

14:00–17:10

AFTERNOON BREAKOUT SESSION

ROOM 4

**Current Issues Regarding Human Health Risks Posed
By Dioxin Like Compounds — Part 1**

Chairs: Glenn Rice, Jeff Swartout

- 14:00** AN OVERVIEW OF EPA'S REANALYSIS OF KEY ISSUES RELATED TO DIOXIN TOXICITY AND RESPONSE TO NAS COMMENTS
P.Preuss **1582**
- 14:20** THE APPLICATION OF STUDY SELECTION CRITERIA TO TCDD EPIDEMIOLOGIC STUDIES AND ANIMAL BIOASSAYS FOR DEVELOPMENT OF A REFERENCE DOSE AND CANCER ORAL SLOPE FACTOR
L.Teuschler **1583**
- 14:40** OVERVIEW OF DIOXIN KINETICS AND APPLICATION OF DIOXIN PHYSIOLOGICALLY-BASED PHARMACOKINETIC (PBPK) MODELS TO RISK ASSESSMENT
H.El-Masri **1584**
- 15:00** DESIGN AND APPLICATION OF A PHYSIOLOGICALLY-BASED PHARMACOKINETIC (PBPK) MODEL FOR TCDD DOSE-RESPONSE MODELING AS A TOOL FOR HUMAN RISK ASSESSMENT.
C.Emond, M.DeVito, L.Birnbaum **1562**
- 15:20** **Coffee Break**
- 15:50** THE U.S. EPA'S DRAFT REFERENCE DOSE (RfD) FOR 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN (TCDD)
J.Swartout **1588**
- 16:10** CANCER CLASSIFICATION AND MODE OF ACTION FOR 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN (TCDD)
J.Hess-Wilson **1587**
- 16:30** THE U.S. EPA'S DRAFT ORAL SLOPE FACTOR (OSF) FOR 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN (TCDD)
G.Rice **1585**
- 16:50** DEVELOPMENT OF ILLUSTRATIVE ORAL RfDS FOR 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN (TCDD)-INDUCED CARCINOGENESIS
B.Hawkins **1586**
- 17:10** FEASIBILITY OF DEVELOPING A QUANTITATIVE UNCERTAINTY ANALYSIS FOR 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN (TCDD) DOSE-RESPONSE MODELS
R.Cooke **1590**

SPONSORED SESSION



14:00–17:10

AFTERNOON BREAKOUT SESSION

ROOM 5

**Environmental Forensics — State of Knowledge in
Determining the Sources & Fate of Organohalogen
Compounds in the Environment**

Chairs: Court Sandau, Bill Luksemburg

- 14:00** PCDD/F FINGERPRINTING WITH 17 CONGENERS - WHAT ABOUT THE OTHER 193?
W.Shields, Y.Tondeur, J.Hart, M.Edwards, L.Benton, J.Pietari **1450**
- 14:20** ENVIRONMENTAL RELEASE OF DIOXINS FROM RESERVOIR SOURCES DURING BEACH NOURISHMENT PROGRAMS
Y.Tondeur **1097**
- 14:40** DETERMINATION OF SITE-SPECIFIC PCDD/PCDF AMBIENT SOIL CONCENTRATIONS AT A FORMER SAWMILL SITE
S.Huntley, E.Osborn, P.Goodrum, L.Harrington, B.DeShields, R.Hilarides, S.Holm **1162**
- 15:00** FUZZY-C-MEANS CLUSTERING: AN ALTERNATIVE TO PCA-BASED RECEPTOR/MIXING MODELS FOR PCDD/F FINGERPRINTING
G.Johnson, R.Horsak, A.Gary **1669**
- 15:20** **Coffee Break**
- 15:50** COMPREHENSIVE FINGERPRINTING OF CHEMICAL MIXTURES FOR ENVIRONMENTAL AND BIOLOGICAL FORENSICS
D.Patterson, G.O'Sullivan, C.Sandau **1667**
- 16:10** CONGENER-BASED ANALYSIS OF THE WEATHERING OF PCBs IN PAPER MILL SLUDGE
T.Saba, P.Boehm **1524**
- 16:30** SOURCE DIFFERENTIATION OF CHLORINATED COMPOUNDS IN THE ENVIRONMENT ON THE BASIS OF CARBON, CHLORINE AND HYDROGEN ISOTOPES.
P.Philp, T.Kuder **1579**
- 16:50** EVIDENCE FOR EXTENSIVE DECHLORINATION OF PCBs IN SEWERS, LANDFILLS, AND CONTAMINATED GROUNDWATER
L.Rodenburg, S.Du, D.Fennell, G.Cavallo **1018**



DAY AT A GLANCE

- 8:30 PLENARY** **ROOM 4**
 Omic Examination of the Hepatic Mode of Action of 2,3,7,8-Tetrachlorodibenzo-p-dioxin:
 A Species Comparison with Risk Assessment Implications
 Tim Zacharewski
- 9:15 COFFEE BREAK** **EXHIBIT HALL**
- 9:45 MORNING BREAKOUT SESSIONS** **SEE PAGES 40-41**
- | | | | | |
|---|--|---|---|---------------------------------------|
| ROOM 1 | ROOM 2 | ROOM 3 | ROOM 4 | ROOM 5 |
| Current Issues
Regarding Human
Health Risks Posed
By Dioxin Like
Compounds — Part 2 | Emerging and
Naturally Occurring
Compounds in the
Environment | Sampling Strategies,
Preparation and
Quality Assurance
Aspects of POPs
Analysis | Toxicology of
Brominated
and Fluorinated
Compounds | Human Exposure to
Dioxins and PCBs |
- 12:05 OPTIONAL TOURS** **(See Page 12)**

