

Rowe, A. W. (2000, Aug.). Improved decontamination: Interfacial, transport, and chemical properties of aqueous surfactant cleaners. M. S. Thesis, University of Tennessee, Knoxville, TN.

Project: 64965

Title: Supercritical Carbon Dioxide-Soluble Ligands for Extracting Actinide Metal Ions from Porous Solids

PI: Dr. Mark L. Dietz

Institution: Argonne National Laboratory

Publication Type: Journal

Griffith-Dzielawa, J. A., Barrans, R. E., McAlister, D. R., Dietz, M. L., & Herlinger, A. W. (2000). Synthesis and characterization of di-[3-(trimethylsilyl)1-propylene] alkylenediphosphonic acids. *Synthetic Commun.* 30(12), 2121-2132.

Publication Type: Poster

Herlinger, A. W., Griffith, J. A., McAlister, D. R., & Barrans Jr., R. E. (1999, Aug. 22-26). Functionalized diphosphonic acid ligands for metal ion coordination in supercritical carbon dioxide. Poster presentation #33 at the First Accomplishments of the Environmental Management Sciences Program Symposium sponsored by the Division of Nuclear Chemistry and Technology at the 218th National A.C.S. Meeting. New Orleans, LA.

HEALTH/ECOLOGY/RISK

Analytical Chemistry & Instrumentation

Project: 60163

Title: Investigation of Techniques to Improve Continuous Air Monitors Under Conditions of High Dust Loading in Environmental Settings

PI: Dr. Stephen D. Schery

Institution: New Mexico Institute of Mining & Technology

Publication Type: Presentation

Rodgers, J. C., Wasiolek, P. T., Schery, S. D., & Alcantara, R. E. (1998, Nov. 1-6). High resolution real-time optical studies of radiological air sample processes in an environmental continuous air monitor. 1998 SPIA Symposium on Industrial and Environmental Monitors and Biosensors. Boston, MA. LA-UR-98-1684.

Project: 60474

Title: Ultrahigh Sensitivity Heavy Noble Gas Detectors for Long-Term Monitoring and Monitoring Air

PI: Dr. John D. Valentine

Institution: Georgia Institute of Technology

Publication Type: Journal

Valentine, J. D. (1999). Evaluating detectors and pulse processing techniques. *IEEE Transactions in Nuclear Science.* 46(3).

Publication Type: Other

Valentine, J. D. (1999). Small prototype fluid transfer system and its performance. Nuclear Instruments and Methods in Physics Research, Section A. 422, 820-825.

Project: 73807 (Renewal of Project No. 60218)

Title: Rapid Nucleic Acid Analysis for Contaminant Evaluation

PI: Dr. Chung H. Chen

Institution: Oak Ridge National Laboratory

Publication Type: Journal

Chen, C. H., et. al. (1999). Laser desorption mass spectrometry for high throughput DNA analysis and its applications. SPIE Int. Soc. Opt. Eng. 3602, 338-345.

Golovlev, V. V., Allman, S. L., Garrett, W. R., Taranenko, N. I., & Chen, C. H. (1997). Laser induced acoustic desorption. International Journal of Mass Spectrometry and Ion Processes. 169/170, 69-78.

Isola, N. R., Allman, S. L., Golovlev, V. V., & Chen, C. H. (1999). Chemical cleavage sequencing of DNA using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. Analytical Chemistry. 71, 2266-2269.

