgan G, Earnest A, Muscatello D, Beard J

#### **Global Dimensions of Low-level Lead Toxicity in Children** [TU5D]

[Room C105]

Chairs: B Lanphear, A Navas-Acien

Timing of Fetal Lead Exposure, Length of Gestation, and Risk of Prematurity [1254] Cantonwine D, Hu H, Sánchez BN, Lamadrid-Figueroa H, Smith D, Ettinger AS, Mercado-García A, Wright RO, Hernández-Avila M, Téllez-Rojo MM

Prenatal Lead Exposure and Growth Trajectory of 0 to 5 Year-Old Children in Mexico City [1266] Afeiche M, Hu H, Sánchez BN, Lamadrid-Figueroa H, Mercado-García A, Cantonwine D, Peterson KE, Ettinger AS, Wright RO, Hernández-Avila M, Téllez-Rojo MM

Lead Associated Deficits in Executive Function and Behavior in 3-7 Year Old Children in Chennai, India [1468]

Roy A, Bellinger D, Hu H, Schwartz J, Wright R, Palaniappan K, Balakrishnan K

The Effects of Calcium Supplement in Reducing School Children Blood Lead Levels in Bandung [1219] Haryanto B

Patterns of Residential Mobility Among Lead Poisoned Children in Wisconsin [1341] Magzamen S, Havlena J, Kanarek M

#### Time, Space, and Exposure [TU5E]

[Room C101]

Chairs: J Levy, M Bell

NO<sub>x</sub> Concentrations in Gothenburg, Sweden: Present Levels and Changes Over Time Due to Traffic Planning [587] Molnár P, Barregard L, Sällsten G

Factors Influencing the Spatial Associations Between Nitrogen Dioxide and Other Ambient Airborne Pollutants Across Four Seasons in Windsor, Ontario [570]

Bellack N, Wheeler A, Anastassopoulos A, Kulka R, van Ryswyk K, van Rijswijk D, You H, Brook J, Xu IX, Rasmussen P, Grgicak-Mannion A

Spatial Modeling of Air Pollution 1985-2000 in the Continental United States [1558] Hart JE, Yanosky JD, Puett RC, Ryan L, Dockery DW, Smith TJ, Garshick E, Laden F

Establishing a Dynamic Exposure Assessment with an Activity-based Modeling Approach: Methodology and Results for the Dutch Case Study [1733]

Beckx C, Torfs R, Arentze T, PL Int, Janssens D, Wets G

Spatial Implications of Covariate Adjustment on Patterns of Risk: Respiratory Hospital Admissions in Christchurch, New Zealand [696]

Sabel CE, Gaines Wilson J, Kingham S, Tisch C, Epton M

Succe CE, Gaines Wilson V, Hill Stain S, Fisch C, Epion H

#### Sources of Errors in PM<sub>2.5</sub> Exposure Assessment [TU5F]

[Room C103]

Chairs: S Fruin, O Hanninen

Estimating Error in Using Ambient PM<sub>2.5</sub> Concentrations as Proxies for Personal Exposures: A Meta-Analysis [1012]

Avery CL, Mills KT, McGraw KA, Smith RL, Poole C, Whitsel EA

Air Pollution Exposure Model for Individuals in Health Studies: Parameter Estimates for PM<sub>2.5</sub> from Research Triangle Park PM Panel Study [1036] Breen M, Breen M, Williams R, Rea A

Misclassification of Onset Time of Acute Events Leads to Underestimation of Air Pollution Acute Health Effects [893]

Wellenius GA, Coull BA, Lokken RP, Suh HH, Mittleman MA

The Effect of Ignoring Interpolation Error on the Inferred Relationship Between Ambient Particulate Matter Exposure and Median RR Interval in Post-Menopausal Women [774] Crooks JL, Whitsel EA, Quibrera PM, Catellier DJ, Liao D, Smith RL

Avoiding Measurement Errors When Monitoring Fine and Ultrafine PM for Exposure and Epidemiology Studies [1661]

Westerdahl D

Tuesday, 3:00 PM - 4:30 PM

#### **Poster Viewing and Afternoon Break**

[Pavilion]

Tuesday, 4:30 PM - 6:00 PM

#### **Symposia**

#### Near-Roadway Exposures and Childhood Allergies and Asthma [S25]

[Room C106]

Conveners: LM Neas. A Vette

Near-Roadway Indicators and Land-Use Regression [S25-01]

Hoek G, Brunekreef B

Overview of Near-Roadway Studies of Childhood Asthma and Allergies in Germany [S25-02] Heinrich J

Assigning Air Pollution Estimates to Traffic Related Pollutants – An Application to School-based Respiratory Health Studies [S25-03]

Wheeler AJ, Nethery E, MacNeill M, Van Ryswyk K, Grgicak-Mannion A, Smith-Doiron M, Mahmud M, Liu L, Xu X, Rasmussen P, Brook JR, Dales R

Near-Roadway Studies in a Northern, Industrial U.S. Metropolitan Area:

Exposures and Health Outcomes [S25-04]

Neas LM, Vette A, Williams R, Gallagher J, Mukerjee S, Hudgens E, Johnson M, Barzyk T, Baxter L, Williams A

## Personal Exposure Assessment Tools for use in Large Scale Epidemiologic Studies [S26]

[Room C107]

Conveners: RK Kwok, J Hoppin

Remote Data Collection Devices for Exposure Measurement in Large Scale Epidemiologic Studies [S26-01]

Sandler DP

Measurement of Gaseous PAHs with an Innovative Passive Sampler in Community Exposure Studies [S26-02]

Fan Z

Characterizing Exposure in Community Health Studies: A Participant-Based Approach to Indoor/Outdoor Air Monitoring [S26-03]

Johnson M

Use of an Electrostatic Dust Cloth for Self-administered Home Allergen Collection [S26-04] Cozen W

Remote Exposure Monitoring Strategy for Use in Longitudinal Cohort Studies [S26-05] Raymer JH

Use of Ultraviolet Radiation Dosimetry in Epidemiologic Studies of Skin Cancer [S26-06] Kwok RK

## Health Effects Due to Human Impacts on the Global Nitrogen Cycle [S27]

[Room C104]

Convener: MH Ward

Nitrate Exposure and Methemoglobin Levels among Infants in Washington State [S27-01]

Vanderslice J

Nitrate Ingestion from Drinking Water and Diet and Cancer Risk [S27-02] Weyer PJ, Kantamneni JR, Lu X, Ward MH, Cerhan JR

Estimating Exposure to N-nitroso Compounds in Studies of Adverse Reproductive Outcomes [S27-03]

Brender JD, Griesenbeck JS, Steck M, Huber JC, Sharkey JR, Weyer PJ, Werler MM, Mohanty B

Nutrient Enrichment in Aquatic Ecosystems and Emergence of Human and Animal Diseases [S27-04]

Johnson P, Townsend

## Impacts of and Adaptation to Extreme Weather Events in a Changing Climate [S28]

[Room C102]

Conveners: KL Ebi, S Tong

Impact of Climate Change on Vectorborne Disease: What are the Early Signs So Far? [S28-01] *Tong S* 

Predicting U.S. Health Outcomes Attributable to Climate Change for Extreme Weather Events – What Happens When the Uncertain Meets the Unknown [S28-02] *Mills D* 

Improving Adaptation to Heatwaves in a Changing Climate [S28-03] *Sheridan S* 

Potential Impacts of Climate Change on Cold- vs. Heat-Related Mortality [S28-04] *Ebi KL* 

#### **Contributed Oral Sessions**

#### Neuro-Developmental Effects [TU6A]

[Room C211]

Tuesday afternoon

Chairs: B Ritz, J Sunyer

Statistical Methods to Study Windows of Vulnerability [1466]

Sanchez BN, Hu H, Litman H, Tellez-Rojo MM

The Relationship Between Ambient Air Pollutants and Early Children's

Neurobehavioral Development [1656]

Chen P, Yang S, Lin K, Ho W, Shu B

Indoor Air Pollution and Cognitive Functioning in Children Effect Modifier of GSTP1 Gene [701] Guxens M, Morales E, Julvez J, Castro-Giner F, Estivill X, Torrent M, De Cid R, Sunyer J

Neuropsychological Effects of Manganese Exposure on Children Living in Communities Near Processing Plants in Mexico [888]

Riojas-Rodriguez H, Rodriguez-Agudelo Y, Schilmann A, Solis R, Hernandez D, Rodriguez Dozal S

Prenatal Organochlorine Exposure and ADHD-like Behaviors in School-Aged Children Using a Psychometric Intelligence Test [564]

Sagiv SK, Bellinger DC, Tolbert PE, Altshul LM, Korrick SA

#### Workplace Exposures & Effects [TU6B]

[Room C207]

Chairs: R Herrick, A Stefaniak

Increased Risk of Urological Cancer in Chinese Herbalists: A Retrospective Cohort Study [577] *Yang H Sr* 

Repeated Measures of Inhalation and Dermal Exposure to Jet Fuel Among Air Force Personnel [981] Smith KW, Proctor SP, McClean MD

Occupation and Risk of Renal Cell Cancer in Central and Eastern Europe [1264] Heck JE, Boffetta P, Charbotel B, Szeszenia-Dabrowska N, Zaridze D, Lissowska J, Foretova L, Janout V, Kollarova H, Bencko V, Brennan P

Analysis of Exposure to Benzene from a Mineral Spirit Solvent Used During Parts Washing and Degreasing Operations [1609]

Sheehan P, Hicks J, Goswami E, Richter R, Fedoruk MJ, Lau E

Effectiveness of a CBPR Worksite Intervention to Reduce Occupational and Take-home Pesticide Exposures to Farmworkers and their Children [1659]

Salvatore AL, Bradman A, Camacho J, Kavanagh-Baird G, Lopez J, Eskenazi B

#### Water Quality and Health [TU6C]

[Room C208]

Chairs: K Cantor, C Villanueva

Exposure to Perfluorooctanoate (PFOA)-Contaminated Drinking Water Resulted in Increased PFOA Plasma Concentrations - a Biomonitoring Study from Arnsberg, Germany [703] *Hölzer J, Midasch O, Rauchfuss K, Kraft M, Kleeschulte P, Angerer J, Wilhelm M* 

Improving the Assessment of *E. coli* Exposure Levels Along Un-monitored Stream Reaches [917] *Money E, Carter GP, Serre ML*  The Biosand Filter: A Robust and Sustainable Technology for Household Water

Treatment in Developing Countries [1422]

Stauber CE, Ortiz GM, Liang KR, Aiken BA, Sobsey MD

Water Intake and Fetal Growth [1434]

Wright JM, Hoffman CS, Savitz DA

Genotoxicity and Adverse Human Health Outcomes Among People Living Near Highly Polluted Waste Water Drains in Punjab, India [1495]

Thakur JS, Singh D, Prinja S, Arora S, Prasad R, Parwana H, Kumar R

#### **Tracking the Lead Connection** [TU6D]

[Room C105]

Chairs: A Ettinger, M Weisskopf

Interaction of Stress and Lead Burden on Cognition in Older Men: The VA Normative Aging Study [806]

Peters JL, Wright RJ, Weisskopf MG, Spiro A III, Schwartz J, Sparrow D, Nie H, Hu H, Wright RO

A Hybrid Mechanistic-Empirical Model for the Accumulation of Lead in Household Dust [807]

Henning C, Murphy D, Pekar Z, Lee M

Association Between Lead Exposure and Markers of Global DNA Methylation [866]

Wright RO, Baccarelli A, Wright RJ, Park S, Pilsner R, Hu H, Sparrow D, Tarantini L, Bollati V, Schwartz J

Relationships Between Cadmium, Lead and Other Metals and Semen Quality:

Human Evidence for Molybdenum as a Male Reproductive Toxicant [912]

Meeker JD, Rossano MG, Protas B, Diamond MP, Puscheck E,

Daly D, Paneth N, Wirth JJ

Nitrogen Dioxide a Factor in Increasing Availability of Lead from Lead-Based Paints [1597] Edwards RD, Zhang L, Johnson M, Kleinman M

#### **Spatial Pollution Perspectives** [TU6E]

[Room C101]

Chair: F Lurman

Traffic Exposure Model Estimates of Residential NO<sub>2</sub> Levels [631]

Ebisu K, Holford TR, McKay L, Gent JF, Belanger K, Bracken MB, Leaderer BP

Traffic-Related Air Pollution in a Densely Populated Urban Area [1503]

Minegishi T, Suh HH, Kaufman M, Allen J, Zamore W, Lipson S, MacIntosh D

Spatial Characteristics of Aerosol and Gaseous Co-Pollutant Concentrations During the Fresno Asthmatic Children's Environment Study [1501]

Alcorn S, Lurmann F, Hammond K

Daily Temperature at Residence vs. Central Measurements in Eastern Massachusetts [1107] Von Klot S, Melly S, Coull B, Dutton J, Schwartz J

Outdoor Exposure Assessments of Multi-Pollutant in Sarnia, Ontario, Canada [1204] *Miler L, Xu X, Atari DO, I. Luginaah N* 

#### **Community-Based Research Studies** [TU6F]

[Room C103]

Chairs: V Zartarian, B Schultz

A Community-Based Study on the Association Between Hypertension and Air Pollution [1388] *Chan C, Yang H, Lin R* 

Community-Based Risk Assessment and Capacity Building for Community Decision-Making: Meeting the EPA/OPPTS Tribal Strategic Plan Objective [1025]

\*Resek E, Hall RE\*

Community-Based Participatory Exposure Assessment in an Environmental Justice Community: Preliminary Results and Communication [1089]

Morello-Frosch R, Zota AR, Rudel RA, Pérez C, Tovar J, Brown P, Dodson R, Brody JG

Building Tribal Capacity to Assess Health Effects from Contaminants in Their Food Supply Using a Case Study Approach [1553]

Zender L, Franklin C

Community Oriented Reuse and Refinement of Available Transportation, Air Quality and Public Health Data to Shape Regional Equity Discussions and Healthier Development Outcomes in Somerville, Massachusetts [1691]