9:15–12:05

MORNING BREAKOUT SESSION

ROOM 1

**Current Issues Regarding Human Health Risks Posed
By Dioxin Like Compounds — Part 2**

Chairs: Todd Abel, Linda Birnbaum

- 9:45** MODE OF ACTION FOR 2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN CARCINOGENICITY
R.Budinsky, C.Rowlands, T.Abel **1581**
- 10:05** LINEAR VS. NONLINEAR EXTRAPOLATION FOR DOSE-RESPONSE ASSESSMENT OF TCDD
T.Simon, R.Budinsky, J.Rowlands, T.Abel **1538**
- 10:25** ASSESSING THE CUMULATIVE EFFECTS OF MIXTURES: LESSONS LEARNED FROM THE NTP CHRONIC BIOASSAYS OF MIXTURES OF DIOXINS AND PCBS.
N.Walker **1265**
- 10:45** REVIEW AND RECALCULATION OF THE U.S. EPA DRAFT PROPOSED REFERENCE DOSE (RfD) FOR 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN BASED ON WEIGHT OF EVIDENCE METHODS
L.Aylward **1433**
- 11:05** REGULATORY IMPLICATIONS OF USEPA'S DRAFT ORAL SLOPE FACTOR AND REFERENCE DOSE FOR DIOXIN
J.Haney, M.Aplin **1681**
- 11:25** INTERIM PRELIMINARY REMEDIATION GOALS FOR DIOXIN IN SOIL
M.Berg **1178**
- 11:45** IMPLICATIONS OF THE EPA'S NEW PRELIMINARY REMEDIATION GOALS FOR RESIDENTIAL SOIL BASED ON THE UNIVERSITY OF MICHIGAN DIOXIN EXPOSURE STUDY
A.Franzblau, D.Garabrandt, B.Gillespie, X.Jiang, P.Adriaens, A.Demond, O.Jolliet, J.Lepkowski **1683**

9:15–12:05

MORNING BREAKOUT SESSION

ROOM 2

**Emerging and Naturally Occurring
Compounds in the Environment**

Chairs: Jef Focant, Nigel Walker

- 9:45** DECHLORANE PLUS, IN THE GLOBAL ATMOSPHERIC PASSIVE SAMPLING (GAPS) STUDY
E.Sverko, T.Harner, S.Lee, B.McCarry **1505**
- 10:05** ACCUMULATION OF A FUNGI-DERIVED TERRESTRIAL HALOGENATED NATURAL PRODUCT IN WILD BOAR (SUS SCROFA)
J.Hiebel, K.Lehnert, W.Vetter **1370**
- 10:25** ACCUMULATION FEATURES OF ANTHROPOGENIC AND NATURALLY PRODUCED ORGANOHALOGEN COMPOUNDS IN HUMAN SERUM FROM INDIAN E-WASTE RECYCLING WORKERS AND RESIDENTS NEAR COASTAL AREAS
A.Eguchi, K.Nomiyama, A.Subramanian, P.Parthasarathy, K.Bulbule, S.Takahashi, S.Tanabe **1334**
- 10:45** IMPACT OF TRICLOSAN ON THE FORMATION OF POLYCHLORINATED DIOXINS AND FURANS (PCDD/FS) IN WATER
M.Flournoy, K.Buechler, D.Herbert, R.Hrabak, D.Allmeh, J.Sadler, D.Gall, S.Valmores, J.Barnett, S.Arghestani, E.Nguyen **1129**
- 11:05** PBDE METABOLITES ARE HIGHER THAN PARENT PBDES IN PELAGIC NORTH PACIFIC ALBATROSS: NATURAL OCCURRENCE?
J.-S.Park, S.Harwani, R.Henry, A.Rhee, M.Petreas **1125**
- 11:25** THE EMERGING BFRS — HEXABROMOBENZENE (HBB), BIS(246-TRIBROMOPHENOXY)ETHANE (BTBPE) AND DECABROMODIPHENYLETHANE (DBDPE) — IN IRISH FOODS
C.Tlustos, A.Fernandes, M.Rose **1600**
- 11:45** OH-PBDEs AND MeO-PBDEs IN SWEDISH MARINE AND FRESH WATER ENVIRONMENT - AN OVERVIEW
L.Asplund, K.Lofstrand, A.Malmvorn, K.Nylund, U.Eriksson, A.Bergman **1454**



9:15–12:05

MORNING BREAKOUT SESSION

ROOM 3

Sampling Strategies, Preparation and Quality Assurance Aspects of POPs Analysis

Chairs: Mehran Alaei, David Thal

- 9:45 EVIDENCE OF TWO SOURCES OF FALSE POSITIVE RESULTS IN ANALYSIS OF ENVIRONMENTAL SAMPLES FOR DIOXINS
S.Gormley, M.Bevier **1495**
- 10:05 SOURCES OF ERRORS IN CLINICAL CHEMICAL ANALYSIS OF PCBs AND RECOMMENDED PRACTICES TO AVOID THEM
W.Mills, Y.Tondeur, J.Hart, D.Patterson, A.DeCaprio **1561**
- 10:25 STABILITY FACTORS INFLUENCING THE ANALYSIS OF ENVIRONMENTAL ORGANIC CHEMICALS
B.Xia, R.Ramage, D.Wang, P.Behniwal, S.Cao, J.She **1568**
- 10:45 PASSIVE SAMPLING TO ASSESS THE BIOAVAILABILITY OF HALOGENATED AROMATIC COMPOUNDS IN AQUATIC SYSTEMS
D.Thal **1604**
- 11:05 SELECTIVE PRESSURIZED LIQUID EXTRACTION OF DIOXINS IN SOIL: OPTIMIZATION USING EXPERIMENTAL DESIGN
T.L.Do, S.Lundstedt, P.Haglund **1210**
- 11:25 PCB AND OCP RESULTS OF FIRST WORLDWIDE UNEP INTERLABORATORY STUDY ON PERSISTENT ORGANIC POLLUTANTS — PHASE 1
J.de Boer, S.Van Leeuwen, E.Steindal, B.Van Bavel, G.Lindstrom, H.Fielder **1166**
- 11:45 INTERLABORATORY STUDIES FOR PCDD/FS AND PCBs IN FEED AND FOOD — RESULTS FROM APPLICATION OF PHYSICO-CHEMICAL AND BIOANALYTICAL METHODS —
A.Kotz, R.Malisch, K.Wahl, J.Haedrich **1137**