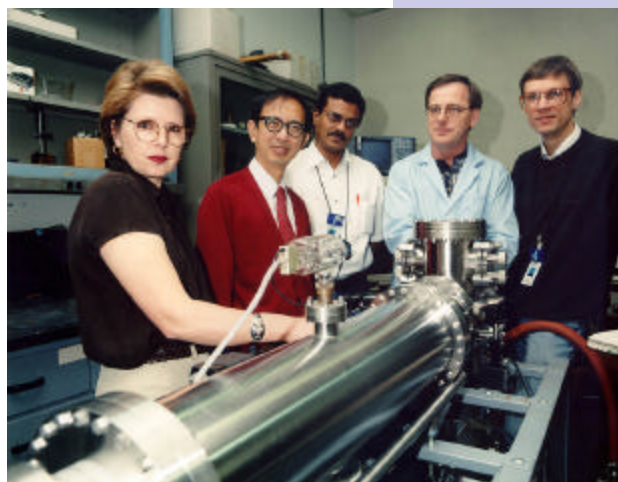
Taranenko, N. I., et. al. (1998). Matrix-assisted laser desorption/ionization for short tandem repeat loci. Rapid Comm. Mass Spectrom. 12, 413-418.

Taranenko, N. I., et. al. (1998). Sequencing DNA using mass spectrometry for ladder detection. Nucleic Acids Research. 26(10), 2488-2490.

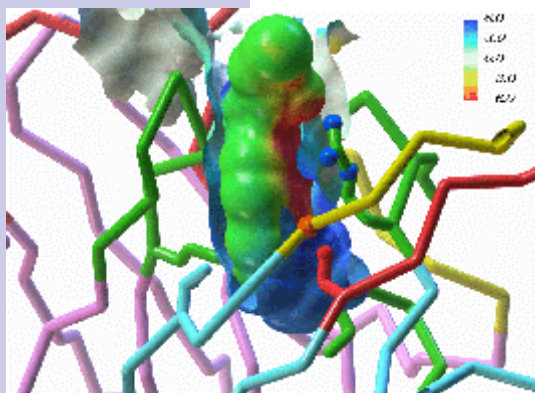
Taranenko, N. I., Potter, N. T., Allman, S. L., Golovlev, V. V., & Chen, C. H. (1999). Detection of trinucleotide expansion by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. Genetic Analysis. 15, 25-31.

Publication Type: Presentation

Chen, C. H. (1999, Mar. 26). Laser desorption mass spectrometry for rapid nucleic acid analysis. American Physical Society Centennial Meeting.



Researchers working to develop the new DNA detection technology by using laser induced acoustic desorption mass spectrometry. [see Project #73807, renewal of #60218]

Health/Risk**Project: 54546***Title:* Engineered Antibodies for Monitoring of Polynuclear Aromatic Hydrocarbons*PI:* Dr. Alexander E. Karu*Institution:* University of California at Berkeley*Publication Type:* Journal

A University of California project is using genetic engineering to improve detection of polynuclear aromatic hydrocarbons in the environment. [Project #54546]

Guo, F., Li, Q. X., & Alcantara-Licudine, J. P. (1999). A simple Na₄ EDTA-assisted sub/supercritical fluid extraction procedure for quantitative recovery of polar analytes in soil. *Anal. Chem.* 71, 1309-1315.

Li, K., Chen, R., Zhao, B., Liu, M., Karu, A. E., Roberts, V. A., & Li, Q. X. (1999). Monoclonal antibody-based enzyme-linked immunosorbent assays for part-per-billion determination of polycyclic aromatic hydrocarbons: Effects of haptens and formats on sensitivity and specificity. *Anal. Chem.* 71, 302-309.

Liu, M., Li, Q. X., & Rechnitz, G. A. (1999). Flow injection immunosensing of polycyclic aromatic hydrocarbon with a quartz crystal microbalance. *Analyt. Chim. Acta.* 387, 29-38.

Liu, M., Li, Q. X., & Rechnitz, G. A. (2000, Jan). Gold electrode modification with thiolated hapten for the design of amperometric and piezoelectric immunosensors. *Electroanal.* 12(1), 21-26.

Liu, M., Rechnitz, G. A., Li, K. & Li, Q. X. (1998). Capacitive immunosensing of polycyclic aromatic hydrocarbon and protein conjugates. *Anal. Lett.* 31, 2025-2038.

Thomas, S. & Li, Q. X. (2000, Jun. 15). Immunoaffinity chromatography for the analysis of polycyclic aromatic hydrocarbons in corals. *Environ. Sci. Technol.* 34(12), 2649-2654.