Zamore W, Reisner E, Peterson S, Ingram W, Dann R, Lucas B

Tuesday, 6:00 PM - 7:00 PM

International Society for Children's Health and the Environment Membership Meeting

[Room C104]

Tuesday, 6:00 PM - 9:00 PM

Student and New Researchers Network Workshop and Reception

[Room C106]

Conference Schedule Wednesday morning

#### Wednesday, 7:30 AM - 8:20 AM

#### **Morning Training Sessions** (registration required with ticket)

**Dermal Exposure** [Room C101] [MTS09] John Kissel, University of Washington [MTS10] **Gene-Environment Interactions** [Room C102] Stephanie London, National Institute of Environmental Health Studies [MTS11] **Integrating Physical Activity Information in Exposure Models** [Room C103] Thomas McCurdy, US Environmental Protection Agency **Multi-Center, Multi-National Studies in Environmental** [Room C104] [MTS12] Epidemiology – the bigger the better? Nino Künzli, CREAL, Barcelona

Wednesday, 8:30 AM - 10:00 AM

<u>Awards Plenary</u> [Auditorium]

Conveners: Anthony McMichael, President of ISEE Tina Bahadori, President-elect of ISEA

#### John Goldsmith Award and Presentation (ISEE)

Joel Schwartz, Harvard University School of Public Health, USA

#### Jerome J. Wesolowski Award and Presentation (ISEA)

Thomas McKone, Lawrence Berkeley National Laboratory, USA

#### **Distinguished Lecturer Award and Presentation (ISEA)**

Paul Lioy, Environmental and Occupational Health Sciences Institute, University of Medicine and Dentistry of New Jersey, USA

#### **Research Integrity Award (ISEE)**

Richard Clapp, Boston University School of Public Health, USA

#### **Rebecca James Baker Memorial Prize** (ISEE)

Maggie Clark, Colorado State University, USA

#### **Constance L. Mehlman Award (ISEA)**

William Wilson, US Environmental Protection Agency, USA

#### Joan M. Daisy Outstanding Young Scientist Award (ISEA)

Marsha Morgan, US Environmental Protection Agency, USA

Wednesday, 10:00 AM - 10:30 AM

**Break** 

#### Wednesday, 10:30 AM - 12:00 PM

#### **Symposia**

## The Southern California Children's Health Study: 15 Years of Air Pollution Epidemiology and New Results [S29]

[Room C106]

Convener: R McConnell

Synthesis of Scientific Results and Policy Implications from the Children's Health Study [S29-01]

Peters J

Early Diagnosis of Asthma Modifies the Effect of Air Pollution on Lung Development in Children [S29-02]

Berhane K

Asthma and Traffic-Related Exposure at Schools, Homes and on Roadways [S29-03] *McConnell R* 

The Role of Genetic Susceptibility to Air Pollutants in the Etiology of Asthma [S29-04] *Gilliland F* 

A Genome Wide Search for Genetic Variants that Modify Air Pollution Effects on Respiratory Health [S29-05]

Gauderman WJ

## Exposure Assessment within the Frame of the European Union's Chemicals Policy REACH [S30]

[Room C102]

Conveners: Y Bruinen de Bruin, K van Leeuwen

Introduction about Chemical Safety Assessment (CSA) under REACH [S30-01] Van Leeuwen K

Consumer Exposure Assessment [S30-02]

van Engelen J

New Tools in Occupational Exposure Assessment [S30-03]

Tielemans E

ECETOC Targeted Risk Assessment Screening Tool [S30-04]

Zaleski R

European Chemicals Agency's (ECHA) View for the Further Development of Exposure Tools for the Implementation of REACH [S30-05]

Hansen B

## Research Perspectives on Community Environmental Health Assessment [S31]

[Room C104]

Convener: YA Sanchez

Community Environmental Health Assessment: What Is It? How Can I

Participate as a Researcher? [S31-01]

Sanchez YA

Urban Community Environmental Health Assessment: New York City [S31-02] Kinney P

A Community Environmental Health Assessment in a Latino Farm Worker Community [S31-03] Hoare L

Community Environmental Health Assessment: Researchers Addressing "Real World" Problems [S31-04]

\*\*Hricko A. Green E\*\*

## NIH Genes, Environment, and Health Initiative: Tools for Enhancing Exposure Assessment [S32]

[Room C107]

Conveners: DM Balshaw, DB Shaughnessy

Session Overview Balshaw DM

Nanosensor Array for Real-Time Monitoring of Diesel and Gasoline Exhaust Exposure [S32-01] Mulchandani A, Myung NV, Deshusses MA, Cocker D, Wang J, Bakkaloglu B, Spanias A

Hemoglobin Adducts in Dried Blood Spots as Measures of Carcinogen Exposures [S32-02] Rappaport SM, Funk WE, Chaing S

Geospatial Measurement & Analysis Of Physical Activity: Physical Activity Location Measurement System (PALMS) [S32-03]

Patrick K, Kerr J, Norman G, Ryan S, Sallis J, Krueger I, Griswold W, Demchak B, Dietrich S, Raab F, Lotspeich D, Matthews S, Wolf J, Ainsworth B

Characterizing the Impacts of Circadian Rhythm Alteration on Physiological Stress, and How these Alterations in Turn Impact How Environmental Exposures Affect Health [S32-04] Rea MS, Figueiro MG, Lawless PA, Rodes CE

Roundtable Discussion

#### **Contributed Oral Sessions**

#### **Heat and Mortality** [WE7A]

[Room C207]

Chair: C Chuan

Winter Mortality Modifies the Heat-Mortality Association the Following Summer [565] *Rocklöv JPG, Forsberg B, Meister K* 

The Impact of Heat Waves on Mortality in 9 European Cities, 1990-2004 [1389] D'Ippoliti D, Michelozzi P, Marino C, Menne B, Gonzales Cabre M, Katsouyanni K, Medina S, Paldy A, Anderson HR, Ballester F, Bisanti L, Peters A, Perucci C

2006 California Heat Wave High Death Toll: Insights Gained from Coroner's Reports and Meteorological Characteristics of Event [1672]

Margolis HG, Gershunov A, Kim T, English P, Trent R

Effect of Interaction Between Temperature and Air Pollution on Daily Mortality During Heat-waves [1734]

Fischer P, Ameling C, Marra M

## **Epidemiological Studies of Phthalates** [WE7B]

[Room C211]

Chairs: J Hoppin, C Hines

Maternal Prenatal Urinary Concentrations of Di-(2-Ethylhexyl) Phthalate in Relation to the Timing of Labor: Results from a Birth Cohort Study of Inner-city Mothers and Newborns [1151] Whyatt RM, Adibi JJ, Calafat AM, Rundle A, Just AC, Hauser R

Phthalate Exposure in Uterus and Its Relationship to Thyroid Function in Newborn [957] Huang PC, Kuo PL, Ou HY, Teng MC, Lee CC

Prenatal Phthalate Exposure is Associated with Altered Neonatal Behavior in a Multiethnic Pregnancy Cohort [997]

Engel SM, Berkowitz GS, Calafat AM, Zhu C, Liao L, Silva MJ, Wolff MS

Prenatal Phthalate Exposure and Gender Role Behavior in Preschool Children from Central Taiwan [1351]

Wang S, Su B, Ku H, Chen J, Huang H, Guo Y, Tseng T, Angerer J

The Role of Exposure to Phthalates from Polyvinyl Chloride Products in the Development of Asthma and Allergies: A Systematic Review and Meta-Analysis [779]

Jaakkola JJK, Knight TL

# **Spatial and Temporal Analyses of Exposure and Disease** [WE7C]

[Room C208]

Chairs: S Bartell, S Von Klot

Spatial Analysis of Kidney, Pancreatic, and Bladder Cancer on Upper Cape Cod using Generalized Additive Modeling [1627]

Vieira V, Webster T, Weinberg J, Aschengrau A

Cancer Incidence and Arsenic in Soil in a Gold Mining Area of Australia [924] Pearce DC, Dowling K, Sim MR

Space-Time Clustering Analyses of Type 1 Diabetes in Children from Northern England [1134] McNally RJQ, Pollock R, Court S, Begon M, Cheetham T

Spatial and Temporal Profiles of Personal PM Exposure in Urban Childhood Asthma [1542] Adams CD, Rabinovitch N, Strand M, Marquart K, Riggs P, Volckens J

Seasonal and Spatial Distributions of Nickel in New York City Ambient Air [1510] Lippmann M, Peltier R, Lippmann M

# Traffic and Commuting [WE7D]

[Room C105]

Chairs: G Hoek, J Hart

Exposure to Ultrafine Particles and Noise During Cycling and Driving in 11 Dutch Cities [695] Boogaard H, Borgman G, Kamminga J, Hoek H

Pilot Study of Barcelona Commuters' Exposure to Particulate Matter [788] de Nazelle A, Nieuwenhuijsen M, Pérez L, Künzli N, Lobo A

Minute Ventilation During Commuting by Bike, Car and Bus [1056] Zuurbier M, Hoek G, Van den Hazel P, Brunekreef B Effects on Lung Function from Long-Term Exposure to Various Sources of PM in a Large Swiss Cohort (SAPALDIA) [1179]

Liu L, Schindler C, Keidel D, Gerbase M, Brändli O, Brutsche MH, Bettschart R, Künzli N, Rochat T, T Sapaldia Team

Impact of Improved Air Quality During the 1996 Atlanta Summer Olympic Games on Cardiovascular and Respiratory Outcomes [1513]

Peel JL, Klein M, Flanders WD, Mulholland JA, Tolbert PE

# Use of Biomonitoring to Evaluate Pesticide Exposure and Health Effects [WE7E]

[Room C101]

Chairs: J Lantz, O Jolliet

Effects of Organophosphorus Pesticide Exposure on Birth Outcome Among Pregnant Women with Differing PON1 Status [1605]

Harley KG, Huen K, Holland NT, Bradman A, Barr DB, Eskenazi B

Dietary Organophosphorus Pesticide Intake and Urinary Dialkylphosphate Levels in Adult Volunteers [1599]

Riederer AM, Hunter RL, Barr DB, Weekasekera G, Ryan PB

Organophosphate Pesticide and Exposure Route Contribution to Aggregate and Cumulative Dose for Young Farmworker Children [1302]

Beamer P, Canales RA, Ferguson AC, Eskenazi B, Leckie JO, Bradman A

Urinary Concentrations of Pyrethroid Metabolites in the General U.S. Population, NHANES 1999-2002 [1033]

Barr DB, Baker SE, Whitehead RD Jr, Wong L, Needham LL

### **Vulnerability and Health Disparities** [WE7F]

[Room C103]

Chairs: D Melzer, K Shankardass

A Case-Crossover Analysis Identifying the Vulnerable Populations for Mortality Associated with Temperature Exposure in California [523]

Basu R, Ostro BD

Risk Factors for Respiratory Disease in Puerto Rican Adults [676] Brugge D, Henkin S, Tucker K, Giao N, Gao X

Seasonality of Birth in Atlanta and Implications for Temporal Studies of Preterm Birth [1290] Darrow LA, Strickland MJ, Klein M, Correa A, Waller L, Marcus M, Flanders WD, Tolbert PE

Leprosy, Social Conditions and Deforestation at the Brazilian Amazon [1610] *Ignotti E, Xavier DR, Hacon S* 

Bisphenol A, Age, Ethnicity and Health Outcomes [1736] Melzer D, Lang IA, Scarlett A, Galloway TS

#### Wednesday, 12:00 PM - 1:30 PM

Lunch [Pavilion]

# Wednesday, 12:30 PM - 1:30 PM

### Beijing Olympics Forum (added session)

# The Beijing Health Effects of Air Pollution Reduction Trial Study (The Beijing HEART Study)

[Room C107]

The HEART study design and background Jim Zhang

Air pollution control measures and ambient concentration changes *Tong Zhu* 

Preliminary results on health outcomes *Wei Huang* 

Remarks

Howard Kipen, David Rich

Wednesday, 1:30 PM - 3:00 PM

### **Symposia**

# **Exposure to Traffic-Related Pollutants: Continuous Monitoring and Future Directions** [S33]

[Room C106]

Conveners: R Decastro, J Levy

Challenges in Evaluating Exposure to Traffic-Related Air Pollutants Using Continuous Monitoring Data [S33-01] Levy J

An Analysis of Continuous Black Carbon Concentrations in Proximity to an Airport and Major Roadways [S33-02]

\*\*Dodson R\*\*

The Longitudinal Dependence of Black Carbon Concentrations on Traffic Volume in an Urban "Hot Spot" Environment [S33-03]

\*Decastro R\*

Aethalometer Black Carbon: Data Quality Issues and Data Analysis Methods [S33-04] Turner JR

Spatial and Temporal Heterogeneity in Mobile Source Air Pollutants in Complex Urban Terrain [S33-05]

Zwack L

Human Exposure to Mobile Source Related Air pollution: The Road Ahead [S33-06] Buckley TJ

# HEIMTSA-INTARESE – A European Center Stage for Developing Integrated Assessment Methodologies for Environmental Health Policy [S34]

[Room C102]

Conveners: L van Bree, E Kunseler

HEIMTSA-INTARESE - Bridging Science and Environmental Policy Through Integrated Environmental Health Assessments [S34-01]

Lebret E, Hurley F, Briggs D

Integrated Assessment for Housing and Climate Policies [S34-02]

Haverinen-Shaughnessy U, Fenn B, Chalabi Z, Kovats S, Michelozzi P, de Donato F

Exposure Scenarios for Environmental Health Policy Assessment [S34-03]

Loh M, Jantunen M

A Tool for Health Impact Calculations [S34-04]

Knol A, Knuseler E, van Velze K

Cost-Benefit Analysis (CBA) and Health Economics in Environmental Assessments [S34-05] Hunt A, Navrud S, Torfs R

Guidance and Tools for Integrated Assessments and Their Application [S34-06] Friedrich R, Kuhn A, Tuomisto J, Sabel C

# Community-Based Participatory Research: Approaches in Incorporating Cultural Factors in Environmental Exposure and Risk Reduction Research [S35]

[Room C104]