9:15–12:05

MORNING BREAKOUT SESSION

ROOM 4

Toxicology of Brominated and Fluorinated Compounds

Chairs: John Butenhoff, Martin Vandenburg

- 9:45 IMPACTS OF DIETARY TETRABROMOETHYLCYCLOHEXANE (TBECH) ON THE THYROID AXIS OF BROWN TROUT (SALMO TRUTTA)
V.Palace, B.Park, K.Wautier, B.Gemmill, G.Tomy **1593**
- 10:05 METABOLISM OF α - AND γ -HEXABROMOCYCLODODECANE AND ENANTIOSELECTIVE FRACTIONS OF α -, β -, γ -ISOMERS IN MICE
H.Hakk, J.Huwe, D.Szabo, J.Diliberto, L.Birnbaum **1436**
- 10:25 INHIBITION OF THE DEPOLARIZATION-EVOKED INCREASE IN INTRACELLULAR CALCIUM LEVELS AND CATECHOLAMINE EXOCYTOSIS BY HEXABROMOCYCLODODECANE (HBCD) IN PC12 CELLS
R.Westerink, H.Heusinkveld, A.Bergman, M.van den Berg, M.Dingemans **1104**
- 10:45 IMPACTS OF POLYBROMINATED DIPHENYL ETHERS (PBDES) ON THE METABOLISM OF THYROID HORMONES IN EARLY LIFE STAGES OF FATHEAD MINNOWS (PIMEPHALES PROMELAS)
P.Noyes, H.Stapleton **1503**
- 11:05 POLYBROMINATED DIPHENYL ETHERS AND THEIR METABOLITES, A POTENTIAL CAUSE FOR THE DEVELOPMENT OF THE ENDOCRINE DISORDER HYPERTHYROIDISM IN CATS?
J.Norrgran, B.Jones, N.Lindquist, A.Bergman **1389**
- 11:25 NIEHS/NTP STUDIES OF POLYBROMINATED DIPHENYL ETHERS
J.Dunnick, K.Shockley, M.Vallant, H.Cunny, S.Auerbach **1440**
- 11:45 MEASURING IMPACTS OF HALOGENATED PHENOLIC COMPOUNDS ON THYROID REGULATING DEIODINASE ACTIVITY USING IN VITRO TECHNIQUES
C.Butt, D.Wang, H.Stapleton **1564**

9:15–12:05

MORNING BREAKOUT SESSION

ROOM 5

Human Exposure to Dioxins and PCBs

Chairs: Paolo Mocarelli, Martin Rose

- 9:45** DIOXIN-RELATED COMPOUNDS IN HOUSE DUST FROM VIETNAMESE E-WASTE RECYCLING SITES: COMPARISON OF IN VITRO BIOASSAY- AND CHEMICAL ANALYSIS-DERIVED TOXIC EQUIVALENTS
N.M.Tue, G.Suzuki, S.Takahashi, T.Isobe, P.Trang, P.Viet, S.Tanabe **1348**
- 10:05** DIETARY INTAKE OF PCDD/F AND DIOXIN-LIKE PCB FOR THE BELGIAN POPULATION
J.-F.Focant, I.Windal, S.Vandevijvere, M.Maleki, S.Gosciny, C.Vinkx, G.Eppe, V.Hanot, J.van Loco **1250**
- 10:25** DANISH MONITORING OF DIOXINS AND PCB IN FOOD AND FEED DURING THE YEARS 2000 TO 2009 - LEVELS, TIME TREND AND HUMAN EXPOSURE
T.L.Cederberg, S.Sorensen, K.Lund, S.Friis-Wandall **1362**
- 10:45** DIOXINS IN ORGANIC EGGS DUE TO CONTAMINATED CORN
W.Traag, J.Immerzeel, M.Zeilmaker, R.Herbes, R.Hoogenboom **1287**
- 11:05** GENDER SPECIFIC DIFFERENCES IN LEVELS OF PERSISTENT ORGANIC POLLUTANTS -A PROSPECTIVE COHORT STUDY (N=988)
S.Salihovic, L.Mattioli, G.Lindstrom, P.Lind, L.Lind, B.van Bavel **1547**
- 11:25** DIOXIN INTAKE DUE TO FISH AND GAME CONSUMPTION IN A DIOXIN-CONTAMINATED AREA
W.Hao, D.Garabrant, A.Franzblau, B.Gillespie, J.Lepkowski, P.Adriaens, A.Demond, X.Jiang, O.Jolliet **1572**
- 11:45** BROMINATED AND MIXED HALOGENATED DIOXINS AND FURANS (PBDD/FS) IN FOODS - A SIGNIFICANT CONTRIBUTION TO OVERALL DIOXIN-LIKE TOXICITY FOR SOME FOODS
M.Rose, A.Fernandes, D.Mortimer **1531**

DAY AT A GLANCE

8:30	PLENARY					ROOM 4
	Dioxins (PBDD/Fs) in Food — Living with Regulation Chairs: Laurie Haws, Martin Scheringer					
9:15	COFFEE BREAK					EXHIBIT HALL
9:45	MORNING BREAKOUT SESSIONS					SEE PAGES 44–46
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	
	Contaminated Sites: Cases, Remediation, Risk and Policy — Part 2	Developmental Neurotoxicity of PBDEs — Mechanisms to Functional Consequences	Fluorinated Compounds — Fate and Transport	HBCD Part 1 — Wildlife Toxicology and Exposure	Global Fate & Long Range Transport	
12:05	LUNCH BREAK					EXHIBIT HALL
13:00	POSTER SESSION					SEE PAGES 49–53
						EXHIBIT HALL & FOYER
14:00	AFTERNOON BREAKOUT SESSIONS					SEE PAGES 46–48
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	
	Exposures to Dioxin-Like Compounds in Soil and the Potential Impact on Human Health	New Biological Roles for the Misunderstood Aryl-Hydrocarbon Receptor	POPs in Soil and Sediment	HBCD Part 2 — Environmental Fate and Distribution	Perfluorinated and Brominated Compounds: Analytical Approaches and Developments	
15:20	COFFEE BREAK					EXHIBIT HALL
15:50	Exposures to Dioxin-Like Compounds in Soil and the Potential Impact on Human Health	New Biological Roles for the Misunderstood Aryl-Hydrocarbon Receptor	POPs in Soil and Sediment	HBCD Part 2 — Environmental Fate and Distribution	Perfluorinated and Brominated Compounds: Analytical Approaches and Developments	
18:00	SYMPOSIUM BANQUET at COWBOY'S DANCEHALL					(See Page 13)

