

Risk Assessment Specialty Section (RASS)

ANNUAL REPORT: 2008-2009

May 1, 2008 to April 30, 2009

I. Officers/Committees:

Officers:	<u>2008-2009</u>	<u>2009-2010</u>
President:	Harvey Clewell	Edward Ohanian
Vice President:	Edward Ohanian	Elaine Faustman
President-elect:	Elaine Faustman	Robinan Gentry
Secretary/Treasurer:	Julie Goodman	Calvin Willhite
Councilors:	Laurie Haws	Rory Conolly
	Lisa Sweeney	Laurie Haws
<i>Past-President</i>	Jennifer Orme-Zavaletta	Harvey Clewell
SAC Representative:	Shep Martin	Anne Loccisano
PDA Representative:	Jerry Campbell	David Szabo

Committees: None

II. Activities

2009 SOT Annual Meeting Reception was held March 16, 2009 in Baltimore, MD.

Approximately 250 people were in attendance.

Dr. Clewell called the meeting to order at 7 PM.

Meeting Agenda:

- Accomplishments for 2008-2009
- RASS Survey Results
- RASS Best Abstract Awards
- RASS Best Manuscript Awards
- Remarks by Incoming President
- Point / Counterpoint: "Risk Assessment in the 21st Century: Is Everything Linear?"

Awards:

2008 Best Publication Advancing the Science of Risk Assessment:

Andersen ME, Clewell HJ 3rd, Bermudez E, Willson GA, Thomas RS., 2008. Genomic signatures and dose-dependent transitions in nasal epithelial responses to inhaled formaldehyde in the rat. *Toxicol Sci.* 105(2):368-83.

Rest of Top 10 Publications in 2008 Advancing the Science of Risk Assessment:

Clewell HJ, Tan YM, Campbell JL, Andersen ME., 2008. Quantitative interpretation of human biomonitoring data. *Toxicol Appl Pharmacol.* 231(1):122-33.

Hays SM, Aylward LL, LaKind JS, Bartels MJ, Barton HA, Boogaard PJ, Brunk C, DiZio S, Dourson M, Goldstein DA, Lipscomb J, Kilpatrick ME, Krewski D, Krishnan K, Nordberg M, Okino M, Tan YM, Viau C, Yager JW., 2008. Guidelines for the derivation of Biomonitoring Equivalents: report from the Biomonitoring Equivalents Expert Workshop. *Regul Toxicol Pharmacol.* 51(3 Suppl):S4-15.

Kostich MS, Lazorchak JM., 2008. Risks to aquatic organisms posed by human pharmaceutical use. *Sci Total Environ.* 389(2-3):329-39.

Leslie M. Shama and Robert K. D. Peterson., 2008. Assessing Risks of Plant-based Pharmaceuticals: I. Human Dietary Exposure. *Hum Ecol Risk Assess.* 14(1):179-193.

Moore MM, Heflich RH, Haber LT, Allen BC, Shipp AM, Kodell RL., 2008. Analysis of in vivo mutation data can inform cancer risk assessment. *Regul Toxicol Pharmacol.* 51(2):151-61.

Rice G, MacDonell M, Hertzberg RC, Teuschler L, Picel K, Butler J, Chang YS, Hartmann H., 2008. An approach for assessing human exposures to chemical mixtures in the environment. *Toxicol Appl Pharmacol.* 233(1):126-36.

Swenberg JA, Fryar-Tita E, Jeong YC, Boysen G, Starr T, Walker VE, Albertini RJ., 2008. Biomarkers in toxicology and risk assessment: informing critical dose-response relationships. *Chem Res Toxicol.* 21(1):253-65.

Willhite CC, Ball GL, McLellan CJ., 2008. Derivation of a bisphenol A oral reference dose (RfD) and drinking-water equivalent concentration. *J Toxicol Environ Health B Crit Rev.* 11(2):69-146.

Woodruff TJ, Zeise L, Axelrad DA, Guyton KZ, Janssen S, Miller M, Miller GG, Schwartz JM, Alexeeff G, Anderson H, Birnbaum L, Bois F, Cogliano VJ, Crofton K, Euling SY, Foster PM, Germolec DR, Gray E, Hattis DB, Kyle AD, Luebke RW, Luster MI, Portier C, Rice DC, Solomon G, Vandenberg J, Zoeller RT., 2008. Meeting report: moving upstream-evaluating adverse upstream end points for improved risk assessment and decision-making. *Environ Health Perspect.* 116(11):1568-75.