Convener: NA Fields

Addressing Cultural Factors Associated with Exposure, Biomonitoring and Intervention Research in the Yakima Valley of Washington State [S35-01] Coronado GD

From Study Design to Translation of Research Findings: Methods for Community Engagement in a Migrant Farmworker Cohort [S35-02]

Salvatore AL. Rosas LG. Bradman A. Camacho J. Eskenazi B

Bridging Western and Traditional Tribal Knowledge in Assessing Exposure in Subsistence Populations [35-03]

Harper BL

Discussant: Lessons Learned in Reducing Risks of the Anishinaabe from Methlymercury [35-04] Foran J

# Biomonitoring in a Global Environment – Collaborations, Challenges, and Opportunities [S36]

[Room C107]

Conveners: FL Kaufman, DM Lee, M Lipsett

Decreases in Human Concentrations of Selected Chemicals as Determined in U.S. NHANES [S36-01] Needham L

Moving Towards Integrated Human Biomonitoring Programs in Europe – Contribution of Experience from German Environmental Surveys (GerES) [S36-02] *Kolossa-Gehring M* 

Population-based Biomonitoring Surveys in Canada - Reporting Results to Study Participants [S36-03] Haines D

10 Americans [S36-04] Sharp R

### **Contributed Oral Sessions**

#### Heat - Morbidity and Mortality [WE8A]

[Room C207]

Chairs: MO'Neil, A Hansen

The Effect of Heatwaves on Hospital Admissions for Renal Disease in Adelaide, South Australia [670] Hansen A, Bi P, Ryan P, Nitschke M, Pisaniello D Tucker G

Hospital Admissions of the Elderly During Heat Waves in Five U.S. Cities, 1985-2003 [1461] Gronlund CJ, O'Neill MS, Zanobetti A, Wellenius GA, Schwartz J

The 2006 California Heat Wave: Impacts on Hospitalizations and Emergency Department Visits [1528] Knowlton K, Rotkin-Ellman M, King G, Margolis HG, Smith D, Solomon G, Trent R, English P

Predicting Vulnerability to Heat: Summer 2007 and 2008 in Rome [1245] Schifano P, Cappai G, D'Ippoliti D, Marino C, Leone M, Michelozzi P, Perucci C

The Italian Heat/Health Warning System for Prevention of Heat Health Effects; Evaluation of Summer 2008 [1391]

de'Donato FK, Michelozzi P, Bargagli A, Di Gennaro M, D'Ippoliti D, Leonardi M, Marino C, Schifano P, Perucci C

## Phthalates - Biomarkers [WE8B]

[Room C211]

Chairs: R Whyatt, A Calafat

Urinary Phthalate Metabolite Concentrations Among Workers in Selected Industries [662] Hines CJ, Hopf N, Deddens J, Calafat A, Silva M, Grote A, Sammons D

Prenatal and Postnatal Exposure to Phthalates in Central Taiwan [671] Lin S, Ku HY, Chen JW, Su BH, Chen HY, Angerer J, Wang SL

Urinary Mono-Ethyl Phthalate Concentrations and Reported Use of Personal Care Products Among Pregnant Women [1257]

Just AC, Adibi JJ, Rundle AG, Calafat AM, Hauser R, Whyat RM.

German Environmental Survey for Children (GerES IV): Metabolites of DEHP, DnBP, DiBP, BBzP, and DiNP in Urine [1397]

Becker K, Conrad A, Seiwert M, Lusansky C, Schulz C, Huenken A, Kolossa-Gehring M, Wittassek M, Goen T

Correlations Between Urinary Phthalate Metabolites and Phthalates, Estrogenic Compounds 4-Butyl phenol and o-Phenyl phenol, and Some Pesticides in Home Indoor Air and House Dust [1557] *Rudel RA, Dodson RE, Newton E, Zota AR, Brody JG* 

# **Polybrominated Diphenyl Ethers** [WE8C]

[Room C208]

Chairs: B Eskenazi, J Chevrier

Polybrominated Diphenyl Ethers in Maternal Blood from Mexico, Canada and the USA [709] Van Oostdam J, Needham L, Riojas H, Rodriquez S, Donaldson S

Elevated House Dust and Serum Concentrations of PBDEs in California: Unintended Consequences of Furniture Flammability Standards? [913]

Zota AR, Rudel RA, Morello-Frosch RA, Brody JG

Brominated Flame Retardant Levels in Human Milk and Serum from MAMA Study Participants: Preliminary Findings from Correlations over Time and Matrix, and with Questionnaire Results [1549] *Fenton SE, Mendola P, Sjodin A, Patterson DG, Needham LL, Hines EP* 

Associations Between Prenatal Exposure to PBDEs and Neonatal TSH levels [1310] Chevrier J, Harley K, Bradman A, Sjodin A, Fenster L, Eskenazi B

Prenatal Exposure to PBDEs and Neurodevelopment [1615]

Herbstman JB, Sjödin A, Jones R, Kurzon M, Lederman SA, Rauh VA, Needham LL,
Wang R, Perera FP

# **Estimating Personal PM Exposure** [WE8D]

[Room C105]

Chairs: S Adar, J Meliker

An Examination of Methods to Estimate Personal Exposures to Ambient PM<sub>2.5</sub> through Data Analysis [541]

Strand MJ, Hopke PK, Zhao W, Vedal S, Gelfand EW, Rabinovitch N

Modeling Personal Exposures to Various Components of Fine Particulate Matter from Different Sources in Southern California [693]

Phuleria HC, Ducret-Stich R, Tjoa T, Gemperli A, Wu J, Delfino RJ, Liu LJS

An Evaluation of Exposure Estimation Methods for a Large Cohort Study Using Personal-Indoor-Outdoor Measurements for 51 Children in Windsor, Canada [1333]

Nethery E, Grigcak-Mannion A, Van Ryswyk K, MacNeill M, Rasmussen P,
Dales R, Liu L, Xu X, Wheeler A

Personal Air Pollution Monitoring and Lung Health of Asthmatic Children Living in Windsor, Ontario [1345]

Wheeler AJ, Chen L, MacNeill M, Villeneuve PJ, Van Ryswyk K, Xu X, You H, Kulka R, Brook JR, Rasmussen P, Dales R

The Impact of Human and Environmental Factors on Personal PM<sub>2.5</sub> Exposures [657] Williams R, Jones P, Croghan C, Rea A, Wallace L

### **Serum Organochlorines in Michigan and the USA** [WE8E]

[Room C101]

Chair: W Karmaus

The Relationship Between Blood Serum Dioxin Levels and Breast Feeding [984] Knutson K, Hong B, Chen Q, Chang C, Hedgeman E, Towey T, Jolliet O, Gillespie BW, Franzblau A, Lepkowski J, Adriaens P, Demond A, Garabrant DH Serum Dioxin, Furan, and PCB Concentrations and Half-Life Study Among the U.S. General Population [1205]

Chen Q, Garabrant D, Hedgeman E, Gillespie B, Hong B, Knutson K, Lepkowski J, Franzblau A, Jolliet O

Current Estimates of Population Serum PCDD, PCDF, and Dioxin-like PCB Levels in the United States [1210]

Hedgeman E, Chen Q, Hong B, Knutson K, Lee S, Olson K, Lohr-Ward B, LaDronka K, Lepkowski J, Gillespie B, Franzblau A, Garabrant D

Factors that Predict Serum PCB, PCDD, and PCDF Concentrations in Michigan, USA [1305] Garabrant D, Hong B, Chen Q, Chang C-W, Jiang X, Franzblau A, Lepkowski J, Adriaens P, Demond A, Hedgeman E, Knutson K, Towey T, Gillespie BW

Pharmacokinetic Modeling to Support the Statistical Analysis of Blood Dioxin Concentration [1696] Jolliet O, Wenger Y, Milbrath M, Garabrant D, Jiang X, Gillespie B

### **Exposure and Risk Analysis** [WE8F]

[Room C103]

Chair: B Hubble

Exposure Considerations for Chemical Prioritization and Toxicity Testing [638] Cohen Hubal E

Estimating Indoor Radon Exposure and Excess Risk of Lung Cancer [1247] Andersson EM

Summary of EPA Programs and Exposure Tools Relevant to Community-Based Cumulative Risk and Exposure Assessments [1015]

Barzyk TM, Conlon KC, Chahine T, Zartarian V, Schultz B, Hammond D

A Review and Synthesis of EPA Exposure Models [1076] Williams PR, Hubbell B, Weber E, Fehrenbacher C

Association Between Pollution and Public Perception of Air Quality-SEQAP, a Risk Perception Study in France [1135]

Deguen S, Pédrono G, Ségala C, Mesbah M

Wednesday, 3:00 PM - 4:30 PM

**Poster Viewing and Afternoon Break** 

[Pavilion]

## Wednesday, 4:30 PM - 6:00 PM

#### **Symposia**

#### Community Noise, Air Pollution, and Cardiovascular Health [S37]

[Room C106]

Conveners: SD Adar, RW Allen

State of the Evidence of an Association Between Environmental Noise and Cardiovascular Diseases [S37-01]

Babisch W

Assessing Chronic Exposure to Noise and Air Pollution in Greater Vancouver, British Columbia, Canada [S37-02]

Davies H

Noise, Air Pollution, and Cardiovascular Mortality in the Netherlands [S37-03] *Hoek G* 

Residential Exposure to Road Traffic and Cardiovascular Events: The Role of Road Traffic Noise and Air Pollution [S37-04] *de Kluizenaar Y* 

# Creating a Better Science-Policy Interface: Practical Guidelines for Scientists and Research Organizations [S38]

[Room C102]

Conveners: L Shirname-More, A Rea

Interactions of Science and Policy to Meet Societal Needs [S38-01] Henderson R

Defining Policy-Relevant Research Questions: A U.S. Perspective [S38-02] *Hubbell B* 

Defining Policy-Relevant Research Questions: An International Perspective [S38-03] Brunekreef B

Panel Discussion: Practical Guidelines for Scientists and Research Organizations *Rey A, et al.* 

# Community-Based Participatory Research: Methods for Assessing and Reducing Risks from Dietary Exposures in North American Native Tribal Populations [S39]

[Room C104]

Convener: NA Fields

Contaminants in the Traditional Foods of the Yupik People of St. Lawrence Island, Alaska-Exposure Pathways, Collaborative Interventions, and Prevention [S39-01] *Welfiger-Smith G* 

Defining and Evaluating Risks from Contaminated Food in the Swinomish: Combining Data from a Risk Assessment, Consumption Survey, and Cultural Risk Evaluation Tool [S39-02] *Donatuto J* 

Intervention Research and Probabilities of Risk in Walleye Harvesting Ojibwe Communities [S39-03] *Foran JA* 

Discussion: Constructing Traditional Tribal Subsistence Exposure Scenarios [S39-04] Harper BL

# **Use of Simple Approaches That Tie Body Burden to Dose** [S40]

[Room C107]

Conveners: M Lorber, L Aylward

Use of a Simple Pharmacokinetic Model to Characterize Exposures to Perchlorate [S40-01]

Lorber M

Interpreting Human Biomonitoring Data for Acrylamide: Screening-level Modeling Approaches [S40-02]

Avlward L

11/0/// 60/ 60 2

Creatinine Corrections for Obesity and Pregnancy to Pesticide Doses Estimated from NHANES Urinary Data [S40-03]

Allen R

Application of Pharmacokinetic Modeling to Relate PFOA Exposures and Blood Concentrations in Human Populations [S40-04]

Clewell H

#### **Contributed Oral Sessions**

# **Temperature and Health Effects** [WE9A]

[Room C207]

Chairs: J Schwartz, A Schneider

Short-Term Effects of Air Pollution and Temperature on Daily Morbidity in Chiang Mai, Thailand [791]

Pudpong N, Hajat S

Air Temperature and the Occurrence of Myocardial Infarction in Augsburg, Germany [903] Wolf K, Schneider A, Breitner S, von Klot S, Meisinger C, Cyrys J, Hymer H, Wichmann H, Peters A

The Effect of Temperature on Hospital Admissions in Nine California Counties [1313] Green R, Malig B, Broadwin R, Kim J, Basu R, Ostro B

Hot Temperatures and Morbidity Among Elderly People in 101 U.S. Cities [1421] O'Neill MS, Zanobetti A, Wellenius GA, Gronlund C, Diez-Roux AV, Schwartz JD

Seasonal Patterns of Mortality and Temperature-Mortality Relationship in Summer, Rome, 1987-2005~[608]

Stafoggia M, Forastiere F, Michelozzi P, Perucci CA

### PAH Exposure Assessment [WE9B]

[Room C211]

Chairs: L Sheldon, H Choi

Residential Outdoor Levels of Polycyclic Aromatic Hydrocarbons in PM<sub>2.5</sub> [1402] Johannesson S, Gustafson P, Bergemalm-Rynell K, Strandberg B, Sällsten G

Characterizing the Spatial Distribution of Ambient PAHs Using Vegetation Biomonitoring [1550] Noth EM, Hammond SK, Biging GS, Tager IB Ambient Concentrations of Polycyclic Aromatic Hydrocarbons and Phenolic Compounds Measured Before and During a Woodstove Change-Out Program in Libby, Montana. [1273] *Ward T* 

Spatial and Temporal Variation in Polycyclic Aromatic Hydrocarbon Concentrations, Based on Personal, Indoor, and Outdoor Monitoring Among Non-Occupationally Exposed Pregnant Cohort [1230] *Choi H, Perera F, Pac A, Jedrychowski W, Camann D, Spengler J* 

Comparison of Methods to Assess Dietary Exposure to Polycyclic Aromatic Hydrocarbons and Heterocyclic Amines [1227]

Cardello Deziel N, Strickland PT, Platz EA, Dominici F, Buckley TJ

#### **Dermal Exposure and Effects** [WE9C]

[Room C208]

Chairs: T Buckley, J Kissel

Transfer of Contaminant Particles from Skin or Clothing to Common Household Surfaces and Implications to Subsequent Exposure [823]

Thornburg J, Dart A, Seagraves J, VanOsdell D

Soil Solubility of Chemical Contaminants: Concept, Determination and Effects on Dermal Absorption [1277]