SPONSORED SESSION



9:15–12:05

MORNING BREAKOUT SESSION

ROOM 1

Contaminated Sites: Cases, Remediation,
Risk and Policy — Part 2

Chairs: Roland Weber, Mats Tysklind

- 9:45** A MENTAL MODELS FRAMEWORK FOR CONSIDERING COMMUNITY PERCEPTIONS OF DIOXIN-LIKE COMPOUNDS
J.Diebol, E.Parker, A.Franzblau, P.Ross, I.Weber, B.Zikmund-Fisher **1142**
- 10:05** REMOVAL OF DIOXINS FROM SURFACE WATER AND GROUNDWATER GENERATED DURING WETLAND SEDIMENT REMOVAL USING HIPOX ADVANCED OXIDATION
E.Conti, R.Villalobos, A.Cazier, B.Robinson, B.Silverbush, R.Scholl, T.Bernhardt **1213**
- 10:25** ASSESSMENT OF POLYCHLORINATED BIPHENYLS (PCBs) CONTAMINATION IN SURFACE AND SUBSURFACE SOILS OF AN OLD POWER GENERATING STATION IN LAGOS, NIGERIA
B.Alo, B.Oketola, O.Osibanjo, A.Ajani, M.Eisa, L.Li **1306**
- 10:45** PFOS AND PFC POLLUTION FROM USE OF FIRE FIGHTING FOAM IN A MAJOR FIRE IN DUSSELDORF/GERMANY - HUMAN EXPOSURE AND REGULATORY ACTIONS
R.Weber, R.Weber, I.Bantz, M.Klumbies, I.Valentin, P.Fantke **1379**
- 11:05** ASSESSMENT OF A QUICK SCREENING METHOD FOR CHARACTERIZING DIOXIN-CONTAMINATED SOIL - WITH A CASE STUDY OF CPDC AN-SHUN SITE
C.Chao, J.Huang, K.Lin, P.Kung **1439**
- 11:25** ON-SITE REMEDIATION OR REMOVAL OFF-SITE TREATMENT -STRATEGY FOR POPS PESTICIDE SITES IN CHINA
J.Zhu, X.Hu, Q.Ding, F.Zhang **1540**
- 11:45** DIOXIN CONTAMINATION OF SOILS: ASSESSING ENVIRONMENTAL RISK APPLYING A WEIGHT OF EVIDENCE TRIAD APPROACH
A.Dagnino, L.Avidano, F.Dondero, S.Fenoglio, E.Gamalero, S.Sforzini, A.Viarengo, T.Forte, M.Peleggi, C.Ottavi **1428**

9:15–12:05

MORNING BREAKOUT SESSION

ROOM 2

Developmental Neurotoxicity of PBDEs —
Mechanisms to Functional Consequences

Chairs: Henrick Viberg, Per Eriksson

- 9:45** THE LINK BETWEEN ADULT BEHAVIORAL EFFECTS OF PBDEs AND ALTERATIONS IN PROTEIN LEVELS IN THE NEONATAL BRAIN
H.Viberg, A.Fredriksson, P.Eriksson **1152**
- 10:05** HYDROXYLATION INCREASES THE NEUROTOXIC POTENTIAL OF THE BROMINATED FLAME RETARDANT BDE-47: THE STRUCTURE OF BDE-47 METABOLITES DETERMINES THE POTENCY TO AFFECT CALCIUM HOMEOSTASIS IN PC12 CELLS
R.Westerink, M.van den Berg, A.Bergman, M.Dingemans **1103**
- 10:25** COMPARATIVE EFFECTS OF PBDEs AND PCBs ON INTRACELLULAR SIGNALING IN RAT CEREBELLAR GRANULE NEURONS
P.R.Kodavanti **1678**
- 10:45** INTERACTIVE EFFECTS OF POLYCHLORINATED BIPHENYLS (PCBS) AND POLYBROMINATED DIPHENYL ETHERS (PBDES) ON COCHLEAR FUNCTION
S.Schantz, E.Poon, R.McAlonan, D.Ferguson, B.Powers **1470**
- 11:05** DEVELOPMENTAL EXPOSURE TO PBDES AND ENVIRONMENTAL TOXICANTS: EFFECTS AND FUNCTIONAL CONSEQUENCES LATER IN LIFE
P.Eriksson, H.Viberg, A.Fredriksson **1474**
- 11:25** PRENATAL EXPOSURE TO PBDES AND NEURODEVELOPMENT
J.Herbstman, A.Sjodin, M.Kurzon, S.Lederman, R.Jones, V.Rauh, L.Needham, D.Tang, M.Niedzwiecki, R.Wang, F.Perera **1141**
- 11:45** SERUM LEVELS OF DECA-BROMODIPHENYLETHER (DECA-BDE) IN WOMEN FROM FOUR EUROPEAN COUNTRIES AND POSSIBLE RELATIONSHIPS WITH LIFESTYLE, DIET AND RISK.
M.van den Berg, R.Houba, H.Leslie, R.Canton, C.Thomsen, G.Becher, A.Asillero, J.Sunyer Deu, M.van Tongeren, B.Brunekreef, J.de Boer **1278**