Yoon M, Barton HA., 2008. Predicting maternal rat and pup exposures: how different are they? *Toxicol Sci.* 102(1):15-32.

2008 Best Publication Demonstrating an Application of Risk Assessment:

Ginsberg GL, Asgharian B, Kimbell JS, Ultman JS, Jarabek AM., 2008. Modeling approaches for estimating the dosimetry of inhaled toxicants in children. *J Toxicol Environ Health* 71(3):166-95.

Rest of Top 10 Publications in 2008 Demonstrating an Application of Risk Assessment:

Aylward LL, Lakind JS, Hays SM., 2008. Derivation of biomonitoring equivalent (BE) values for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and related compounds: a screening tool for interpretation of biomonitoring data in a risk assessment context. *J Toxicol Environ Health* 71(22):1499-508.

Berman DW, Crump KS., 2008. A meta-analysis of asbestos-related cancer risk that addresses fiber size and mineral type. *Crit Rev Toxicol.* 38 Suppl 1:49-73.

Bogen KT., 2008. An adjustment factor for mode-of-action uncertainty with dual-mode carcinogens: the case of naphthalene-induced nasal tumors in rats. *Risk Anal.* 28(4):1033-51.

Burgoon LD, Zacharewski TR., 2008. Automated quantitative dose-response modeling and point of departure determination for large toxicogenomic and high-throughput screening data sets. *Toxicol Sci.*104(2):412-8.

Burns FJ, Rossman T, Vega K, Uddin A, Vogt S, Lai B, Reeder RJ., 2008. Mechanism of selenium-induced inhibition of arsenic-enhanced UVR carcinogenesis in mice. *Environ Health Perspect.* 116(6):703-8.

Cullen AC, Corrales MA, Kramer CB, Faustman EM., 2008. The application of genetic information for regulatory standard setting under the clean air act: a decision-analytic approach. *Risk Anal.* 28(4):877-90.

Lu Y, Rieth S, Lohitnavy M, Dennison J, El-Masri H, Barton HA, Bruckner J, Yang RS., 2008. Application of PBPK modeling in support of the derivation of toxicity reference values for 1,1,1-trichloroethane. *Regul Toxicol Pharmacol.* 50(2):249-60.

Schroeter JD, Kimbell JS, Gross EA, Willson GA, Dorman DC, Tan YM, Clewell HJ 3rd., 2008. Application of physiological computational fluid dynamics models to predict interspecies nasal dosimetry of inhaled acrolein. *Inhal Toxicol.* 20(3):227-43.

Zhang Q, Pi J, Woods CG, Jarabek AM, Clewell HJ, Andersen ME., 2009. Hormesis and adaptive cellular control systems. *Dose Response* 6(2):196-208.

2009 RASS Perry J. Gehring Best Student Abstract Award

An assessment of the impact of exposure route on the interindividual variability factor (IVF) for drinking water contaminants (DWCs)

M. Valcke^{1,2}; *K. Krishnan*¹

1. Santé environnementale et santé au travail, Université de Montréal, Montréal, QC, Canada.

2. Institut national de santé publique du Québec, Montréal, QC, Canada.

ABSTRACT #1472

2009 RASS Perry J. Gehring Best Postdoc Abstract Award

Independent validation of gene expression-based hepatocarcinogenicity prediction models

*S. Auerbach*¹; *D. Mav*²; *R. Shah*²; *M. K. Vallant*¹; *N. J. Walker*¹; *G. A. Boorman*¹; *R. D. Irwin*¹

1. NTP, NIEHS, Research Triangle Park, NC, USA.

2. SRA International. Inc., Research Triangle Park, NC, USA.

ABSTRACT #1097

2009 Best Risk Assessment Abstract

Translating in vitro estrogenic assay results to ecological risk assessment

*C. Mori*¹; *S. Thakali*¹; *A. Tarrant*²; *M. Sharma*¹; *H. Yekel*³; *T. Verslycke*¹

1. Gradient Corporation, Cambridge, MA, USA.

2. Woods Hole Oceanographic Institution, Woods Hole, MA, USA.

3. Wyeth Pharmaceuticals, Malvern, PA, USA.

ABSTRACT #440 Poster Board 308

Location: Exhibit Hall

Time of Presentation: Mar 16 1:00 PM - 1:00 PM

Category: Ecotoxicology, (Risk Assessment), (Safety Assessment: Pharmaceutical)

2009 Top 10 Risk Assessment Abstracts (Ordered by presentation date)

Automated Dose-Response Analysis of the Relative Hepatic Gene Expression Potency of TCDF in C57BL/6 Mice