Deglin SE, Macalady DL, Bunge AL

*In Vitro* Study of Transdermal Permeation of Insect Repellent and Sunscreen [1131] *Yiin L, Huang W* 

PCB Exposure and Damage Cell, Dermal in an Ex-Occupational Population Sample in Alpuyeca Morelos [1000]

Corina FH, Verónica DM, Rodrigo CP, Anabel RR, Daniel H, Gustavo CJ, Patricia OW, Monserrat SC, Ana María SM

GerES IV: Contact Allergies in Children - More Prevalent than Previously Thought [699] Straff WJ, Becker K, Seiwert M, Kolossa-GehringM

#### Respiratory and Immune Effects of Traffic Exposure [WE9D]

[Room C105]

Chairs: M Mittleman, A Hansell

Exposure to Traffic Air Pollution and Early Childhood Atopic Disorders [943] Wang I, Guo Y, Hsieh W, Lin T, Hwang Y, Jee S, Chen P

Effects of Early Childhood Exposure to Traffic Related Air Pollution on Asthma and Wheeze in School Aged Children in Toronto [1512]

Dell S, Foty RG, Beckerman B, Jerrett M, Stieb D

Effects of Source-specific Emissions of Ambient Particulate Matter on Respiratory Symptoms Among Asthmatic Children in Detroit, Michigan [963]

Hammond D, Dvonch JT, Mentz G, Robbins T, Parker E, Keeler G, Israel B, Yip F, Mukherjee B, Brakefield-Caldwell W, Max P, Lewis T

Traffic-Related Air Pollution and Circulating Levels of Total and Allergen-Specific IgE Among Children in Detroit, Michigan [1216]

Johnson MM, Hudgens E, Heidenfelder B, Smith L, Mukerjee S, Stallings C, Hamilton R, Neas L, Özkaynak H, Gallagher J

Combined Effects of Prenatal Exposure to Traffic-Related Air Pollution and Inhaled Allergens on Maternal and Cord Blood IgE Expression: Project ACCESS [1556] Wright RJ, Franco Suglia S, Gryparis A, Peters J, Gold DR, Schwartz J

# Pesticides and Children [WE9E]

[Room C101]

Chairs: N Freeman, N Tulve

Indoor Pesticide Exposures in Low Income Hispanic Children Living in Agricultural and Urban Communities [1106]

Quiros-Alcala L, Bradman A, Nishioka M, Harnly M, Hubbard A, Ferber J, Eskenazi B

Organic Diets Associated with Lower Pesticide Urinary Metabolite Excretion in Children Living in Agricultural and Urban Areas [1124]

Bradman A, Quiros-Alcala L, Barr D, Odetokun M, Ferber J, Eskenazi B

Using Pesticide Screening Questions to Identify the More Highly Exposed Participants in a Larger Cohort [1063]

Egeghy PP, Tulve NS, Adetona O, Naeher LP

Indoor Residual Spraying (IRS) with DDT is Associated with Urogenital Birth Defects in Newborn Venda Boys from South Africa [939]

Bornman R, de Jager T, Worku Z, Farias P

Residential Exposure to Polychlorinated Biphenyls and Organochlorine Pesticides and Risk of Childhood Leukemia [1090]

Ward MH, Colt JS, Metayer C, Gunier RB, Lubin J, Nishioka MG, Reynolds P, Buffler PA

# **Characterization of Particulate Exposures** [WE9F]

[Room C103]

Chairs: M Jantunen, J Bang

Associations Between Personal, Indoor, And Residential Outdoor Pollutant Concentrations: Implications For Exposure Assessment To Size Fractionated PM [532] *Arhami M, Polidori A, Tjoa T, Delfino RJ, and Sioutas C* 

Characterization of Different Fractions of Particulate Matter at Various Locations with Contrast in Local Source Emissions: First Phase of the RAPTES Study [1177]

Strak MM, Steenhof M, Fokkens PHB, Boere AJF, Leseman DLAC, Meliefste K, Harrison RA, Godri KJ, Kelly FJ, Mudway IS, Hoek G, Brunekreef B, Lebret E, Cassee FR, Gosens I, Janssen NAH

Daily Incremental Exposure: A Method for Comparing Exposures to Fine Particles from Everyday Sources [1563]

Ott WR, Klepeis NE, Switzer P, Hildemann LM

Integrated and Real-time PM<sub>2.5</sub> Concentrations in Kitchens, Bedrooms, and Outdoors in Highland Guatemala Using both Gravimetric and UCB Particle Monitor [1634] Chowdhury Z, McCraken J, Canuz E, Edwards RD, Smith KR

Elemental Composition and Oxidative Properties of  $PM_{2.5}$  in Relation of Origin of Air Masses in ERCHS II City Tartu [1175]

Orru H, Kimmel V, Forsberg B, Soon A

Conference Schedule

Wednesday afternoon

Wednesday, 6:00 PM - 7:00 PM

**ISEE New Members Reception** 

[Patio by Pavilion]

Wednesday, 7:00 PM - 12:00 AM

**Conference Dinner and Entertainment** 

[Pavilion]

## Thursday, 8:30 AM - 10:00 AM

#### **Symposia**

#### **Brominated Flame Retardants: A New Health Threat** [S41]

[Room C107]

Conveners: A Schecter, L Needham

PBDE Exposure to Pregnant Women and Their Children Living in a United States Agricultural Community [S41-01]

Bradman A, Sjodin A, Rosas L, Harley K, Fenster L, Eskenazi B

A Case Control Investigation of PBDEs and Autism in Children [S41-02] Hertz-Picciotto I

PBDE and HBCD Brominated Flame Retardants in the USA, Update 2008: Levels in Human Milk and Blood, Food, and Environmental Samples [S41-03] *Schecter A, Harris TR, Brummitt S, Shah N, Paepke O* 

Tissue Distribution of Polybrominated Diphenyl Ethers in Rats Following Oral Exposure and the Relationship to Body Burdens [S41-04]

Huwe JK

Televisions as Sources of DecaBDE in House Dust [S41-05] *Allen JG* 

Serum Levels of Poly-Brominated Diphenyl Ethers (PBDEs) in Girls in California and Ohio [S41-06]

Windham GC

# Personal Measurements of Radio Frequency Electromagnetic Field Exposure and the Implications for Experimental and Epidemiological Studies [S42]

[Room C104]

Convener: M Roosli

Challenges of Personal RF-EMF Exposure Measurements [S42-01] *Roosli M* 

Mobile Telecommunication Exposure and Well-Being in Children and Adolescents [S42-02] Heinrich S, Kühnlein A, Thomas S, von Kries R, Radon K

Assessment of the Radio Frequency Exposure in the General Population: Results of a French Pilot Study [S42-03] *Viel J, Hours M, Cardis E* 

Personal Radio Frequency Electromagnetic Field Exposure in a Swiss Population Sample [S42-04] Frei P, Mohler E, Braun-Fahrländer C, Bürgi A, Egger M, Fröhlich J, Joos N, Neubauer G, Theis G, Röösli M

The Dutch Exposimeter Study: Developing an Activity Exposure Matrix [S42-05] Bolte JFB, Pruppers MJM, Kamer J, Van der Zande G, Schipper CMA, Fleurke SR, Kluwer T, Van Kamp I, Kromhout J

# Recent Findings from the Agricultural Health Study: Pesticide Exposure Assessment, Cancer, and Neurologic Disease [S43]

[Room C101]

Convener: J Hoppin

Cancer Risk Associated with Pesticide Exposure in the Agricultural Health Study: Introduction and Recent Findings [43-01]

Alavanja M

AHS Exposure Assessment Strategies: Questionnaires, Intensity Metrics, and Validation Studies [S4302]

Hoppin JA

Organophosphate Insecticides and Neurologic Dysfunction in the Agricultural Health Study [S43-03]

Kamel F

#### **Contributed Oral Sessions**

# **Environmental Stressors & Hospital Admissions** [TH10A]

[Room C207]

Chairs: S Sarnat, KJ Hoggatt

Impact of Particulate Matter of Diameter Less Than 2.5 Microns (PM<sub>2.5</sub>) Over Daily Hospital Admissions on Children in Madrid, Spain (2003-2005) [539] *Linares C, Diaz J Sr.* 

Seasonal and Regional Short-Term Effects of Fine Particles on Hospital Admissions in 202 U.S. Counties, 1999-2005 [1023]

Bell ML, Ebisu K, Peng RD, Walker J, Samet JM, Zeger SL, Dominici F

Assessing the Relationship Between Exposure to Vegetation Fire Smoke and Hospital Admissions when Empirical Air Quality Measurements are Limited: Darwin, Australia, 1996-2005 [1311] Hanigan IC, Johnston FH, Morgan GG, Dingle JK, Bowman DMJS

Impact of Hot Weather Conditions on Respiratory and Cardiovascular Hospital Admissions in New York City, USA [1451]

Shao L, Luo M, Walker R, Liu X, Hwang S, Robert C

The Effect of Ozone on All Cause Mortality in the Elderly: Modification by Sex, Race, and Previous Heart, Lung, and Diabetes Related Hospital Admissions in a U.S. National Multicity Study [1533] *Vaclavik Bräuner E, Zanobetti A, Schwartz J* 

#### Modeling Exposure & Assessing Outcomes [TH10B]

[Room C102]

Chairs: J Gauderman, J Wu

Modeling Intra-Urban Concentrations of Traffic-Related Air Pollution in New York City for the U.S. Multi-Ethnic Study of Atherosclerosis [637]

Jensen SS, Larson T, Kaufman J, KC D

Including Caline3 Dispersion Model Predictions into a Land Use Regression Model for NOx in Los Angeles, California and Seattle, Washington. [1334] *Wilton D, Larson T, Gould T, Szpiro A* 

Modeling Intra-Urban Spatial Variability of Volatile Organic Compounds Using a Land Use Regression Method [1493]

Su J, Jerrett M, Beckerman B

Spatio-Temporal Modeling to Predict Intra-Urban Variation in Air Pollution Levels [1525] Szpiro AA, Sampson PD, Sheppard L, Wilton D, Larson T, Lumley T, Adar SD, Kaufman J

# Climate, Climate Change and Health [TH10C]

[Room C106]

Chair: A McMichael

Climate Variability and Ross River Virus Infections in the Riverland, South Australia, 1992-2004 [600] *Bi P, Hiller J, Cameron S, Zhang Y, Givney R* 

Infectious Disease in a Warming World: How Weather Influenced West Nile Virus in the United States (2001-2005) [1120]

Soverow J, Wellenius G, Fisman D, Mittleman M

Exposure Science: Potentials and Challenges [851]

Hati SS

Effect of the Temperature and Precipitation on the Incidence of Acute Respiratory Infections and Acute Diarrheic Disease in Veracruz, Mexico [1697]

Hurtado-Dìaz M, Moreno-Banda GL, Rothenberg SJ, Santos-Luna R, Riojas-Rodriguez H

Mechanistic Insights: Cardiovascular Events During Hot Weather [956]

Fenn B, Hajat S, Wilkinson P

# **Arsenic and Manganese** [TH10D]

[Room C211]

Chairs: A Geyh, M Cortez Lugo

Air, Water, House Dust, Blood and Hair Manganese of Children Living in the Vicinity of a Ferro-Manganese Alloy Plant [642]

Menezes-Filho JA, Sarcinelli PN, Moreira JC, Paes CR, Kato M, Oliveira FV, Mergler D

Assessment of Pulmonary Exposure to Manganese: Uptake of Metals from Inhaled Welding Fumes into the Circulatory System [1297]

Richman JD, Livi KJT, Spannhake EW, Macri KK, Torrey CM, Geyh AS

Model Estimates of Arsenic Exposure and Dose and Evaluation with 2003 NHANES Data [707] Xue J, Zartarian V, Wang S, Georgopoulos P

Arsenic Exposure and Prevalence of Type 2 Diabetes in U.S. Adults [1473] Navas-Acien A, Silbergeld EK, Guallar E

Arsenic Exposure and Global DNA Methylation [1459]

Kile M, Baccarelli A, Hoffman E, Quamruzzaman Q, Rahman M, Mahiuddin G, Christiani D

### Fish Consumption & Exposure [TH10E]

[Room C103]

Chair: J VanDerslice

Identifying Fish Consumption Patterns and Exposure to Mercury in Washington State Using a Population-Based Telephone Survey [1595]

Laflamme D, VanDerslice J, McBride D

Comparing Fish Consumption Information Collected via a Telephone Survey and a Food Frequency Questionnaire [1502]

VanDerslice J, Laflamme DM, Wynkoop-Simmons K

Fish Consumption and Mercury Exposure Among Pregnant Women at a Sacramento Clinic [1044] *Ujihara A, Copan L, Tan M, Smorodinsky S, Lee D* 

## **Spatial Analysis of Pollutants and Pathogens** [TH10F]

[Room C105]

Chairs: K Berhane, A deNazelle

Estimating Daily PM<sub>2.5</sub> Exposure in Massachusetts with Satellite Aerosol Remote Sensing Data, Meteorological, and Land Use Information [723]

Liu Y, Paciorek C, Koutrakis P

Predictors of Heterogeneity in Airport Emissions of Air Toxics Associated with Individual Cancer Risk Thresholds [1026]

Zhou Y, Levy JI

Spatial Analysis of the Distribution of Bacterial Pathogen Indicators Across Shallow Aquifers in Bangladesh [1085]

Akita Y, Leber J, Knappett PSK, Feighery J, Band LE, Emch ME, Mailloux BJ, Culligan PJ, Layton AC, McKay LD, van Geen A, Serre ML

Public Health Impacts of Residential Wildfires: Analysis of Ash and Debris from the 2007 Southern California Fires [1096]

Wittig V, Williams S, DuTeaux SB

The <u>W</u>oodstove <u>E</u>xchange <u>ST</u>udy (WEST): Mapping Residential Woodsmoke in the Skeena-Bulkley Valley Lakes District [1562]

Millar G, Brauer M, Jackson P, Allen R, Leckie S

#### Continuing Stories of Secondhand Smoke [TH10G]

[Room C208]