9:15–12:05

MORNING BREAKOUT SESSION

ROOM 3

Fluorinated Compounds — Fate and Transport

Chairs: Jiang Guibin, Heidelore Fiedler

- 9:45 PERFLUORINATED CHEMICALS IN FRESHWATER FISH IN CANADA
A. De Silva, M. Gledhill, M. Sekela, J. Syrgiannis, M. Evans, A. Armellin, J. Pomeroy, M. Keir, D. Muir **1487**
- 10:05 ANALYSIS OF PERFLUORINATED PHOSPHONIC ACIDS IN WATER, SLUDGE AND SEDIMENT SAMPLES BY LC-MS/MS
S. van Leeuwen, J. de Boer, X. Esparza, S. van Leeuwen, E. Moyano, M. Galceran **1363**
- 10:25 ENANTIOSELECTIVE ANALYSIS OF A PFOS ISOMER: EVIDENCE FOR THE SOURCE CONTRIBUTION OF PRECURSORS TO AQUATIC ORGANISMS IN THE GREAT LAKES
B. Asher, Y. Wang, A. De Silva, S. Backus, D. Muir, C. Wong, J. Martin **1460**
- 10:45 PERFLUORINATED CHEMICALS IN GLACIAL ICE CORE SAMPLES FROM THE EUROPEAN ARCTIC
K. Kwok, N. Yamashita, S. Taniyasu, Y. Horii, G. Petrick, R. Kallenborn, K. Kannan, P. Lam **1200**
- 11:05 ENVIRONMENTAL CONTAMINATION AND ISOMER PATTERNS OF PFAAs AND 6:2 FTS CLOSE TO A FIRE-FIGHTING TRAINING FACILITY
A. Karrman, K. Elgh-Dalgren, C. Lafossas, T. Moskeland **1544**
- 11:25 THE DISTRIBUTION AND FATE OF POLYFLUORINATED COMPOUNDS IN WASTE WATER TREATMENT (WWTP) PLANT IN CHINA
Z. Yating, S. Taniyasu, N. Yamashita, D. Jiayin **1235**
- 11:45 PERFLUORINATED COMPOUNDS IN SURFACE SEDIMENTS AND CORES FROM LAKE ONTARIO
L. Yeung, C. Marvin, A. De Silva, P. Lam, S. Taniyasu, N. Yamashita, D. Muir, S. Mabury **1557**

9:15–12:05

MORNING BREAKOUT SESSION

ROOM 4

HBCD Part 1 — Wildlife Toxicology and Exposure

Chairs: Kim Fernie, Vince Palace

- 9:45 IN VITRO METABOLISM OF HBCD ISOMERS BY RAT LIVER MICROSOMES
L. Roosens, H. Stapleton, A. Covaci **1409**
- 10:05 TOXIC EFFECT OF THE BROMINATED FLAME RETARDANTS BDE-47 AND HBCD IN NEURONAL CELL MODELS.
V. Reffatto, T. Carroll, J. Rasinger, J. Bartsch, C. Hogstrand **1280**
- 10:25 INVESTIGATION OF HBCD METABOLISM IN MARINE MAMMALS FROM CANADA USING A HEPATIC MICROSOMAL IN VITRO BIOASSAY APPROACH AND COMPARISON WITH FIELD SAMPLES
G. MacInnis, R. Letcher, M. McKinney, M. Lebeuf, J. Fang, A. Bergman, G. Tomy **1416**
- 10:45 HEXABROMOCYCLODODECANE IN PEREGRINE FALCON (*Falco peregrinus*) EGGS FROM CANADA AND SPAIN: LEVELS AND ENANTIOMERIC PATTERNS
P. Guerra, G. Pacepavicius, B. Jimenez, E. Blazquez, K. Fernie, L. Champoux, C. Marvin, G. Macinnis, E. Eljarrat, D. Barcelo, M. Alae **1264**
- 11:05 EVIDENCE OF ENDOCRINE DISRUPTION AND TESTICULAR CHANGES IN MALE AMERICAN KESTRELS (*FALCO SPARVERIUS*) EXPOSED TO TECHNICAL HBCD
S. Marteinson, S. Kimmins, R. Letcher, D. Bird, I. Ritchie, K. Fernie **1119**
- 11:25 CHANGES IN REPRODUCTION AND BEHAVIOR OF AMERICAN KESTRELS (*FALCO SPARVERIUS*) ASSOCIATED WITH EXPOSURE TO ENVIRONMENTALLY RELEVANT CONCENTRATIONS OF TECHNICAL HBCD
K. Fernie, S. Marteinson, D. Bird, I. Ritchie, R. Letcher **1120**
- 11:45 IN VIVO STEREOISOMERIZATION OF HBCD GAMMA AND ALPHA IS TISSUE AND STEREOISOMER SPECIFIC
D. Szabo, H. Hakk, J. Diliberto, J. Huwe, L. Birnbaum **1220**