Publication Type: Poster

Karu, A. E., Li, Q. X., & Roberts, V. (1998, July 27-30). Engineered antibodies for monitoring of polynuclear aromatic hydrocarbons. Poster presented at Department of Energy Environmental Science Management Program Workshop. Chicago, IL. <http://www.doe.gov/em52/1998posters/id54546.pdf>.

Publication Type: Presentation

Li, Q. X., Li, K., Thomas, S. & Li, H. (1999, Aug. 22-26). Application of immunochemical methods for the analysis of polynuclear aromatic hydrocarbons in the environment (Abstract No. NUCL0047). Symposium on First Accomplishments of the Environmental Management Science Program, 218th National Meeting of the American Chemical Society. New Orleans, LA.

Pellequer, J.-L., Zhao, B., Kao, H.-I., Karu, A. E., & Roberts, V. A. (1999, Aug. 22-26). Cation-pi interactions in antibody binding of polynuclear aromatic hydrocarbons (Abstract No. 36750). Symposium on First Accomplishments of the Environmental Management Science Program, ACS Div. of Nuclear Chemistry and Technology, 218th National Meeting of the American Chemical Society. New Orleans, LA.

Project: 54584

Title: Comparison of the Bioavailability of Elemental Waste Laden Soils Using in vivo and in vitro Analytical Methodology, and Refinement of Exposure/Dose Models

PI: Dr. Paul J. Lioy

Institution: Univ of Medicine & Dentistry of NJ

Publication Type: Presentation

Ellickson, K. M., Kosson, D., Schopfer, C., & Lioy, P. J. (1999, Sep. 4-9). The bioaccessibility of radionuclides in contaminated soils using "in vitro" methods for the digestive system. Presentation at the 9th Annual Meeting of the International Society of Exposure Analysis. Athens, Greece.

Project: 54684

Title: Mechanism Involved in Trichloroethylene-Induced Liver Cancer: Importance to Environmental Cleanup

PI: Dr. Brian D. Thrall

Institution: Pacific Northwest National Laboratory

Publication Type: Journal

Bull, R. J. (2000, May). Mode of action of liver tumor induction by trichloroethylene and its metabolites, trichloroacetate, and dichloroacetate. *Environ. Health Persp.* 108, 241-259, Suppl. 2.

Kato-Weinstein, J., Lingohr, M. K., Thrall, B. D., & Bull, R. J. (1998). Effects of dichloroacetate on carbohydrate metabolism in B6C3F1 mice. *Toxicology.* 130, 141-154.

Lingohr, M. K., Thrall, B. D., & Bull, R. J. (1999, in press). Serum insulin levels and differential insulin receptor expression in livers and liver tumors of mice treated with dichloroacetate (DCA). *Toxicol. Appl. Pharmacol.*

Merdink, J. L., Gonzalez-Leon, A., Bull, R. J., & Schultz, I. R. (1998). The extent of dichloroacetate formation from trichloroethylene, chloral hydrate, trichloroacetate, and trichloroethanol in B6C3F1 mice. *Toxicological Sciences.* 45, 33-41.

Miller, J. H., et. al. (2000, Apr. 14). In vivo MRI measurements of tumor growth induced by dichloroacetate: Implications for mode of action. *Toxicology.* 145(2-3), 115-125.

Mounho, B. J. & Thrall, B. D. (1999, Sept. 1). The extracellular signal-regulated kinase pathway contributes to mitogenic and antiapoptotic effects of peroxisome proliferators in vitro. *Toxicol. Appl. Pharm.* 159(2), 125-133.

Schultz, I. R., Merdink, J. L., Gonzalez-Leon, A., & Bull, R. J. (1999, Jul. 15). Comparative toxicokinetics of chlorinated and brominated haloacetates in F344 rats. *Toxicol. Appl. Pharm.* 158(2), 103-114.

Stauber, A. J., Bull, R. J., & Thrall, B. D. (1998). Dichloroacetate and trichloroacetate promote clonal expansion of anchorage-independent hepatocytes, in vivo and in vitro. *Toxicol. Appl. Pharmacol.* 150, 287-294.

