

Risk Assessment Specialty Section (RASS)

ANNUAL REPORT: 2009-2010

(May 1, 2009 to April 30, 2010)

I. Officers/Committees:

Officers:

	<u>2009-2010</u>	<u>2009-2010</u>
President:	Edward Ohanian	Elaine Faustman
Vice President:	Elaine Faustman	Robinan Gentry
President-elect:	Robinan Gentry	John Lipscomb
Secretary/Treasurer:	Calvin Willhite	Calvin Willhite
Councilors:	Laurie Haws	Rory Conolly
	Rory Conolly	J. Caroline English
Past-President	Harvey Clewell	Edward Ohanian
SAC Representative:	David Szabo	David Szabo
PDA Representative:	Anne Loccisano	Anne Loccisano

II. Committees: None

III. Activities

2009 SOT Annual Meeting Reception

The reception was held on March 8, 2010 in Salt Lake City, UT.

Approximately 350 people were in attendance.

Dr. Edward V. Ohanian called the meeting to order at 7 PM.

Meeting Agenda:

- Accomplishments for 2009-2010
- RASS Best Abstract Award
- Student Travel Award
- RASS Best Published Paper Awards
- Remarks by Incoming President
- Point / Counterpoint: "Translating Endocrine Disruptor Screening to Human Health Risk"

III. Awards:

RASS 2010 Best Overall Risk Assessment Abstract Award

Abstract # 2205

C. R. Elcombe , CXR Biosciences Ltd, Dundee

Nuclear Receptor (CAR/PXR) Humanized Mouse Models to Investigate Nongenotoxic Hepatocarcinogenesis

CXR Biosciences Ltd, Dundee, United Kingdom.

Additional RASS Top 10 Best Abstracts

ID 247 Poster Board – 548. Nine and Ten Chemical Haloacetic Acid Mixtures Exhibit Concentration-Dependent Departure from Dose Additivity

J. Simmons¹; C. Dingu²; E. D. Wagner³; L. K. Teuschler⁴; G. E. Rice⁴; M. J. Plewa³

1. ORD/NHEERL, U.S. EPA, Research Triangle Park, NC, United States.
2. Batelle, Columbus, OH, United States.
3. Univ. of Illinois, Urbana, IL, United States.
4. ORD/NCEA, U.S. EPA, Cincinnati, OH, United States.

ID 250 Poster Board – 603. In vitro-in vivo extrapolation of the human dose-response relationship for cellular perturbations by a binary mixture of toluene (TOL) and n-hexane (HEX)

K. Krishnan¹; T. Peyret¹

1. DSEST, Université de Montréal, Montréal, QC, Canada.

ID 37. The additivity to background argument for low-dose linearity – Is it viable?

K. S. Crump¹

1. Mathematics and Statistics, Louisiana Tech University, Ruston, LA, United States.

ID 40. Noncancer Toxicity Potential at Low Doses: Background Processes Considered Statistically and Biologically

L. R. Rhomberg¹

1. Gradient, Cambridge, MA, United States.

ID 542. High-Throughput Screening for Hazard and Risk of Environmental Contaminants

D. J. Dix¹

1. U.S. EPA, Research Triangle Park, NC, United States.

ID 857 Poster Board – 505. Feasibility of the F1-extended-one generation reproduction toxicity study

L. Sheets¹; I. Fegert²; S. Schneider²; B. van Ravenzwaay²; B. Stahl³; R. Lewis⁴; P. Botham⁴; T. Hanley⁵; R. Billington⁶; E. Carney⁷

1. Toxicology, Bayer CropScience, RTP, NC, United States.

2. Toxicology, BASF, Ludwigshafen, Germany.
3. Toxicology, Bayer CropScience, Sophia-Antipolis, France.
4. Toxicology, Syngenta, Raleigh, NC, United States.
5. Toxicology, Syngenta, Greensboro, NC, United States.
6. Toxicology, Dow AgroSciences, Abingdon, United Kingdom.
7. Toxicology, Dow Chemical, Midland, MI, United States.