L. D. Burgoon^{1, 2, 5}; *Q. Ding*^{1, 2, 3}; *A. N'jai*^{1, 2, 3}; *E. Dere*^{1, 2, 3}; *J. Rowlands*⁴; *R. A. Budinsky*⁴; *K. E. Stebbins*⁴; *T. R. Zacharewski*^{1, 2, 3}

1. Biochemistry & Molecular Biology, Michigan State University, East Lansing, MI, USA.

2. National Food Safety & Toxicology Center, Michigan State University, East Lansing, MI, USA.

3. Center for Integrative Toxicology, Michigan State University, East Lansing, MI, USA.

4. The Dow Chemical Company, Midland, MI, USA.

5. Toxicogenomic Informatics and Solutions, LLC, Lansing, MI, USA.

ABSTRACT #55

Assessing the Influence of Dietary Manganese Variability and Inhaled Exposure by Pharmacokinetic Modeling

A. Nong¹; M. D. Taylor²; D. C. Dorman^{1,3}; M. E. Andersen¹; H. J. Clewell¹

1. The Hamner Institutes for Health Sciences, Research Triangle Park, NC, USA.
2. Afton Chemical Corporation, Richmond, VA, USA.
3. College of Veterinary Medicine, North Carolina State University, Raleigh, NC, USA.

ABSTRACT #467

Use of a physiologically based pharmacokinetic (PBPK) model to predict tissue disposition in pigs fed melamine.

J. L. Buur¹; R. E. Baynes²; J. E. Riviere¹

1. College of Veterinary Medicine , Western University of Health Sciences, Pomona, CA, USA.
2. Center for Chemical Toxicology and Pharmacokinetics, NCSU, Raleigh, NC, USA.

ABSTRACT #477

Age- and gender-structured distributions for physiological parameters: assessment of human variability in the exposure-internal-dose relationship for dichloromethane (DCM)

P. M. Schlosser¹; A. Bale²; G. S. Cooper²

1. NCEA, U.S. EPA, RTP, NC, USA.
2. NCEA, U.S. EPA, Washington, DC, USA.

ABSTRACT #479

Evaluating Neurotoxicity of a Mixture of Five OP Pesticides Using a Composite Score

E. Nyirabahizi¹; C. Gennings¹; V. C. Moser²

1. Biostatistics, Virginia Commonwealth University, Richmond, VA, USA.
2. Neurotoxicology Division, U.S. EPA-NHEERL, Research Triangle Park, NC, USA

ABSTRACT #564

Comparison of quantum dot biodistribution with blood flow-limited physiologically based pharmacokinetic model

H. A. Lee¹; T. L. Leavens¹; S. E. Mason¹; N. A. Monteiro-Riviere¹; J. E. Riviere¹

1. Center for Chemical Toxicology Research and Pharmacokinetics , North Carolina State University, Raleigh, NC,

ABSTRACT #719

Cryptosporidium exposure and recreational water contact in persons with HIV/AIDS in Baltimore, Maryland

C. C. McOliver¹; E. K. Silbergeld¹; T. K. Graczyk¹

1. Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA.

ABSTRACT #1201

The relationship between the IC50, toxic threshold, and the magnitude of stimulatory response in biphasic (hormetic) dose-responses

M. A. Nascarella^{1,2}; E. J. Calabrese²

1. Gradient Corporation, Cambridge, MA, USA,
2. Environmental Health Sciences, University of Massachusetts Amherst, Amherst, MA, USA.

ABSTRACT #1275

Your results may vary: exploring the sensitivity of titanium dioxide risk estimates to different modeling assumptions

D. A. Dankovic¹; E. D. Kuempel¹; M. W. Wheeler¹

1. Risk Evaluation Branch, CDC/NIOSH, Cincinnati, OH, USA.

ABSTRACT #1473

Point/Counterpoint at RASS Reception:

Risk Assessment in the 21st Century: Is Everything Linear?

Presenters: Lawrence Rhomberg, Gary Ginsberg

Moderator: Rory Conolly

Specialty Section 2008-2009 Activities:

- Continuing RASS Teleseminar Series
 - Joint telecons with BMSS, SRA DRSG
- Creating Risk Assessment Primer for SOT Web Site
 - Still under development
- Sponsored 5 CE Courses and 46 Sessions
 - 60% success rate compared to SS average of 55%
- Presented RASS poster at student/postdoc mixer
- Conducted 2 Surveys:
 - SOT student membership: interest in RASS
 - RASS membership satisfaction / interests