9:15–12:05

MORNING BREAKOUT SESSION

ROOM 5

Global Fate & Long Range Transport

Chairs: Myrto Petreas, Masatoshi Morita

- 9:45** EVALUATING THE ENVIRONMENTAL PERSISTENCE AND LONG-RANGE TRANSPORT OF ENDOSULFAN
M.Scheringer, L.Becker, U.Schenker, K.Hungerbuhler **1355**
- 10:05** MEASUREMENT OF VAPOR PRESSURES OF SOME PBDES AND NON-PBDE FLAME RETARDANTS AND EVALUATION OF THEIR PERSISTENCE AND LONG-RANGE TRANSPORTATION POTENTIAL
H.Kuramochi, H.Tagigami, S.Sakai **1534**
- 10:25** SEASONAL AND ALTITUDINAL VARIATIONS OF LEGACY AND CURRENT-USE PESTICIDES IN THE BRAZILIAN TROPICAL AND SUBTROPICAL MOUNTAINS
R.Meire, S.Lee, Y.Yao, J.Torres, T.Mitoma **1081**
- 10:45** ENVIRONMENTAL CHEMISTRY MEETS GLACIOLOGY: TRANSPORT AND FATE OF POLYCHLORINATED BIPHENYLS (PCB) IN THE GLACIER AND LAKE OBERAAR, SWITZERLAND
C.Bogdal, D.Nikolic, M.Luthi, U.Schenker, M.Scheringer, K.Hungerbuhler **1035**
- 11:05** BROMINATED FLAME RETARDANTS IN THE ARCTIC - SPATIAL AND TEMPORAL TRENDS AND NEW CANDIDATES
C.de Wit, D.Herzke, K.Vorkamp **1160**
- 11:25** FATE OF DIOXINS IN A BOREAL FOREST CATCHMENT
M.Bergknut, S.Meijer, C.Halsall, A.Agren, H.Laudon, S.Kohler, K.Jones, M.Tysklind, K.Wiberg **1026**
- 11:45** FLAME RETARDANTS AND LEGACY CONTAMINANTS IN POLAR BEARS FROM ALASKA, CANADA, EAST GREENLAND AND SVALBARD: SPATIOTEMPORAL TRENDS AND THE ROLE OF DIET
R.Letcher, M.McKinney, E.Born, M.Branigan, R.Dietz, T.Evans, G.Gabrielsen, E.Peacock, D.Muir, C.Sonne **1441**

SPONSORED SESSION



14:00–17:10

AFTERNOON BREAKOUT SESSION

ROOM 1

Exposures to Dioxin-Like Compounds in Soil and the Potential Impact on Human Health

Chairs: Laurie Haws, Matt Lorber

- 14:00** HISTORICAL AND CURRENT TRENDS IN DIOXIN EXPOSURE - A REVIEW
M.Lorber **1077**
- 14:20** DIOXIN CONTAMINATED SOILS: AN HISTORICAL PERSPECTIVE ON RISK.
M.DeVito **1647**
- 14:40** THE UNIVERSITY OF MICHIGAN DIOXIN EXPOSURE STUDY: RESIDENTIAL SOIL AND HOUSEHOLD DUST UNRELATED TO SERUM DIOXIN LEVELS
D.Garabrant, X.Jiang, A.Franzblau, P.Adraiens, A.Demond, B.Gillespie, O.Jolliet, J.Lepkowski, W.Hao, Q.Chen **1541**
- 15:00** A TOXICOKINETIC MODELING APPROACH TO INVESTIGATE THE PREDICTORS OF SERUM TCDD CONCENTRATION
W.Hao, X.Jiang, Y.Wenger, C.Chang, B.Gillespie, T.Towey, Q.Chen, B.Hong, A.Franzblau, J.Lepkowski, P.Adriaens **1552**
- 15:20** **Coffee Break**
- 15:50** SERUM CONCENTRATIONS OF DIOXIN-LIKE COMPOUNDS IN A POPULATION IN MIDLAND MICHIGAN: AN EVALUATION OF THE IMPACT OF SOIL EXPOSURES
M.Harris, A.Tachovsky, D.Staskal, L.Aylward, B.Burkhalter, T.Simon, L.Haws **1546**
- 16:10** COHORT OF WOMEN LIVING IN A HIGHLY INDUSTRIALIZED AREA OF KANAWHA RIVER VALLEY IN WEST VIRGINIA: ENDOMETRIOSIS AND BLOOD LEVELS OF DIOXIN AND DIOXIN-LIKE CHEMICALS
J.Diliberto, L.Sirinek, J.Becker, D.Jude, D.Patterson, W.Turner, B.Burkhalter, L.Haws, A.Tachovsky, R.Landy, L.Birnbaum **1448**
- 16:30** SOIL-SERUM PCB ASSOCIATIONS IN THE ANNISTON COMMUNITY HEALTH SURVEY
M.Pavuk, J.Olson, H.Ha, S.Dearwent, L.Bian, P.Rogerson **1418**
- 16:50** AN EVALUATION OF THE INFLUENCE OF DIFFERENT SOIL CLEANUP LEVELS ON THE CONCENTRATION OF DIOXIN-LIKE COMPOUNDS IN HUMAN SERUM
L.Haws, A.Tachovsky, D.Staskal, L.Aylward, B.Burkhalter, J.Urban, T.Simon, M.Harris **1548**



14:00–17:10

AFTERNOON BREAKOUT SESSION

ROOM 2

New Biological Roles for the Misunderstood Aryl-Hydrocarbon Receptor

Chairs: Craig Rowlands, Rusty Thomas

- 14:00 ANTAGONISTS OF THE ARYL HYDROCARBON RECEPTOR PROMOTE THE EXPANSION OF HUMAN HEMATOPOIETIC STEM CELLS
M.Cooke **1705**
- 14:20 ACTIVATION OF THE ARYL-HYDROCARBON RECEPTOR INHIBITS INVASIVE AND METASTATIC FEATURES OF HUMAN BREAST CANCER CELLS AND PROMOTES BREAST CANCER CELL DIFFERENTIATION
R.Thomas, J.Hall, M.Bar Hoover, D.Kazmin, D.McDonnell, W.Greenlee **1163**
- 14:40 DIFFERENTIAL GENOMICS EFFECTS OF HEPATOCARCINOGENIC AND ANTI-CARCINOGENIC AHR ACTIVATORS IN RAT LIVER
S.Auerbach, N.Walker, J.Bucher, M.Wyde **1284**
- 15:00 NATURAL SOURCES OF AHR AGONIST ACTIVITY
C.Rowlands, R.Budinsky, J.Dong, S.Xu, N.Fang **1659**
- 15:20 **Coffee Break**
- 15:50 AH RECEPTOR AGONISTS, ANTAGONISTS AND SAHRMS: DISSECTION OF AH RECEPTOR PHYSIOLOGY
G.Perdew, I.Murray, B.DiNatale, K.Smith **1118**
- 16:10 THE AH RECEPTOR HAS A NOVEL ROLE AS A PHYSIOLOGICAL REGULATOR OF HEMATOPOIETIC PRECURSORS
T.Gasiewicz, K.Singh, F.Casado, R.Garrett **1658**
- 16:30 ARYL HYDROCARBON RECEPTOR AGONISTS INHIBIT ER-NEGATIVE BREAST CANCER CELL GROWTH, MIGRATION AND INVASION BY INDUCING MicroRNA-335
S.Safe, S.Zhang, K.Kim **1277**
- 16:50 THE ARYL HYDROCARBON RECEPTOR AS A MEDIATOR OF SERM SIGNALING
C.Bentley, E.Nelson, B.Wittmann, J.Fretz, D.Kazmin, R.Thomas, J.Pike, D.McDonnell **1155**