Chairs: P Breysse, P Goodman

Second Hand Smoke and Outdoor Pollution in Historical Cities [536]

Invernizzi G, Ruprecht A, Mazza R, De Marco C, Lopez MJ, Nebot M, Gorini G, Gasparrini A, Sasco AJ, Boffi R

Using Computer Simulation to Communicate Exposure Levels and Risks: A Pilot Intervention Study for Secondhand Smoke in Automobiles [1155]

Klepeis NE, Drake P, Siller C

Biological Monitoring of Environmental Nicotine and Tobacco Smoke Exposures: Cotinine, 3-Hydroxycotinine and Nicotine in Urine of Non and Passive Smokers [1376] *Koch HM, Weiss T, Käfferlein HU, Brüning T* 

Impact in the Levels of Secondhand Smoke Exposure Two Years after the Implementation of the Non-Smoking Law in Spain [772]

Lopez MJ, Nebot M, Ariza C, Pérez-Ríos M, Fu M, Schiaffino A, Muñoz G, Saltó E, Fernández E, Spanish Smoking Evaluation Group

From Exposure Science to Policy Change: A 32-Country Comparison of Tobacco Smoke Derived Particle Concentrations in Public Places [1152]

Travers MJ, Hyland A, Cummings K

10:00 AM - 11:30 AM

# **Poster Viewing with Buffet Brunch**

[Pavilion]

Thursday, 11:30 AM - 1:00 PM

# **Closing Plenary**

# The Rise and Fall of Environmental Health Issues – Provoking Innovation in Environmental Health Sciences

[Auditorium]

Convener: Tina Bahadori

Ecological Health Paradigm, Vectors of Interest, and Influence of Issue Market Forces on Public Health Protection

Michael Lerner, President, Commonweal

Activating Research and Putting Research into Action: California Breast Cancer Research Program

Marion (Mhel) Kavanaugh-Lynch, Director, California Breast Cancer Research Program

Through the Cacophony: Enabling Improved Public Health

Gina Solomon, Senior Scientist, Natural Resources Defense Council

Thursday, 1:00 PM - 1:30 PM

**Closing Ceremony** 

[Auditorium]

# **Contributed Posters**

[Pavilion]

Monday, all day – dedicated poster viewing, 3:00 PM – 4:30 PM	g. 3:00 PM - 4:30 PM	ooster viewing.	v – dedicated	all da	Monday,
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P001	GExFRAME – a Web-Based Framework for Accommodating Global Consumer Exposure Data, Scenarios and Models [1001] Kephalopoulos SD, Arvanitis A, Pandian M
P002	Development of a Meta-Analysis-Based Model to Explain the Variability in the Reported Uptake of PAHs by Plants [1062]  Marquez-Bravo LG, Spliethoff HM
P003	Linear Regression of the Fuzzy Dependent Variable For Epidemiological Study [1111] <i>Bolotin A</i>
P004	Improving Human and Ecological Exposure Assessments: A Bayesian Network Modeling Approach [1183]  Gronewold A, Reckhow K, Vallero D
P005	Using Oracle Application Express for Rapid Development of CHAD Explorer – a Data Mining Tool for Consolidated Human Activity Database (CHAD) [1294] <i>Liu S</i>
P006	Comparison of Street and Parcel Geocoding Methods: Implications for Environmental Exposure Assessment [1324]  Reid C, Broadwin R, Seto E
P007	Exploring Markov Models to Simulate Children's Sequential Micro-Level Activities for Exposure Assessments [1329] <i>Canales RA, Julian T</i>
P008	A Stochastic Model of Viral Transmission Via Fomites [1606] Julian T, Canales R, Leckie JO, Boehm AB
P009	The Impact of Exposure Measurement Error in a Time-Series Analysis of Air Pollution and Emergency Department Visits in Atlanta, Georgia [1611] Sarnat SE, Klein M, Sarnat JA, Flanders WD, Waller L, Mulholland JA,

#### **Arsenic**

Russell AG, Tolbert PE

- P010 Arsenic Exposure Assessment in Fish Consumers from Vieques, Puerto Rico [896] Toro-Colón C, Martínez A, Mansilla-Rivera I, Rodríguez-Sierra CJ
- P011 Associations Between Arsenic in Drinking Water and Pterygium [1004] *Guo H, Lin W, Wang S, Wu H, Chang K, Yeh P, Chen C*
- P012 Modeling Human Exposure to Cadmium and Arsenic in the Northern Campine Region [1077] Standaert AR, Van Holderbeke M, Cornelis C, Torfs R, Nelen V, Berghmans P, Bruckers L, Van Gestel G, Claeys N, Van Campenhout K, Wildemeersch D, Verlaek M
- P013 Arsenic Methylation is Associated with Skin Lesions [1098] *Kile M*

P014	Latency Patterns of Kidney Cancer Mortality in Arsenic-Exposed Region II of Chile from
	1950 to 2000 [1206]
	Yuan Y. Marshall G. Ferreccio.C Steinmaus C. Smith AH

- P015 Chronic Arsenic Exposure and Dermatological Lesions, Hypertension and Chromosomal Abnormalities: An Epidemiological Study [1240]

  Dastgiri S, Mosaferi M, Fizi M, Olfati N, Zolali S, Puladi N, Azarfam P
- P016 Arsenic Exposure: Reliability of Spot Urine Samples in Epidemiological Studies [1482] Rivera-Nunez Z, Linder AM, Nriagu JO
- P017 Chronic Arsenic Toxicity: Clinical Features, Epidemiology, and Treatment: Experience in Indo-Nepal Border [1622]

  Joshi SR, Bhandari RP

#### **Asthma or Allergy**

- P018 Influence of GST Genotypes Polymorphisms and Prenatal Smoke Exposures on Children Atopic Dermatitis [572]

  Wang I, Guo Y, Hsieh W, Lin T, Wu K, Hwang Y, Jee S, Chen P
- P019 Sales of Short-Acting Beta Agonist for Asthma, Air Pollution and Socioeconomic Deprivation: A Small-Area Case Crossover Study in Children and Adolescents [623]

  Laurent O, Pedrono G, Filleul L, Segala C, Lefranc A, Rivière E, Schillinger C, Bard D
- P020 Association of Obesity and Asthma in Inner City Minority Children [656] Vangeepuram N, Doucette J, Britton J, Galvez M, Brenner B, Teitelbaum S, Wolff M
- P021 Traffic-Related Air Pollution, Climate, and Prevalence of Eczema in Taiwanese Schoolchildren [712]

  Lee Y, Liang P, Su HJ, Sheu H, Yu H, Guo YL
- P022 Phthalate Metabolites and Asthma in Urban Minority Girls [717]

  Teitelbaum SL, Britton JA, Vangeepuram N, Bausell R, Brenner B, Silva M,

  Calafat A, Wolff MS
- P023 Development of an Asthma Education Program for Chinese Immigrant Children [741] Brugge D, Lane K, Chin M, Palella M
- P024 Horse Allergen at School a Dark Horse? [762] Smedje G, Norbäck D, Elfman L
- P025 Prenatal Exposure to PCBs is Related to Asthma in Female Adult Offspring [782] Karmaus W, Osuch J, Zhang J, Mikucki D, Haan P
- P026 Effects of Ambient Elemental Carbon and Metals on Wheeze and Cough During Early Childhood [907]

  Patel MM, Chillrud S, Hoepner L, Reyes A, Garfinkel R, Whyatt R, Kinney P,

  Perera F, Miller RL
- P027 Influence of Ambient Fungal Concentrations on Hospital Visits for Allergic Respiratory Diseases [953]

  Chao HJ
- P028 Exposure Pattern Assessment the NOMIRACLE and the MILAGRO Project Importance of Indoor VOC for Allergic Symptoms/Eczema [972]

  Herbarth O, Franck U, Geiss O, Kohajda T, Matysik S, Tirendi S, Tovalin H, Rembges D

P029	Does Rhino-Conjunctivitis Exist as Early as in Infancy? Evidence from the Paris Birth Cohort
	Study [1006]
	Clarisse B, Just J, Momas I

- P030 Ethnic Difference in the Effect of Asthma on Pulmonary Function in Children [1053] Zhang Y, McConnell R, Berhane K
- P031 Predicting Risk for Early Infantile Atopic Dermatitis by Hereditary and Environmental Factors [1069]

  Wen H, Chen P, Chiang T, Lin S, Chuang Y, Guo Y
- P032 Respiratory Health: Frequency of Asthma, Wheezing and Allergies in Inuit Children in Relation to Indoor Air Quality [1137]

  Lajoie P, Lévesque B, Rhainds M, Rochette L
- P033 Indoor Airborne VOC Exposure and Symptoms of Allergy and Asthma in Children [1220] Choi H, Sundell J, Schmidbauer N, Spengler J, Bornehag C
- P034 Relationship Between PM<sub>10</sub> Concentrations and Asthma Patients in Metropolitan Areas in Korea Using Spatial and Time-Trend Analysis [1252] *Yi O, Park A, Huh J, Kim H*
- P035 Residential Traffic and Current Asthma in the East Bay Children's Respiratory Health Study [1318]

  Kim J, Huen K, Adams S, Smorodinsky S, Malig B, Ross Z, Jerrett M, Ostro B
- P036 Chronic Exposure to Ambient Ozone and Asthma Hospital Admissions Among Children in New York State [1407]

  Pantea C, Lin S, Liu X, Hwang S
- P037 Indoor Environment and Asthma Linkage in a Nepal Urban Poor Setting [1491] Joshi SD, Panday K
- P038 Air Pollution, Airway Inflammation and Lung Function is Schoolchildren from Mexico City, the EVA Cohort Study [1575]

  Barraza-Villarreal A Dr, Sunyer J, Hernandez-Cadena L, Escamilla-Nuñez MC, Sienra-Monge JJ, Ramírez-Aguilar M, Cortes-Lugo M, Holguin F, Diaz-Sánchez D, Olin AC, Romieu I
- P039 Diesel Air Pollution and Asthma Exacerbations in a Group of Children with Asthma [1582] Spira-Cohen A, Chen L, Kendall M, Xillari D, Clemente J, Blaustein M, Gorzcynski J, Thurston GD
- P040 Association of Childhood Asthma with School Commuting Time [1585] Liu F, McConnell R, Wu J
- P041 The Asian Dust Events and Emergency Department Visits with Atopic Asthma in Seoul, Korea [1664]

  \*Hwang S, Jang Y, Kim H\*
- P042 Impact of Biomass Combustion: Prevalence of Asthma Due to Indoor Air Pollution in Developing Country [1676]

  Bajgain D, Panday K
- P043 Allergenic Potential of *Broussonetia papyrifera* Pollens Prevalent in the Atmosphere of Southern Taiwan [1700]

  Hsu NY, Lin WP, Wang JY, Wu PC, Su HJ

P044 Effects of Traffic Air Pollution on Asthma and Atopy in Children: A Small-area Level Geographical Study in Seoul, Korea [1735]

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#### **Bio-monitoring and Biomarkers**

- P045 Selenium and Lipids in Umbilical Cord Serum [558]

  Wells EM, Navas-Acien A, Caldwell KL, Jones RL, Apelberg BJ, Herbstman JM,

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- P046 Tradescantia *Pallida* Biomonitoring: Identifying the Air Pollution Sources in an Industrial Brazilian City [759]

  Miranda DdC, Pereira LAA, de Oliveira RC, Saldiva PHN
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  Bloom MS, Kannan K, Spliethoff HM, Tao L, Aldous KM, Vena JE
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  DeCaprio AP, Johnson GW, Reece MT, Staudenmeyer JW, Arcaro KF
- P049 First Steps in Exposure Assessment and Management Among the PFC Case in Arnsberg, Germany [880]

  Wilhelm M, Hölzer J, Rauchfuss K, Kraft M, Fürst P, Wiesmüller G, Angerer J
- P050 Genetic Damage by the Environmental Exposure to c-PAHs: Bus Drivers [947] Sram RJ, Binkova B, Milcova A, Novakova Z, Rossner P, Rossner P Jr, Rossnerova A, Solansky I, Svecova V, Topinka J
- P051 The Application of Biomonitoring Data in Risk Assessment: An Expanded Case-Study with Benzene [1061]

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- P052 Development and Application of Immunoaffinity Column Chromatography for Coplanar PCBs in Soil and Sediment [1091]

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P060	Gene Expression-Based Biomarkers of Air Pollution Mixtures [1639] Sarigiannis D, Cimino Reale G, Marafante E, Collotta A
P061	Urinary Levels of Occupational Contaminants in the General U.S. Population: Cobalt, Thallium, Tungsten, and Uranium [1674]  Nguyen LM, Scott L, Harris M
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P071	Environmental Exposures and Adult Brain Cancers [1347]  Davis FG, McCarthy BJ, Erdal S, Il'yasova D, Mendes J, Rankin K, Bigner D
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- P080 Air Pollution and Cardiovascular Disease in the California Teachers Study Cohort [754] Lipsett M, Ostro B, Reynolds P, Goldberg D, Hertz A, Hurley S, Jerrett M, Smith D, Garcia C
- P081 The Effects of Fine Particulate Matter on Daily Mortality for Specific Heart Diseases in Japan [767]

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- P082 The Use of Zip Code Level Mortality Data in Community, Time-Series Epidemiology Yields Higher and More Significant Associations of Daily Deaths with Daily PM<sub>2.5</sub> and Demonstrates Effect Modifications from Income Level, Proximity to Roads, and Distance from the Monitor [794] Wilson WE, Mar TF, Koenig JQ
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- P085 Effect Modification of Air Pollution Effects on Arrhythmias ER visits: Gender and Age [1160] Braga G, Braga E, Zanobetti A, Martins LC, Pereira LAA, Santos UP, Braga ALF
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- P094 Psychometric Scores of Children and Methylmercury Exposure: Isolated Riverines (High Fish Consumers) versus Agrarian Communities (Non Fish-Consumers) [1336]

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- P098 School Building Conditions Potentially Related to Indoor Air Quality: A Summary of Data from the 2005 New York State Building Condition Survey [77] *Kielb CL, Lin S*
- P099 Study of the Current Status and Influence Factors of Indoor Air Pollution in Xi'an City [550] Liu J, Pan X, Guo Y