ID 1351. Need for a New Approach to Genetic Toxicity Assessment: Lessons Learned and New Opportunities

*J. T. MacGregor*¹

1. Toxicology Consulting Services, Arnold, MD, United States.

ID 1354. Beyond Positive or Negative: A Quantitative Approach for Interpreting Genotoxicity Data

*B. Gollapudi*¹

1. Dow Chemical Company, Midland, MI, United States.

ID 1914 Poster Board – 524. Evaluation of the magnitude of toxicokinetic inter-individual variability factor (IVF-TK): impact of subpopulations and chemical characteristics

*M. Valcke*¹; *K. Krishnan*¹

1. Sante environnementale et sante au travail, Universite de Montreal, Montreal, QC, Canada

ID 1939 Poster Board – 601. Mode of Action For the Cancer Risk Assessment of Ingested Hexavalent Chromium: Identifying and Resolving Data Gaps

*C. Thompson*¹; *D. Proctor*²; *L. Haws*²; *M. A. Harris*¹

1. ToxStrategies, Inc., Katy, TX, United States.
2. ToxStrategies, Austin, TX, United States.

RASS 2010 Perry J. Gehring Best Graduate Student Abstract Award

Abstract # 143 Poster Board-225

Kun Lu, University of North Carolina at Chapel Hill

Advisor: James Swenberg

Distribution and Molecular Dose of Inhalation-derived and Endogenous Formaldehyde DNA Adducts Support Causation of Nasal Carcinoma, but not Leukemia

K. Lu 1; L. B. Collins1; H. Ru2; E. Bermudez3; J. A. Swenberg1

1. Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, NC, USA.

2. Department of Statistics and Operation Research, University of NC Chapel Hill, NC, USA.

RASS Robert J. Rubin Graduate Student Travel Award (RASS-Mechanisms SS)

- Awarded every other year by RASS, to be awarded by Mechanisms SS in 2010, RASS in 2011.
- Open for submission from Graduate Students, as well as abstracts considered with keywords “risk assessment” and “mechanism”
- 2010 Winner to be presented in Mechanisms SS Reception:

“Toxicokinetic differences between two HBCD stereoisomers: Effect of dose, time repeated exposure and route”

Szabo DT; Diliberto JJ; Huwe JK; Birnbaum LS.

RASS 2010 Perry J. Gehring Best Postdoctoral Abstract Award

Abstract #1384

Anne Loccisano , The Hamner Institutes

Advisor: Harvey Clewell

Development of a Rat Gestation PBPK Model for PFOA/PFOS.

A. E. Loccisano1; Y. Tan2; M. E. Andersen1; H. J. Clewell1

1. The Hamner Institutes, RTP, NC, United States.

2. USEPA, RTP, NC, United States.

RASS 2010 Best Publication Advancing the Science of Risk Assessment

Harrill AH, Watkins PB, Su S, Ross PK, Harbourt DE, Stylianou IM, Boorman GA, Russo MW, Sackler RS, Harris SC, Smith PC, Tennant R, Bogue M, Paigen K, Harris C, Contractor T, Wiltshire T, Rusyn I, Threadgill DW.

Mouse population-guided resequencing reveals that variants in CD44 contribute to acetaminophen-induced liver injury in humans.

Genome Res. 2009 Sep; 19(9):1507-15.

Honorable Mention – Published Paper for Advancing the Science of Risk Assessment

Use of short-term transcriptional profiles to assess the long-term cancer-related safety of environmental and industrial chemicals.

Thomas RS, Bao W, Chu TM, Bessarabova M, Nikolskaya T, Nikolsky Y, Andersen ME, Wolfinger RD. Toxicol Sci. 2009 Dec;112(2):311-21.

Nonlinear cancer response at ultralow dose: A 40800-animal ED(001) tumor and biomarker study.

Bailey GS, Reddy AP, Pereira CB, Harttig U, Baird W, Spitsbergen JM, Hendricks JD, Orner GA, Williams DE, Swenberg JA. Chem Res Toxicol. 2009 Jul;22(7):1264-76.