14:00–17:10

AFTERNOON BREAKOUT SESSION

ROOM 3

POPs in Soil and Sediment

Chairs: Derek Muir, Cindy Dewit

- 14:00 NEW HALOGENATED NORBORNENE FLAME RETARDANTS IN SEWAGE SLUDGE FROM SPAIN
A.de la Torre, L.Shen, E.Reiner, M.Alae, M.Martinez **1402**
- 14:20 POPs ACCUMULATED IN THE SURFACE SOIL AND A SOIL-CORE IN A NATIONAL NATURAL RESERVATION, TIANBAO ROCK, SOUTHEASTERN CHINA
Q.Wang, Z.Liu, L.Yang **1254**
- 14:40 DIOXINS AND DIOXIN-LIKE PCBs IN SOLID MATERIAL FROM THE RIVER ELBE, ITS TRIBUTARIES AND FROM THE NORTH SEA
G.Umlauf, G.Mariani, H.Skejo, A.Mueller, L.Baek, B.Stachel, R.Goetz **1060**
- 15:00 A STUDY ON PERSISTENT ORGANOCHLORINE PESTICIDES IN WATER AND SEDIMENTS OF YAMUNA RIVER: Year 2000–2008
B.Kumar **1521**
- 15:20 **Coffee Break**
- 15:50 POLYBROMINATED DIPHENYL ETHERS IN DETROIT RIVER SEDIMENT
D.Burniston, J.Waltho, C.Marvin **1462**
- 16:10 TEMPORAL AND SPATIAL TRENDS OF SELECTED POPs IN RIVERINE SEDIMENTS: WHAT CAN WE LEARN FOR ASSESSMENT OF RISKS ASSOCIATED WITH FREQUENT FLOOD EVENTS?
P.Kukucka, O.Audy, R.Prokes, K.Kubosova, J.Klanova **1070**
- 16:30 ASSESSMENT OF THE RELEASE OF ORGANIC CONTAMINANTS FROM SOIL USING A BATCH LEACHING TEST
S.-L.Badea, S.Lundstedt, P.Liljelind, M.Tysklind **1576**
- 16:50 DIOXIN LEVELS IN GRAZING LAND AND GROUNDWATER IN THE SURROUNDINGS OF A LARGE INDUSTRIAL AREA IN TARANTO (ITALY)
V.Esposito, A.Maffei, G.Castellano, W.Martinelli, M.Conversano, G.Assennato **1274**

14:00–17:10

AFTERNOON BREAKOUT SESSION

ROOM 4

HBCD Part 2 — Environmental Fate and Distribution

Chairs: Chris Marvin, Gregg Tomy

- 14:00** HEXABROMOCYCLODODECANE (HBCD) IN FISH OIL FOOD SUPPLEMENTS
T.Rawn, D.Sit, K.Breakell, V.Verigin, H.Nicolidakis, M.Feeley, J.Ryan **1167**
- 14:20** AN OVERVIEW OF CONTAMINATION OF THE UK ENVIRONMENT WITH HBCD AND ITS DEGRADATION PRODUCTS
S.Harrad, J.Desborough, M.Abdallah **1091**
- 14:40** PROGRESS UPDATE ON CERTIFYING HBCD IN NIST STANDARD REFERENCE MATERIALS (SRMS)
J.Kucklick, J.Keller, S.Leigh, M.Schantz **1207**
- 15:00** HPLC BEHAVIOUR OF THE ISOMERS OF HEXABROMOCYCLODODECANE
N.Riddell, R.McCrindle, B.Chittim, A.McAlees **1195**
- 15:20** **Coffee Break**
- 15:50** GEOGRAPHICAL DISTRIBUTION AND TEMPORAL VARIATION OF PCBs, PBDEs AND HBCDs IN HUMAN BREAST MILK FROM GHANA
K.A.Asante, S.Adu-Kumi, K.Nakahiro, S.Takashashi, T.Isobe, A.Sudaryanto, E.Clark, O.Ansa-Asare, S.Dapaah-Siakwan, S.Tanabe **1069**
- 16:10** IS HEXABROMOCYCLODODECANE (HBCD) A GLOBAL POP? — THE NORWEGIAN PROPOSALS TO INCLUDE HBCD IN UN CONVENTION ON POPS
G.Becher, C.Tolfen, L.Sall **1244**
- 16:30** TIME COURSES OF HBCD LEVELS AND ENANTIOMERIC SIGNATURES IN HERRING GULL EGGS FROM THE GERMAN COAST
R.Becker, S.Esslinger, C.Jung, C.Schroeter-Kermani, I.Nehls **1112**
- 16:50** LEVELS OF HBCDs AND DEGRADATION PRODUCTS IN UK HUMAN MILK AND RELATIONSHIP TO EXTERNAL EXPOSURE
S.Harrad, M.Abdallah **1033**