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- P105 Indoor and Outdoor BTEX Exposure in Children Living in a Petrochemical Area in Spain [843] Gonzalez Alzaga B, Rodriguez-Barranco M, Daponte A, Lacasaña M
- P106 Estimating the Effect of School Indoor Air Quality on Academic Outcomes [906] Stafford TM
- P107 Exposures to PM<sub>2.5</sub> and Polycyclic Aromatic Hydrocarbons from Burning of Incenses from Four Countries [935]

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- P108 Health Risk Assessment of Indoor Mould Exposure [960] Wiesmüeller GA, Dott W, Fischer G
- P109 Impact of Improved Cookstoves on Indoor Air Pollution and Adverse Health Effects Among Honduran Women [1024]

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- P110 Survey Measures of Indoor Air Quality: A Birth Outcomes Study [1145] Ghosh J. Wilhelm M. Ritz B
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- P115 The Cost of Health and Productivity Impacts of Indoor Air Pollution in California [1529] *Phillips TJ*

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  Bang JJ, Druweay W, Anderson YB, Barnett A, Kim D
- P118 Association of Indoor Smoking and PM<sub>2.5</sub> Level in Public Places, Seoul Korea [1649] *Lim S Sr, Lim W, Sohn H, Kim J, Lee J, Lee K*
- P119 The Relationship Between Indoor PM from Maternal Environment and Birth Outcomes Using Structural Equation Model [1678]

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- P121 Application and Evaluation of an Aggregate Physically-Based Two-Stage Monte Carlo Probabilistic Model for Quantifying Children's Residential Exposure and Dose [1039] *Zartarian V, Xue J, Tulve N, Tornero-Velez R, Glen G, Smith L*
- P122 Indoor Residential Assessment Using ConsExpo [1396] Delmaar JE, van Engelen JGM
- P123 Urinary Pesticide Metabolite Concentrations in Children and Adults and the Relationship to Environmental Concentrations Following Indoor Pesticide Applications [1449]

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- P124 Indoor Residential Assessment Using CARES® [1480]I Young B, Driver J
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- P126 LifeLine Aggregate and Cumulative Exposure Model: Advances in Predicting Residential Exposure from Multiple Pesticide Uses [1662] Chaisson CF, Jayjock M

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#### Air Pollution Exposure Assessment - I

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  Jones P, Williams R, Croghan C, Vette A, Stevens C
- P003 Assessment of Self-Pollution of School Buses with Various Retrofit Technologies [692] Phuleria HC, Larson TV, Zielinska B, Ireson RG, Davey ME, Weaver CS, Ondov JM, Hesterberg TW, Liu LJS
- P004 Chemical and Physical Characterization of Particles Emitted from Hardcopy Devices [941] Salthammer T, Uhde E, Wensing M, McGarry P, He C, Morawska L
- P005 Concentration of Airborne Viruses in Pediatrics Department Measured using Real-Time qPCR Coupled to an Air-Sampling Filter Method [1049]

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- P006 Comparison of Continuous Personal Ozone Measurements to Ambient Concentrations and Exposure Estimates from the APEX-Ozone Exposure Model [1122] Long TC, Johnson T, Capel J
- P007 Characterisation of Particulate Exposure During Fireworks Displays [1143] Joly AM, Smargiassi A, Kosatsky T, Fournier M, Dabek-Zlotorzynska E, Celo V, Servrancikx R, D'Amours R, Malo A, Brook J
- P008 Characterization of Chromium Species Distribution as a Function of Particle Size in Chromium Waste Laden Soils [1202]

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- P009 Nitrogen Dioxide Exposure Inside and Outside of Primary Schools [1225] Holland K, Kingham S
- P010 Spatiotemporal Exposure Assessment of Atmospheric Hydrogen Sulfide Produced by Industrial Hog Operations [1229]

  Allshouse WB, Hall DJ, Mills KT, Wing S, Serre ML
- P011 Contributions of Airport Activities to Air Pollution Levels in Surrounding Neighborhoods [1411] Hsu H, Adamkiewicz G, Vallarino J, Melly SJ, Spengler JD, Levy JI
- P012 Chemical and Redox Characteristics of Particulate Matter Emitted from Diesel Engine [1412] *Ho M, Park M, Yang J, Lim Y, Shin D, Kim H*
- P013 Asthmatic Children Exposure and Inhaled Dose of PM, O<sub>3</sub> and NO<sub>X</sub> [1432] *Valente J, Monteiro A, Lopes M, Martins P, Miranda A, Neuparth N, Borrego C*
- P014 Measured Pollutants and Comfort Parameters in a Commercial Aircraft on Intercontinental Flights [1462] Lindgren T, Sr.
- P015 ISEA 2008 Abstract for ECOC & Elements [1477] Yu C, Fan Z, Bonanno L, Korn L

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- P017 Nicotine Contamination in Particulate Matter Sampling [1566] Chiu Y, Hart JE, Smith TJ, Hammond SK, Garshick E, Laden F
- P018 Age of Air as an Indicator of Exposure to Particles [1638] Rim D. Novoselac A

#### Children's Environmental Health

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  Privalova LI, Katsnelson BA, Kireyeva EP, Kuzmin SV, Khrushcheva NA, Beikin YB, Zhuravleva NS, Makarenko NP, Degtyareva TD
- P021 Prenatal Exposure to Organochlorine Compounds and Thyroid Hormone Levels in a Prospective Mother-Infant Cohort Study in Valencia, Spain [729]

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- P022 Relations Between Environmental Factors and Bronchial Obstructive Phenotypes Identified Among Infants of the Paris Birth Cohort Study [771]

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- P024 German Environmental Survey for Children (GerES IV): Human Biomonitoring and Exposure via House Dust [900]

  Conrad A, Seiwert M, Schulz C, Becker K, Hünken A, Kolossa-Gehring M
- P025 The Experience in Assessing Individual Environmental Exposure of Children in the Sverdlovsk Region of the Russian Federation [934] *Kuzmin SV, Gurvich VB, Kuzmina EA, Voronin SA, Privalova LI*
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- P027 Social Factors and Nutritional Status of Children and Adolescents [1013] Sevcikova L, Novakova J, Hamade J, Jurkovicova J, Stefanikova Z, Sobotova L, Machacova E, Aghova L
- P028 Estimated Burden of Blood Lead Levels ≥5µg/dl in 1999-2002 and Declines from 1988-1994 [1030] *Iabal S, Muntner P, Batuman V, Rabito F*
- P029 The Effect of the Neighborhood Built Environment on the Diets of Urban Children [1073] Morland KB, Galvez MP, Godbold J, Liao L, Raines C, Kobil J, Siskind J, Brenner B

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  Cheong H, Kwon H, Kim E, Ha M, Hong Y, Kang D, Moon S
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- P036 Salivary Cholinesterase Activity in Children with Organic and Conventional Diets [1269] Claus Henn B, Tong Argao S, McMaster S, Padilla S
- P037 Deficit in Lung Function Growth and Exposure to Air Pollutants in Adolescents Residing in Mexico City [1279]

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- P038 Development of a Cumulative and Aggregate Exposure and Dose Model for Children [1301] Beamer P, Canales RA, Ferguson AC, Leckie JO
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- P040 Residential Concentrations of Polycyclic Aromatic Hydrocarbons and Childhood Leukemia Risk [1342] Rull RP, Gunier RB, Reynolds P, Colt JS, Nishioka M, Metayer C, Buffler PA, Ward MH
- P041 Residential Mobility During Pregnancy in the North of England [1387] Hodgson S, Shirley M, Rankin J
- P042 Exposure of Children to Chemicals, Biological Factors and Noise the German Environmental Survey on Children (Geres IV) [1395]

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	Ciesielski T, Weuve J, Lanphear B, Bellinger D, Schwartz J, Wright R

- P047 Neuropsychological Function in School-Age Children with Concurrent Mercury Exposures [1555]
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- P048 Prenatal Exposure of p,p'-DDE and Infant Neurodevelopment at 24 Months of Age: Preliminary Report [1578]

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- P051 The Relationship between Ambient Air Pollution and Children's Respiratory Diseases and Symptoms in China [1706]

  Zhang J, Wu Y

#### Reproductive and Developmental Effects of Air Pollution

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- P053 Air Pollution and the Risk of Oral Clefts [727] Hwang B, Jaakkola JJK
- P054 A Case-Crossover Study of Air Pollution and Preterm Birth in Taiyuan, Shanxi, China [745] *Zhao B, Zhang Y*
- P055 Maternal Exposure to Carbon Monoxide and Risk of Term Low Birth Weight Among Singleton Births, Between 1997 and 2005 in Denver, Colorado [755]

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#### Traffic

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   P066 Modeling Air Pollution of Vehicular Traffic in Szeged, Southern Hungary [555]
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- P067 Traffic-Related Air Pollution and Socioeconomic Status: A Spatial Environmental Equity Study on a Small-Area Scale [611]

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- P068 Genomic DNA Methylation, Cardiovascular Disease, and Short-Term Exposure to Traffic Air Pollution [837]

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- P070 The Current Situation about the Traffic Pollution of CO in Xi'an City and the Analysis for the Reasons [968]

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- P071 Urinary 1-Hydroxypyrene in Young Children is Associated with Exposure to Polycyclic Aromatic Hydrocarbons Due to Vehicle Traffic and Indoor Sources [990]

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- P073 Estimating On-Road and Near-Road Exposures Due to Traffic Congestion [1103] *Zhang K, Batterman S*

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#### **Work and Environment**

- P098 Manganese Superoxide Dismutase and Catalase Genetic Polymorphisms and Risk of Asbestosis [76]

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  Cheng T, Chen P, Hsieh H, Wong R, Du C
- P102 High Urine Specific Gravity among Clean Room Workers [735] Su S, Guo H

P103 Protective Effect Of N-acetyl-cysteine Against Noise-Induced Temporary Threshold Shift Among Workers with Different Glutathione S-Transferase M1, T1, P1 Polymorphisms [768] Lin Cheng-Yu, Wu JL, Tsai PJ, Shih TS, Guo YL

- P104 Will Smoking Rate Increase with Work Stress Among Female Shift Workers in High-Tech Industry in Southern Taiwan [778]

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- P105 Skin Barrier Alteration Associated with Chromium Exposure and Smoking Amongst Cement Workers [842]

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- P113 Health Risk Profile of Vietnamese Nail Salon Workers in Alameda County, California [1052] Quach T, Nguyen D, Doan-Billings P, Okahara L, Fan C, Reynolds P
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- P116 Potential Preparation Artifacts Associated with Historical Preparation of Joint Compound Samples and Reported Airborne Asbestos Concentrations [1330] Sheehan P, Brorby G, Berman D, Holm S, Kolk B, Kolk A, Floyd M
- P117 The Impact of Occupation-Related Noise Exposure on Hearing Thresholds in Middle-Aged and Elderly Men: The Normative Aging Study [1349]

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- P123 Knowledge about Universal Precautions in Medical Interns of Nepal and How They Respond to Occupational Accidents [1629]

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Contributed Posters Wednesday

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- P003 Air Quality in Subway Platforms and Carriages of Six Major Cities [848] Invernizzi G, Ruprecht A, Bettoncelli G, Sasco A
- P004 Nitro-Polycyclic Aromatic Hydrocarbon Concentrations in Urban Air Particulate Matter and Their Implications for Source Apportionment in Shenyang, China [1009]

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- P006 Airborne and Urinary Exposure to Polycyclic Aromatic Hydrocarbons in a Population of Pregnant Women: A Pilot Study in Hamilton, Canada [1153]

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- P010 A Review of Historical Ambient Airborne Asbestos Concentrations in Cities and Buildings: 1950s to the Present Day [1274]

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- P011 Exposures of a Panel of Senior Citizens with COPD to Multiple Air Pollutants in Los Angeles [1283]

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- P013 Optimization and Evaluation of a Sampling and Analytic Method for the Measurement of Hexavalent Chromium in Ambient Air [1331]

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- P016 Seasonal Variation of Benzo(A)Pyrene in Suspended-Particle in Belgrade City, Serbia [1430] Matic-Besarabic S, Filipovic A, Jovašević-Stojanović M
- P017 Kitchen CO and PM Measurements from Biomass Smoke in Highland Guatemala [1522] Northcross AL, Chowdhury Z, Canuz E, Johnson R, Smith K
- P018 An Approach for Evaluating the Operational Locations of Portable Combustion Devices and Mechanical Grinders to Obviate the Potential for Residential Impacts When Used to Process Waste in the Aftermath of Destructive Storms and Other Natural Disasters [1565]

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- P020 Inhalation Exposure and Accessibility of Source in the Vicinity of Human Body [1635] Rim D, Novoselac A
- P021 Personal Exposures to Volatile Organic Compounds in Urban Environments of Tianjin, China [1682]

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- P033 Relationships Between Weather, Myocardial Infarction and Stroke in Moscow, Russia [889] Revich BA, Shaposhnikov DA
- P034 The Impact of Cold Wave on Mortality in Seoul, South Korea from 1994 to 2006 [1054] *Ha J, Yoon J, Kim H*
- P035 Mapping Community Determinants of Heat Vulnerability [1184] Reid CE, O'Neill MS, Brines SJ, Gronlund C, Diez-Roux AV, Brown DG, Schwartz J
- P036 Summer 2007 Heat Waves in Rome: Results of the Prevention Programme Based on General Practitioner Surveillance [1243]

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- P037 Extreme Temperature Effects: A Study of the Effects of Heat, Cold, and Heat Waves on Human Mortality in 107 U.S. Cities [1317]

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- P038 Heatwaves and Mortality in Dublin, Ireland [1404] Pascal M, Schwartz J, Clancy L, Goodman P
- P039 The Decision-Making Rationale in the French Heat Watch Warning System [1419] Pascal M, Laaidi K
- P040 Determinants Characterizing Vulnerability for Island-Wide Cardiovascular and Respiratory Mortality at Extreme Temperatures in Taiwan [1707]