Publication Type: Poster

Bull, R. J., Minard, K., Sasser, L.B., Lingohr, M. K., & Wind, R.A. (1999). Dichloroacetate-induced liver tumors cease growing on removal of treatment: Result of an insulin-sensitive phenotype? *AACR Proceedings.* 40, 3321

Publication Type: Presentation

Gonzalez-Leon, A., Merdink, J. L., Schultz, I. R., & Bull, R. J. (1998). Dichloroacetate auto-inhibits its degradation in the cytosol. *Society of Toxicology, 37th Annual Meeting #426.*

Kato-Weinstein, J., Thrall, B. D., & Bull, R. J. (1998). The effect of haloacetates on carbohydrate metabolism in B6C3F1 mice. *Society of Toxicology, 37th Annual Meeting #308.*

Lingohr, M. K., Thrall, B. D., & Bull, R. J. (1998). Dichloroacetate (DCA) affects proteins involved in insulin signaling in mouse liver cells. *Society of Toxicology, 37th Annual Meeting #61.*

Merdink, J. L., Schultz, I. R., & Bull, R. J. (1998). Formation of dichloroacetic acid in B6C3F1 mice from trichloroethylene or its metabolites. *Society of Toxicology, 37th Annual Meeting #1621.*

Mounho, B. J. & Thrall, B. D. (1998). Tumor promotion by peroxisome proliferators may involve the activation of mitogenic activated protein kinases (ERK1/ERK2). *Society of Toxicology, 37th Annual Meeting #51.*

Orner, G. A., et. al. (1998). Effects of trichloroacetate (TCA) and dichloroacetate (DCA) on H-ras in male B6C3F1 mice. *Society of Toxicology, 37th Annual Meeting #60.*

Schultz, I. R., Gonzalez-Leon, A., Merdink, J. L., & Bull, R. J. (1998). Comparative toxicokinetics and metabolism of halo-acetic acids in F344 rats. *Society of Toxicology, 37th Annual Meeting #1045.*

Stauber, A. J., Bull, R. J., & Thrall, B. D. (1998). Dichloroacetate and trichloroacetate promote clonal expansion of anchorage-independent hepatocytes. *Society of Toxicology, 37th Annual Meeting #62.*

Publication Type: Proceeding

Bull, R. J., Minard, K., Sasser, L. B., Lingohr, M. K., & Wind, R. A. (1999). Dichloroacetate-induced liver tumors cease growing on removal of treatment: Result of an insulin-sensitive phenotype? AACR Proceedings. 40, 3321.

Project: 55100

Title: Human Genetic Marker for Resistance to Radiations and Chemicals

PI: Dr. Howard B. Lieberman *Institution:* Columbia University

Publication Type: Journal

Hang, H., Rauth, S. J., Hopkins, K. M., Davey, S. K., & Lieberman, H. B. (1998). Molecular cloning and tissue-specific expression of Mrad9, a murine orthologue of the Schizosaccharomyces pombe rad9+ checkpointing control gene. J. Cell Physiol. 177, 232-240.

Project: 55356

Title: Environmentally-Induced Malignancies: An In Vivo Model to Evaluate the Health Impact of Chemicals in Mixed Waste

PI: Dr. Maria Pallavicini *Institution:* University of California at San Francisco

Publication Type: Journal

Giver, C. R., Moore II, D. H., & Pallavicini, M. G. (1999, Dec.). Radiation-induced translocation biomarkers: Assumptions tested using inbred mice with varying cancer predisposition. American Society of Hematology Meeting, New Orleans, LA.

Giver, C. R., Wong, R., Moore II, D. H., & Pallavicini, M. G. (2000, in press). Radiation-induced translocation biomarkers in inbred mice with varying cancer predisposition. Radiation Res.

Publication Type: Proceeding

Wong, R., Giver, C. R., & Pallavicini, M. (1999, Dec. 3-7). Benzene-induced toxicity and aneusomy in murine bone marrow hemopoietic stem cells. American Society of Hematology Meeting. New Orleans, LA.