Effects of nutrition relevant mixtures of phytoestrogens on steroidogenesis, aromatase, estrogen, and androgen activity.

Taxvig C, Elleby A, Sonne-Hansen K, Bonfeld-Jørgensen EC, Vinggaard AM, Lykkesfeldt AE, Nellemann C. Nutr Cancer. 2010;62(1):122-31.

Investigation of the low-dose response in the in vivo induction of micronuclei and adducts by acrylamide.

Zeiger E, Recio L, Fennell TR, Haseman JK, Snyder RW, Friedman M. Toxicol Sci. 2009 Jan;107(1):247-57.

Bayesian population analysis of a washin-washout physiologically based pharmacokinetic model for acetone.

Mörk AK, Jonsson F, Johanson G. Toxicol Appl Pharmacol. 2009 Nov 1;240(3):423-32.

Estimates of cancer potency of 2,3,7,8-tetrachlorodibenzo(p)dioxin using linear and nonlinear dose-response modeling and toxicokinetics.

Simon T, Aylward LL, Kirman CR, Rowlands JC, Budinsky RA. Toxicol Sci. 2009 Dec;112(2):490-506.

A role for nanoparticle surface reactivity in facilitating pulmonary toxicity and development of a base set of hazard assays as a component of nanoparticle risk management.

Warheit DB, Reed KL, Sayes CM. Inhal Toxicol. 2009 Jul;21 Suppl 1:61-7.

Dose-response modeling of high-throughput screening data.

Parham F, Austin C, Southall N, Huang R, Tice R, Portier C. J Biomol Screen. 2009 Dec;14(10):1216-27.

CYP1A1 and CYP1A2 expression: Comparing 'humanized' mouse lines and wild-type mice; comparing human and mouse hepatoma-derived cell lines.

Uno S, Endo K, Ishida Y, Tateno C, Makishima M, Yoshizato K, Nebert DW. Toxicol Appl Pharmacol. 2009 May 15;237(1):119-26.

Toxicogenomic effects common to triazole antifungals and conserved between rats and humans.

Goetz AK, Dix DJ. Toxicol Appl Pharmacol. 2009 Jul 1;238(1):80-9.

RASS 2010 Best Publication Demonstrating an Application of Risk Assessment

DeSesso JM, Watson RE, Keen CL, Hazelden KP, Haws LC, Li AA.

Analysis and integration of developmental neurotoxicity and ancillary data into risk assessment: a case study of dimethoate.

J Toxicol Environ Health A. 2009;72(2):94-109.

Honorable Mention – Published Papers Demonstrating an Application of Risk Assessment

Parallelogram approach using rat-human in vitro and rat in vivo toxicogenomics predicts acetaminophen-induced hepatotoxicity in humans.

Kienhuis AS, van de Poll MC, Wortelboer H, van Herwijnen M, Gottschalk R, Dejong CH, Boorsma A, Paules RS, Kleinjans JC, Stierum RH, van Delft JH. Toxicol Sci. 2009 Feb;107(2):544-52.

Contribution of trichloroacetic acid to liver tumors observed in perchloroethylene (perc)-exposed mice.

Sweeney LM, Kirman CR, Gargas ML, Dugard PH. Toxicology. 2009 Jun 16;260(1-3):77-83.

Development of a unit risk factor for 1,3-butadiene based on an updated carcinogenic toxicity assessment.

Grant RL, Haney J, Curry AL, Honeycutt M. Risk Anal. 2009 Dec;29(12):1726-42.

Using biomonitoring equivalents to interpret human biomonitoring data in a public health risk context.

Hays SM, Aylward LL. J Appl Toxicol. 2009 May;29(4):275-88.

Are rat results from intratracheal instillation of 19 granular dusts a reliable basis for predicting cancer risk?

Valberg PA, Bruch J, McCunney RJ. Regul Toxicol Pharmacol. 2009 Jun;54(1):72-83.

Derivation of biomonitoring equivalents for di(2-ethylhexyl)phthalate (CAS No. 117-81-7).