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- P044 Sources of Uncertainty in Pesticide Postapplication Exposure Estimates [798] Mathrani VC, Cochran RC
- P045 Relationships Between Environmental Concentrations and Measured Urinary Biomarker Levels [809]

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- P046 Combined Sample Preparation Methods for Selected Pyrethroids, Organophosphates and Polybrominated Diphenyl Ethers in Surface Wipes and Passive Air Samples [858] *Clifton MS, Weathers WS, Colon M, Hines AP, King AS, Smarr MM*
- P047 A Novel Screening Model for Evaluating Exposures to Pesticides Applied as Components of Chalk [882]

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- P048 Estimation of Prenatal Exposure to Glyphosate-Based Formulations Using Maternal Exposure Assessment Techniques a Preliminary Investigation [920]

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- P050 Comparison of Exposure Estimates for Chlorpyrifos Using Three Different Sets of Algorithms [1027]

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- P058 Cumulative Risk Estimation in Humans after Potential Oral Exposure of Three N-methyl Carbamates: Carbaryl, Aldicarb, and Carbofuran [1314]

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- P064 Urinary Pesticide Concentrations and Their Relationship to Air and Dust Concentrations and Household Predictors [1544]

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- P065 Development of a High Performance Liquid Chromatography Method to Analyse *p*-Nitrophenol and *p*-Nitrocresol in Urine of Farmworkers Exposed to Parathion, Methyl Parathion and Fenitrothion [1547] *Lima JS, Moreira JC, Meyer A*
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- P068 Occupational Exposure to Methomyl in California [1603] Wilbur M, Frank J
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- P072 A Situational Residential Chlorpyrifos Biomonitoring Study: Excessive Exposure Triggered by Intensive Activity and Previously Unstudied Floor Coverings [1655]

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- P073 Concentrations of Toxic Chemicals in PVC Shower Curtains [752] Camann DE, Zuniga MM, Yau AY, Lester S, Schade M
- P074 Phthalate Concentrations Among Pregnant Women in Jerusalem, Israel: Results of a Pilot Study [764]

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- P076 Environmental Exposures and Breast Development in Urban Minority Girls [1041] Wolff MS, Teitelbaum SL, Galvez M, Brenner B, Liao L, Britton J, Pfeiffer C, Calafat AM
- P077 Phthalates, Polycyclic Aromatic Hydrocarbons and Perchlorate Associations with Thyroid Hormones During Pregnancy: Results from a Pilot Study [1209]

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- P079 Prenatal Phthalate Exposure and Decrease in Ano-Genital Distance in Mexican Male Newborns [1323]

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- P083 Variability of Phthalate Metabolites Determined in Spot Urine and Fractionated 24-Hour Urine Samples [1523] zur Nieden A, Stilianakis NI, Koch HM, Eikmann TF, Herr CEW

## Respiratory Epidemiology

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P085	Associations of Air Pollution on Small Airway Function, Inflammation and Oxidative Stress
	in Asthmatic Children [614]
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- P086 Acute Cardio-Respiratory Effects of SO<sub>2</sub> and NO<sub>2</sub> Exposure in Southern Israel a Case-Control Design for Data Collection and Analysis [718]

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- P087 Relationships of Ambient Nitric Oxide and Exhaled Nitric Oxide (by Either Real-Time On-Line or Delayed Off-Line Measurement) in an Epidemiologic Survey of Schoolchildren [821] Linn WS, Rappaport EB, deVilliers TM, Avol EL, Berhane KT, Gilliland FD
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- P090 Effect of Particulate Matter in Asian Dust on the Peak Expiratory Flow Rate of the Schoolchildren in Inner Mongolia of China [1070]

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- P091 The Short-Term Impact of Fine Particulate Air Pollution and the Hospital Admission for Respiratory Diseases in Alta Floresta- Amazon Forest [1164] Hacon SS, Ignotti E, Ornelas C, Junger W, Mourão D, Castro H
- P092 Respiratory Health Impact of Diesel Exhaust from Truck Traffic Among Adults and Asthmatic Children in Trans-Alpine Highway Valleys in Switzerland [1180]

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- P093 The Health Effect of Chromium Containing Cement Dust Assessed by Combined Methods of Epidemiologic and Toxicologic Approach [1188]

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- Prenatal Ambient Air Pollution Exposure and Respiratory Health in Early Life: Findings from the UCLA EPOS Cohort [1213]

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- P095 Lung Function Growth and Small Airways Structure and Function Assessed by HRCT [1224] de Villiers TM, Storness-Bliss C, Coxson H, Gilliland FD
- P096 Reported Ill Effects and Perceptions of the Dangers of Passive Smoking Among Indoor and Outdoor Workers in Bars in Ibadan, Nigeria [1242]

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- P097 Effect of Air Pollution on Lung Function in Schoolchildren in Alta Floresta, Mato Grosso, Brazil [1668] Viana LS, Hacon S, Castro H, Ignotti E, Artaxo P, Leon AP
- P098 The Survey on the Indoor Air Quality and Its Health Impact in Rural North China [1710] *Zhang J, Zeng Y, Liu L*

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P099	Costs of Public Health Adaptation to Climate Change [75] <i>Ebi KL</i>
P100	Environmental Health Indicators for the Metropolitan Area of Guadalajara, Mexico [705] <i>Pinal G, Curiel A, Garibay M</i>
P101	Omega-3 Fatty Acid and Methylmercury Effects on Intelligence Quotient (IQ) in Children Due to Prenatal Fish Exposure [833] Leino OE, Tuomisto JT
P102	EPA's Community-Friendly Exposure and Risk Screening Tool [1018] Zartarian V, Schultz B, Lakin M, Smuts M
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P104	Incorporation of the Infant Breast Milk Exposure Pathway into an Exposure and Risk Assessment Model [1249]  Dederick EJ, Burch DF, Cleland JC, Shapiro AJ, Smith R
P105	Man Made but Woman Consumed? Gender Differences in Risk Perception of Nanotechnology [1364] Lin Y, Cheng T, Chou K
P106	Is Epidemiology the Key to Cumulative Risk Assessment? [1416] Levy JI
P107	Comparative Health Risk Assessment and Economic Valuation of Environmental Health Damage in Chennai, India. [1438]  Sambandam S, Ramaswamy P, Balakrishnan K
P108	A Case Study of Cumulative and Background Risk in an Urban Environment [1588] Greene CW, Dymond M, Pratt G, Connell P, Kain K
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P109	Urban/Rural Differences in Occurrence of Neural Tube Defects in Texas [655] Luben T, Messer L, Mendola P, Carozza S, Horel S, Langlois P
P110	Evaluation of Factors Associated with Occurrence of Congenital Malformations in an Area Close to a Large Municipal Dump Site in Cali, Colombia [813] Mendez F, Ariza Y, Isaza C, Benitez N, Martinez G, Orejuela Y, Pachajoa H
P111	The Influence of Community Noise Exposure on Cardiovascular Risk [857] Sobotova L, Jurkovicova J, Stefanikova Z, Sevcikova L, Rapantova H, Aghova L
P112	Social Stress and Susceptibility to Concentrated Particulate Air Pollution (CAPs) in Rats [918] Clougherty JE, Rossi CA, Lawrence J, Long M, Diaz E, Koutrakis P, Godleski JJ
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P114	Factors Important to Defining Susceptibility of the Aging Population to the Effects of Environmental Exposures to Environmental Pollutants [974]  Raymer J, Marriott B, Olsho L, Michael L, Fennell T, J Busby-Whitehead, Tulve N, Thomas K

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Santiago LM, Novaes CO, Mattos IE

- P116 Stability of Socio-Economic Deprivation Index with Respect to Time from the Last Census and Spatial Scale of Its Use [1259]

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- P117 Environmental Chemical Hazards and Their Impact on Senior Citizens [1270]

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  Schröter-Kermani C, Gies A, Wiesmüller GA
- P118 Neighborhood Environmental Health and Risk Factors for Type 2 Diabetes in the English Longitudinal Study of Ageing [1315]

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- P119 Income Inequality as an Effect Modifier of the Association Between PM<sub>10</sub> and Self-Rated Health a Multi-Level Study [1346]

  Lim Y, Kim H, Yi O, Kim M, Cho Y
- P120 Environment, Equity, and Health the Rome Longitudinal Study (EEH-RoLS) [1435] Cesaroni G, Badaloni C, Stafoggia M, Forastiere F, Perucci CA
- P121 Detecting Demographic Variations of AIDS Mortality in Florida- a New Application of Spatio-Temporal Analysis [1453]

  Chiu Y, Hsu CE, Nkhoma ET, Chuang H

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	Milan, Italy [575]
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- P002 Feasibility of a Detailed Mapping of Urban Particulate Matter Pollution with Real Time Portable Analyzers: Detecting Exposure "Hotspots" in the City of Milan [595]

  Invernizzi G, Sasco AJ, Bettoncelli G, Ruprecht A
- P003 Use of GIS and Time-Activity Matrix for Assessment of Personal NO<sub>2</sub> Exposure in Pregnant Women from INMA-Valencia, Spain [652]

  Estarlich M, Iñiguez C, Llop S, Esplugues A, Ballester F
- P004 Comparison of Land Use Regression Models for NO<sub>2</sub> and VOC Exposure Studies in Three Cities [793]

  Mukerjee S, Smith L, Chung K, Johnson M, Stallings C, Neas L
- P005 Characterization of the Spatial Impact of Particles Emitted from a Cement Facility to Outdoor Dust in Surrounding Community [861]

  Yu C, Fan Z, Lioy P
- P006 Strategies for Improving Exposures and Exposure Distributions: Air Pollution and Environmental Justice in the South Coast [883]

  \*Lundquist KR, Marshall JD\*
- P007 Data Assimilation for Epidemiologic Air Exposure Assessment [898] Rappold AG
- P008 Formaldehyde Emissions from Wood Products and Concerns about the Cancer Hazard: Compliance with California's Proposition 65 and Airborne Toxic Control Measure [904] Gaffney SH, Unice KM, Le MH, Kreider ML
- P009 Constructing and Validating Modelled Concentration Surfaces for Black Smoke and Sulphur Dioxide Across GB, 1955-2001 [949]

  Morris C, Hansell A, Gulliver J, Vienneau D, Briggs D
- P010 Time-Series Analysis of Air Pollution and Cardiovascular Mortality in Beijing, China [951] Pan X, Yang M, Fan T
- P011 Application of GIS Mapping Tools to Prioritize Community Air Pollution Issues [961] Hammond D, Barzyk T, Conlon K, Zartarian V, Schultz B
- P012 Predicting Chronic Fine and Coarse Particulate Exposures Using Spatio-Temporal Models for the Northeastern and Midwestern U.S. [1116] *Yanosky JD, Paciorek CJ, Suh HH*
- P013 Health Impact Assessment of Locally Emitted Particulate Matter in Tallinn Using Clustering and Modeling Techniques [1176]

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P014	Evaluation of Land-Use Regression Models in Detroit, Michigan [1218]
	Johnson MM, Smith L, Mukerjee S, Williams R, Hudgens E, Stallings C, Özkaynak H, Vette A,
	Croghan C, Neas L

- P015 Accuracy Assessment of Long-Term Exposure Estimation Using Modern Geostatistics [1236] Yu H, Wang C, Chen J, Christakos G
- P016 Are Data from Air Quality Monitoring Networks Relevant to Estimate Exposure in Epidemiological Studies? A Comparison with an Exposure Model Based on a Fine-Scale Measurement Campaign [1267]

  Caïni, F, Marquis N, Hulin A, Galineau J, Bohet A, Slama R
- P017 Air Pollution Characterization Based on Air Masses: Implications for Human Exposures [1281] Meng Q, Pinto J, Hanna A, Xiu A, Zhu Z, Robinson P, Yeatts K
- P018 A Land Use Regression Model for Predicting PM<sub>2.5</sub> in Mexico City [1285]

  Texcalac Sangrador JL, Escamilla Nuñez C, Barraza Villarreal A, Hernández Cadena L,

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- P019 Longitudinal Evaluation of Spatial Exposure Models for El Paso, TX, USA [1287] Myers OB, Gonzales M, Smith L, Mukerjee S
- P020 Human Health Risk Assessment from Air Pollution Caused by Stationary Sources in Industrial Cities of Ukraine [1569]

  Turos O, Brody M, Caldwell J, Golub A, Kartavtsev O, Petrosian A, Voznyuk O
- P021 Spatial and Temporal Variation of Ambient Hexavalent Chromium in Urban Communities in Paterson, New Jersey [1596]

  Fan Z, Yu C, Buckley B, Bonanno L, Korn L
- P022 An Integrated Exposure and Risk Model for Benzene in the Ambient Air [1643] Karakitsios S, Sarigiannis D, Gotti A, Kassomenos P, Pilidis G

## Air Pollution-Related Mortality and Morbidity

- P023 Air Pollution Occupational and Environmental Exposures to VOCs and other Pollutants in Prague and Biomarkers of Oxidative Stress [627]

  Svecova V, Rossner P Jr, Sram R
- P024 The Effects of Fine Particulate Matter on Daily Mortality in Japan: Comparison of Case-Crossover Analysis and Time-Series Analysis Using Generalized Additive Model [724] *Omura K, Ono M, Takeuchi A, Nitta H*
- P025 Effects of Asian Dust Storm Events on Daily Admissions for Asthma and Stroke in Seven Metropolitans of Korea [853]

  Lee EC, Leem JH, Hong YC, Kim H, Kim HC
- P026 Time-Series Analysis of Particulate Air Pollution and Mortality in Four Chinese Cities [921] Zhang Y, Pan X, Zhou M, Yu F, Zhao Y
- P027 A Time-Series Study on the Effects of PM<sub>2.5</sub> on Daily Mortality in Shanghai [938] Song W, Guo H, Dai H
- P028 Short Term Effects of Fine and Ultrafine Particulate Matter on Mortality in Rochester, NY, USA [1032] von Klot S, Franklin M, Kasumba J, Schwartz J, Hopke P

P029	Long-Term Exposure to Particulate Matter and All-Cause and Cause-Specific Morality in Japan
	Shizuoka Study [1046]
	Yorifuji T, Kashima S, Suzuki E, Takao S, Tsuda T, Sugiyama M, Doi H