Wong, R., Giver, C. R., & Pallavicini, M. (1999, Sep.). Benzene-induced toxicity and aneusomy in murine bone marrow hemopoietic stem cells. NIEHS Meeting - The Role of Human Exposure Assessment in the Prevention of Environmental Disease. Rockville, MD.

Project: 55410*Title:* Determining Significant Endpoints for Ecological Risk Analysis*PI:* Dr. Thomas G. Hinton*Institution:* Savannah River Ecology
Laboratory*Publication Type:* Journal

Congdon, J. D., Dunham, A. E., Hopkins, W. A., Rowe, C. L., & Hinton, T. G. (2000, in press). Resource-allocation based life histories: A conceptual basis for studies of ecological toxicology. *Environmental Toxicology and Chemistry*.



We are using an array of 50 outdoor mesocosms to address ecological risk questions. The mesocosm facility allows us to conduct replicated, controlled dose-effect studies on biota under continuous low-level exposure conditions. This photo shows thermoluminescent dosimeters placed within a mesocosm to test the homogeneity of the radiation exposure field. [see Project #55410]

Mühlmann-Díaz, M. C., et. al. (2000, in press). Conservation of chromosome-1 in turtles over 66million years. *Cytogenics and Cell Genetics*.

Ulsh, B. A., Congdon, J. D., Hinton, T. G., Whicker, F. W., & Bedford, J. S. (2000, in press). Culture methods for turtle lymphocytes. *Methods in Cell Science*.

Ulsh, B. A., Dugan, L., Hinton, T. G., Whicker, F. W., & Bedford, J. S. (2000, in press). Environmental biodosimetry: A biologically relevant tool for ecological risk assessment and biomonitoring. *Journal of Environmental Radioactivity*.

Ulsh, B. A., et. al. (2000, Jun.). Chromosome translocations in turtles: A biomarker in a sentinel animal for ecological dosimetry. *Radiat. Res.* 153(6), 752-759.

Ulsh, B. A., Whicker, F. W., Hinton, T. G., Congdon, J. D., & Bedford, J. S. (2000, in press). Chromosome translocations in *T. scripta*: The dose-rate effect and in vivo lymphocyte radiation response. *Radiation Research*.

Whicker, F. W. (2000). Radioecology: Relevance to problems of the new millennium. *Journal of Environmental Radioactivity*. 50, 173-178.

Publication Type: Poster

Bedford, J. S. (1998, Apr.). Development of a whole-chromosome painting probe for *T. scripta*. Radiation Research Society Annual Meeting, Louisville, KY.

Bedford, J. S. (1998, Dec.). Determining significant endpoints for ecological risk analyses. DOE/DoD/EPA Strategic Environmental Research and Development Program, Washington, D. C.

Bedford, J. S. (1998, Feb.). Non-mammalian whole chromosome FISH probes and microdissection. Third International Clinical FISH Symposium, Steamboat Springs, CO.

Bedford, J. S. (1998, Jul.). Determining significant endpoints for ecological risk analyses. DOE Environmental Management Science Program Workshop, Chicago, IL.

Bedford, J. S. (1999). Chromosome translocations in turtles: A biomarker for radiation exposure. International Congress on Radiation Research, Dublin, Ireland.

Bedford, J. S. (1999). Chromosome translocations in turtles: A biomarker for radiation exposure. Wildlife Applications in Remediation Decision Making Conference, Denver, CO.

Bedford, J. S. (1999, Apr.). Determining significant endpoints for ecological risk analyses. DOE Environmental Management Science Program Workshop, Atlanta, GA.

Bedford, J. S. (2000, Oct.). Chromosome translocations in turtles: A biomarker in a sentinel animal for environmental biodosimetry. International Workshop on Comparative Radiobiology, Dublin, Ireland.