Aylward LL, Hays SM, Gagné M, Krishnan K. Regul Toxicol Pharmacol. 2009 Dec;55(3):249-58.

Development of a quantitative microbial risk assessment for human salmonellosis through household consumption of fresh minced pork meat in Belgium.

Bollaerts KE, Messens W, Delhalle L, Aerts M, Van der Stede Y, Dewulf J, Quoilin S, Maes D, Mintiens K, Grijspeerdt K. Risk Anal. 2009 Jun;29(6):820-40.

Establishing a point of departure for risk assessment using acute inhalation toxicology data.

Rusch GM, Bast CB, Cavender FL. Regul Toxicol Pharmacol. 2009 Aug;54(3):247-55.

Derivation of biomonitoring equivalents for di-n-butyl phthalate (DBP), benzylbutyl phthalate (BzBP), and diethyl phthalate (DEP).

Aylward LL, Hays SM, Gagné M, Krishnan K. Regul Toxicol Pharmacol. 2009 Dec;55(3):259-67.

Human health risk assessment from the presence of human pharmaceuticals in the aquatic environment.

Cunningham VL, Binks SP, Olson MJ. Regul Toxicol Pharmacol. 2009 Feb;53(1):39-45.

IV. RASS Financial Status in 2009-2010

Dues-paying members: ~600

Financial History:

Net assets as of July 2006: \$12,531

Net assets as of July 2007 \$18,283
Net assets as of July 2008: \$21,621
Net assets as of December 2009: \$19,684

2010 Projections:

Additional revenue estimate (500 members): \$9,000 (dues) + \$5,300 (AM revenue) + \$1,000 (interest) + \$500 (Sapphire)
Annual meeting + awards + endorsement expenditures: \$13,175
Projected net: \$22,309

V. RASS Accomplishments in 2009-2010

Continuing RASS Popular Teleseminar Series

8 well-attended teleseminars

Sponsored ICE Courses and 17 Sessions

Workshops (5), Symposia (4), Informational Sessions (3), Roundtables (5)

Co-sponsored/endorsed Workshops

“Establishing Methodologies for Assessing Cancer Risk from Intermittent or Short-Term Exposure to Carcinogens.” HESI’2009

“Risk Assessment Workshops on Beyond Science and Decisions” ARA-TCEQ’2010

RASS poster at graduate student/postdoc mixer

Risk Assessment Primer for SOT Web Site

RASS Newsletter (under discussion)

NEW: RASS’ John Doull Student Fund

Proceeds will provide annual awards to graduate students or postdoctoral fellows for their research abstracts relating to Health Risk Assessment at the SOT Annual Meeting. The Award recipients will be selected by the *Risk Assessment Specialty Section*.

RASS Officers’ Special Accomplishments in 2009-2010

2010 Arnold J. Lehman Award*: Edward V. Ohanian (President)

*Cash stipend donated to Perry J. Gehring

Risk Assessment Student Award Fund

2010 Colgate-Palmolive Award for Student Training Alternative Method:

Dave T. Szabo (Graduate Student Representative)

VI. Special Thanks for Outstanding Support to RASS in 2009-2010

Teleseminars	Annie Jarabek & Merck & Co.
Awards	John Christopher

VII. RASS Program and Activities in 2010-2011

Continuing effort to increase academic membership in RASS

Coordination of activities with other specialty sections/groups

RASS Newsletter

Teleconference presentations

VII. RASS' Scientific Debate at the Annual Meeting in Salt Lake City

Title: Translating Endocrine Disruptor Screening to Human Health Risk”

Participants: Tammy Stoker, *USEPA*

George Daston, *P&G*

Bill Stokes, *NIEHS*

Moderator: Rory Conolly, *USEPA*

Scientific Debate Questions

1. Can EDSP Tier 1 Assay data be utilized for hazard identification?
2. In what way can EDSP Tier 1 Assay data be used for human health risk assessment and for mechanistic assessment?
3. What can it be done to facilitate the use of EDSP Tier 1 Assay data in a regulatory context?