14:00–17:10

AFTERNOON BREAKOUT SESSION

ROOM 5

Perfluorinated and Brominated Compounds: Analytical Approaches and Developments

Chairs: Matt Ross, Jack Cochran

- 14:00** QUANTITATION OF PERFLUORINATED COMPOUNDS IN FOOD AT THE LOW PG/G LEVEL: DEVELOPMENT OF A TETRAHYDROFURAN-WATER EXTRACTION SYSTEM WITH IN-LINE CLEAN-UP
S.van Leeuwen, A.Ballesteros-Gomez, S.Rubio **1300**
- 14:20** LARGE VOLUME SPLITLESS AND COLD ON-COLUMN INJECTION APPROACHES USING UNMODIFIED SPLITLESS AND PTV INJECTION PORTS FOR THE ANALYSIS OF HALOGENATED PESTICIDES AND BROMINATED FLAME RETARDANTS
M.Misselwitz, J.Cochran, J.Thomas, S.Grossman **1490**
- 14:40** DEVELOPMENT OF A METHOD FOR THE DETERMINATION OF SEVERAL NOVEL HALOGENATED FLAME RETARDANTS IN MILK
E.Braekevelt, C.Corrigan, C.Menard, S.Tittlemier **1597**
- 15:00** THE IMPORTANCE OF PHYSICAL PROPERTY CONSIDERATIONS IN PREVENTING ANALYTE LOSSES IN SAMPLING AND SAMPLE PREPARATION OF HIGHLY FLUORINATED COMPOUNDS
M.Kaiser, S.Bachmura, M.Botelho, R.Buck, B.Larsen, G.Wooler **1098**
- 15:20** **Coffee Break**
- 15:50** $\delta^{13}\text{C}$ VALUES OF POLYBROMINATED DIPHENYL ETHERS AND THEIR UV-TRANSFORMATION PRODUCTS
N.Rosenfelder, P.Bendig, W.Vetter **1423**
- 16:10** PERFLUORINATED CONTAMINANTS IN FISH: SOLUTION FOR ULTRA TRACE ANALYSIS
J.Hajslova, O.Lacina, P.Hradkova, J.Poustka, J.Rosmus, J.Pulkrabova **1458**
- 16:30** ISO25101 AND JAPANESE INDUSTRIAL STANDARD (JIS) OF PFOS AND PFOA MEASUREMENTS IN WATER SAMPLES
S.Taniyasu, N.Yamashita, K.Kannan, P.Lam, B.Chittim, T.Kida, T.Takasuga, Y.Tsuchiya **1188**
- 16:50** IMPROVEMENTS TO INDUSTRIAL HYGIENE AND SOURCE TESTING METHODS FOR PERFLUORO-CHEMICALS
W.Mills, B.Grigg, X.Zhu, G.Olden **1535**





DAY AT A GLANCE

8:30 COFFEE ROOM 4

9:00 SPECIAL PROGRAM ROOM 4

International Regulation of POPs:
Bridging the Gap Between Science and Policy
Chairs: Paolo Mocarelli, Martin Rose

11:30 CLOSING CEREMONY ROOM 4

SPECIAL PROGRAM

Title: International Regulation of POPs: Bridging the gap between science and policy

Objective: Identify and discuss key topics related to bridging the gap between science and policy

Chairs: Drs Martin Scheringer and Laurie Haws

SCHEDULE

- 8:30 – 9:00 Coffee
- 9:00 – 9:05 Introductions
- 9:05 – 10:35 Talks (3 talks; 30 min each)
- 10:35 – 11:30 Roundtable
- 11:30 – 11:45 Student awards
- 11:45 2011 Preview

INTRODUCTION

9:00–9:05 Introduction and discussion of session objective.

Speaker: Dr. Laurie Haws

TALKS

9:05–9:35 Are current screening and assessment programs capable of identifying persistent organic pollutants among chemicals in commerce?

Speaker: Derek Muir, Environment Canada

Environmental chemists have had great success over the past 40 years in identifying and quantifying persistent (P) and bioaccumulative (B) chemicals. Such chemicals are a concern because they can accumulate in aquatic and terrestrial food webs and be transported from urban use areas to remote regions. However, the identification has been by detailed analytical chemistry and is focused largely on structural analogs of previously identified compounds with only limited application of “in silico” approaches. The criteria for classifying chemicals as persistent organic pollutants (POPs) have been defined by the Stockholm Convention on POPs as well as by various chemical regulatory agencies. These criteria have been questioned as not comprehensive enough.

9:35–10:05 Impact of rapid advances in technologies on future policy

Speaker: Dr. Jim Bus, Dow Chemical

A discussion on how rapid advances in technologies are making for “game-changing” impacts on future policy. The existing policies are in large part responsible for the drawn-out delays in making decisions that all vested parties have a reasonable degree of confidence, i.e., the dramatic differences between the current application of conservative risk assessment (policy) assumptions often forces technical “debates” that only serve to delay action, or demand time-consuming implementation of toxicity tests that are logistically difficult and increasingly costly (including use of animals). Meanwhile, new technologies coming into play offer some real hope of breaking some of those policy logjams by replacing long-held policy defaults with science-informed options. The rapid advances in analytical and computational modeling technologies can likewise offer entirely new approaches to science-informed decisions, supplanting the use of past policy defaults.

10:05–10:35 Polychlorinated biphenyls — still a challenge for science and policy

Speaker: Dr. Martin Scheringer, ETH, Zurich (committed)

Polychlorinated biphenyls (PCBs) were used in large amounts and many applications in the 1960s and 1970s and were then phased out in many countries. In 2004, PCBs were globally banned under the Stockholm Convention on Persistent Organic Pollutants (POPs). Does this mean that we have solved the problem? Recent measurements in air demonstrate that PCB emissions are still ongoing in many industrialized countries, often at unexpectedly high rates. Primary sources still dominate levels and trends of PCBs in the global environment. The rate of decline is the same before and after entry-into-force of the Stockholm Convention. What do these findings mean for the effectiveness of PCB regulation at the national and international level? Is our scientific understanding of the emissions and fate of PCBs sufficient as a basis for managing the problem?

ROUNDTABLE DISCUSSION

10:35–11:30 International panel of experts to lead a discussion on issues related to bridging the gap between science and policy.

CLOSING CEREMONY

11:30 Otto Hutzinger Student Award Presentation

11:45 Introduction to Dioxin 2011, Jef Focant