- P030 The Global Burden of Anthropogenic Ozone and Particulate Matter Air Pollution on Premature Human Mortality [1154]

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- P031 Associations Between the Ratio of Fine and Coarse Particles of Ambient Air and Daily Mortality in Seoul, Korea [1365]

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- P032 Health Impact of Air Pollution at Regional Level (Lombardy Region, Italy) [1474] Grillo P, Baccini M, Bovis F, Catelan D, Pesatori AC, Bertazzi PAB, Biggeri A
- P033 Long-Term Ambient Multipollutant Exposures and Mortality [1560] Hart, JE Ryan L, Dockery DW, Smith TJ, Garshick E, Laden F
- P034 Brazilian Amazon: Priority Areas to Monitoring the Effects of the Air Pollution to the Human Health [1628]

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## **Exposure Assessment – Spatial Methods**

- P035 Methods for Space/Time Mapping of HIV Incidence Rates in North Carolina [679] Allshouse WB, Hampton KH, Leone PA, Miller WC, Serre ML
- P036 Hazard Identification of Environmental Pollutants by Combining Results of Ecological and Biomarker Studies: An Example [700]

  Schreinemachers DM
- P037 Spatio-Temporal Modelling of Long-Term Exposure to Outdoor Black Smoke [834] Dadvand P, Rushton S, Rankin J, Pless-Mulloli T

## **Exposure Science**

- P038 Development and Evaluation of a Field Protocol for Real-Time Measurement of Formaldehyde Emission from Composite Wood Products [1034]

  Zhu K, Miller R, Waldman J, Williams J, Hawkins D, Baker L, Stein A
- P039 Development of Korean Exposure Factors Handbook [1127] Jang JY, Jo SN, Kim SJ, Kim S, Cheong HK
- P040 Evaluation and Calibration of Continuous Real-Time Particle Monitors for Fine Particle Exposure Analysis [1149]

  Jiang R, Acevedo-Bolton V, Cheng K, Ott W, Klepeis N, Hildemann L
- P041 Water Adherence Factors for Human Skin [1316] Gujral JS, Proctor DM, Su SH, Fedoruk MJ
- P042 Estimation of Skin Permeability Coefficients for Aqueous Chloroform from the Gordon et al. in vivo Human Trials: Impact on Estimated Relative Contribution of Dermal Exposure [1688] *Stumbaugh KL, Shirai JH, Kissel JC*

P043 Use of Intake Fractions and Blood Half-Lives in Combination with Toxic Equivalency Factors (TEFs) to Evaluate Multi-Compound Emissions and Blood Concentrations [1693]

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  Tsai FC, Sandy MS, Zeise L
- P046 The Effect of Chronic Lead Exposure on Brain Magnetic Resonance Spectroscopy [576] Chiu Y, Chuang H, Chen Y, Hsieh T, Chen H
- P047 A Simple Biologically-Based Dynamic Model for Beryllium Sensitization [660] Stefaniak AB, Virji M, Day G, Schuler C, Tinkle S
- P048 Development of Historical Exposure Estimates for an Epidemiologic Study of Beryllium Sensitization and Chronic Beryllium Disease at a Beryllium Production Facility [663] *Virji MA, Schuler CR, Stanton ML, Day GA, Stefaniak AB, Kent MS, Kreiss K*
- P049 The Occurrence of Heavy Metals in House Dust from Selected Urban Residential Homes [766] *Nkala BA, Gqaleni N*
- P050 Influences of Diet and Indoor Environment on Infant Manganese Exposure [868] Zota AR, Ettinger AS, Schwartz J, Wright RO, Hu H, Spengler JD
- P051 Levels of Cadmium and Lead in Human Placentas from Puerto Rico [894] Lebrón MM, Rodríguez-Sierra CJ, Ortiz AP, Mansilla-Rivera I
- P052 Spatial Analysis of Soil Lead Concentrations in Los Angeles, California, USA [901] Wu J, Kleinman M, Edwards R
- P053 Evaluation of As, Cd, Cu and Ni Exposure and Health Risks in People Living Near a Cu-Ni Smelter [940]

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- P054 The Influences of Municipal Solid Waste Incineration on the Biological Mercury Exposure [942] Kim GB, Lee JH, Kang TS, Park HJ, Kim DS
- P055 Low-Dose Heavy Metal Exposure and Aging in Humans [1008] Lang IA, Melzer D
- P056 Case Study of Public Health Intervention at an Urban Agriculture Site in Newcastle-Upon-Tyne, UK [1010]

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- P057 An Integrated Spatiotemporal Approach to Improve Mercury Estimation and Exposure Assessment [1017]

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- P058 Development of Prediction Models for Bone Lead Levels in a Community-Based Population [1214]

  Xia X, Park, Mukherjee B, Weisskopf M, Nie H, Sparrow D, Hu H

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	Nanjid K, Erdenebaatar E, Vanya D, Badrakh B, Ochir C	

- P060 Estimation of the Exposure Levels of Heavy Metals by Traditional Herbal Medicines in Korea [1380]

  Yoon E, Hwang M, Choi H, Kim J, Son B, Yoo T
- P061 Contribution of Mexican Health Sector to Global Pollution by Mercury. Risk Assessment [1382] Sanin L
- P062 Environmental, Behavioral, and Dietary Factors Related to the Manganese Exposure of Early School Age Children [1394]

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- P063 Urinary Cadmium and Cerebral Vascular Accident [1509] Peters JL, Perlstein T, Perry MJ, McNeely E, Weuve J
- P064 Determination of the Population at Risk of Heavy Metal Exposure Associated with a Former Zinc Smelter [1517]

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- P065 Cumulative Exposure to Lead and Risk of Parkinson's Disease [1591] Weisskopf MG, Weuve J, Nie H, Saint-Hilaire M, Sudarsky L, Simon DK, Hersh B, Schwartz J, Wright RO, Feldman RG, Hu H
- P066 The Effect of Maternal Lead Level on Fetal Growth and Pregnancy Outcome in MOCHE Study, Korea [1666]

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- P067 The Association Between Blood Cadmium, Lead, and Mercury Levels in the U.S. Population and Various Demographic Factors [1667] Scott L, Nguyen LM, Harris M
- P068 Nutrient Intakes May Lower Oxidative Stress Among Those with Low Blood Lead Concentration [1695]

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  Han D, Kim J, Lee K, Bennett DH, Ritz B, Cassady D, Hertz-Picciotto I
- P070 Influence of Activity on Transfer of Pesticides from Contaminated Formica® to Foods [1059] Melnyk LJ, Hieber T, O'Bryan E, Morgan J, Vonderheide A
- P071 Comparison of Alternative Monitoring Methods for Activity/Location Data [1101] Whitmore RW, Kizakevich P, Levine B
- P072 An Evaluation of Time-Location Data: The Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air) [1543]

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- P073 Between-Community Comparisons of Housing Characteristics and Location-Time-Activity Patterns of Elderly Participants in the Cardiovascular Health Study [1653] Margolis HG, Stoecklin-Marois MT, Mitchell DC, Westerdahl D, Enright P, Robbins JA

## **Petrochemicals**

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	Garibay Chávez MG, Curiel Ballesteros A, Pinal-Gómez G, Guerrero de León AA, Farías-
	Serratos F, Ruiz- Montero AP

- P075 Assessing Inter-Generational Transfer of Brominated Flame Retardants [747] Joseph AD, Terrell ML, Small CM, Cameron LL, Marcus M
- P076 Effect of Prenatal Exposure to Dioxins on Size for Gestational Age [760] *Konishi K*
- P077 Dioxins and Cardiovascular Mortality: A Review [811] Humblet O, Birnbaum L, Rimm E, Mittleman MA, Hauser R
- P078 Evaluation of Background Persistent Organic Pollutant Levels in Human from Taiwan: Polychlorinated Dibenzo-*P*-Dioxins Dioxins, Dibenzofurans, and Biphenyls [897] *Hsu J, Lee C, Su H, Liao P*
- P079 Assessing Aggregate Human Exposure to Toluene In Europe [1021] Vardoulakis S, Jovašević-Stojanović M, Vermande E, Schuur G, Jovic-Stosic J, Chiado-Piat S, Leonardi G, Fletcher T
- P080 Polychlorinated Biphenyls in Human Milk [1084] Aleksandryan A, Bunatyan Y, Khachatryan A
- P081 Body Burdens of HpCDF Released from an Industrial Source in Southern Finland [1094] Jantunen MJ, Kiviranta H, Loh M, Valentini M
- P082 Exposure Assessment for Trace Contaminants in Consumer Products [1139] Robison SH, Cowan-Ellsberry C
- P083 The University of Michigan Dioxin Exposure Study: A Follow-Up Investigation of Cases with High Serum Concentrations of 2,3,4,7,8-PENTACDF [1211]

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- P084 Associations Between PBDE Body Burden and Thyroid Hormone Levels in Pregnant Women Participating in the CHAMACOS Study. [1228]

  Chevrier J, Harley K, Bradman A, Sjodin A, Holland N, Fenster L, Eskenazi B
- P085 Analysis of Age-Dependent Congener Patterns of PCDD/PCDFs in General Population of Taiwan Using Multivariate Statistical Method [1358]

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- P086 Variable Selection Methods Influence the Identification of Factors That Predict Serum Dioxin Concentrations in Michigan, USA [1377]

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- P087 Is Oxidative Stress from Environmental Chemical Exposure Causing Insulin Resistance in Urban Population? [1385]

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- P088 Human Contamination to Organochlorine Pesticides and Birth Weight Distibution in Cidade Dos Meninos, State of Rio De Janeiro, Brazil [1478]

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	Compounds Measured in Residents of Washington County, Maryland, 1974 and 1989 [1494]
	Ward CE. Helzlsouer. Goldman KL

- P090 Improved Estimates of Global Transport of DDT and Their Implications Using Sensitivity and Bayesian Analyses [1526]

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- P091 Environmental and Biological Levels for PBDEs and Other Organic Compounds [1571] Bennett D, Moran R, Nishioka MG, Hertz-Picciotto I
- P092 Evaluation of Infant Exposure to Persistent Organic Pollutants Using Physiologically-Based Pharmacokinetic Modeling [1589]

  Verner M, Ayotte P, Muckle G, Dewailly É, Charbonneau M, Haddad S
- P093 Level of Perfluorinated Chemicals in Maternal Blood, Cord Blood, and Breast Milk in Korea [1686]

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- P094 Exposure to Persistent Organic Pollutants and Myocardial Infarction: Can Obesity Modify the Atherogenic Effect of Lipophilic Compounds? [1687]

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- P096 Proximity to Transmission Lines and Potential Exposure to Electromagnetic Fields [743] Habermann M, Gouveia N
- P097 Effects of Environmental Noise Exposure on Ambulatory Blood Pressure in Healthy Adults [757] Chang T, Lai Y
- P098 The Study of Hearing Loss Among MP3 Player Users [758] Chang S, Chen W, Wang C
- P099 Occupational EMF and Leukemia and Brain Cancer: An Update to Two Meta-Analyses [919] Vergara XP, Kheifets L, Monroe J, Mezei G, Afifi AA
- P100 Radiofrequency Electromagnetic Fields in Our Everyday Environment: Can We Perceive It? [1003]

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- P101 Exposure to High Levels of Magnetic Fields and the Risk of Poor Sperm Quality [1087] Li D, Yan B, Li Z, Gao E, Miao M, Gong D, Weng X, Yuan W
- P102 Wind Turbines and Noise: Is There a Minimal Siting Distance? [1136]

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- P103 Radiation Levels in Environmental Samples: Health Implications for the Population Living in an Enhanced Natural Radiation Area in Monte Alegre, State of Para, Brazil [1429]

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- P104 Annoyance Analysis Based on EU Strategic Noise Mapping in the Czech Republic [1447] Michalik J, Volf O, Slachtova H, Snajdr K, Rihova K, Vit M

# Pregnancy, Early Life Exposures and Developmental Effects

- P105 The Critical Time Windows for the Effect of Black Smoke on Birth Weight [628] *Ghosh R, Glinianaia S, Rankin J, Pearce MS, Pless-Mulloli T*
- P106 Obesity Linked to the Expression of Genes that Code for Enzymes Involved in Sex Steroid Biosynthesis [916]

  Yousefi M, Karmaus W, Mudd LM, Landgraf J, Mickuki D, Haan P, Zhang J, Osuch J
- P107 The Hygiene Hypothesis in Juvenile Idiopathic Oligoarthritis: A Case-Control Study [937] Radon K, Windstetter D, Poluda D, Häfner R, Michels H
- P108 Residential Outdoor NO<sub>2</sub> Levels During Pregnancy and Birth Weight and Length in the INMA Cohort in Valencia, Spain [970]

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- P109 Association Between Maternal Serum Concentration of Folic Acid and Infant Birth Weight: Hokkaido Birth Cohort Study on Environment and Child Health in Japan [1241] Yuasa M, Yoshioka E, Ban S, Kurahashi N, Sata F, Minakami N, Endo T, Sengoku K, Kishi R
- P110 DNA Methylation Profiles of the 11-beta HSD2 Promoter are Related to Childhood and Lifetime Trauma in Pregnant Women: Project ACCESS [1496]

  Wright RJ, Baccarelli A, Franco Suglia S, Bollati V, Tarantini L, Schwartz J, Wright RO
- P111 Effects of Pregnant Women's Exposure to Bisphenol A on Oxidative Stress [1699] Park E, Ha E, Park H, Ha M, Kim Y, Oh S, Park M, Kim H, Hong Y

#### **Tobacco**

- P112 Smoke Free Law should be Comprehensive to be Effective [619] Lee L, Hahn EJ, Robertson HE, Lee S, Vogel S
- P113 mokeless Tobacco and School Children [777] Jayakumary M Sr, Sreedharan J, Divakaran B
- P114 Secondhand Smoke In Casinos: Nonsmokers' Exposure, Dose, and Risk [975] Repace J
- P115 Wipe Sampling for Nicotine as a Marker of Environmental Tobacco Smoke Contamination of Surfaces [1099]

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