Publication Type: Presentation

Bedford, J. S. (1999, Jul.). A chromosome runs through it. Invited speaker at the Thirty-Sixth Failla Award Lecture. Presented at the Eleventh International Congress of Radiation Research, Dublin, Ireland.

Hinton, T. G. (1999, Aug.). Determining significant endpoints for ecological risk analyses. Invited speaker at the DOE Biota Dose Assessment Group, Washington, D. C.

Hinton, T. G. (2000, Aug.). Determining significant endpoints for ecological risk analyses. Invited speaker at the International Atomic Energy Agency, Vienna, Austria.

Ulsh, B. A. (1999). Including reptiles and amphibians in ecological risk assessment. Invited speaker at the Wildlife Applications in Remediation Decision Making Conference, Denver, CO.

Ulsh, B. A. (2000, Nov.). Chromosome translocations in turtles: A biomarker in a sentinel animal for environmental biodosimetry. Society of Environmental Toxicology and Chemistry Annual Meeting, Nashville, TN.

Whicker, F. W. (1999, Jun.). Future directions in environmental and radiological research. Invited speaker at the 44th Annual Meeting of the Health Physics Society, Philadelphia, PA.

Whicker, F. W. (1999, May). Protection of the environment from ionizing radiation: An international perspective. Invited speaker at the 2nd International Symposium on Ionizing Radiation, Ottawa, Ontario, Canada.

Project: 59828

Title: Bioavailability of Organic Solvents in Soils: Input into Biologically Based Dose-Response Models for Human Risk Assessments

PI: Dr. Ronald C. Wester *Institution:* University of California at San Francisco

Publication Type: Journal

Poet, T. S., Corley, R. A., Thrall, K. D., & Wester, R. C. (1999). Assessing the dermal bioavailability of volatile organics in rats. *The Toxicologist*. 48, 339.

Poet, T. S., Corley, R. A., Thrall, K. D., Edwards, J. A., & Wester, R. C. (2000). Exhaled breath analysis and PBPK modeling of the dermal absorption of trichloroethylene in rats. *The Toxicologist*. 54, 147.

Poet, T. S., et. al. (2000, in press). Bioavailability of organic solvents in soils: Input into biologically based dose-response models for human-risk assessment. *Proceedings of the 15th Annual International Conference on Contaminated Soils and Water*.

Poet, T. S., et. al. (2000, Jul.). Assessment of the percutaneous adsorption of trichloroethylene in rats and humans using MS/MS real time breath analysis and physiological based pharmacokinetic modeling. *Toxicol. Sci.* 56(1), 61-72.

Poet, T. S., et. al. (2000, Mar.). Utility of real time breath analysis and physiologically based pharmacokinetic modeling to determine the percutaneous absorption of methyl chloroform in rats and humans. *Toxicol. Sci.* 54(1), 42-51.

Thrall, K., et. al. (2000). A real-time in vivo method for studying the percutaneous adsorption of volatile chemicals. *Int. J. of Occupational and Environmental Health*. 6, 96-103.

Wester, R. C., et. al. (1999). An innovative method to determine dermal uptake of solvents from soil and water in vivo in humans. *The Toxicologist*. 48, 338.

Wester, R. C., et. al. (2000). Human dermal absorption of trichloroethylene from soil and water. *The Toxicologist*. 54, 148.

Publication Type: Other

Thrall, K. D., Poet, T. S., & Corley, R. A. (1999). An innovative method to determine percutaneous absorption: Real time breath analysis and physiologically based pharmacokinetic modeling. Bronaugh, R. & Maibach, H. (Eds.), *Percutaneous Absorption, Third Edition*, Marcel Dekker, Inc. New York, NY.

Publication Type: Presentation

Wester, R. C. (1998). Chemical manufactures association workshop of research planning. Research Triangle Park, NC.

Wester, R. C. (1998, Sept.). Dermal bioavailability. Presentation at NIOSH. Morgantown, WV.

Wester, R. C. (1999). An innovative method to determine dermal uptake of solvents from soil and water in vivo in humans. Presentation at the 15th Annual International Conference on Contaminated Soils and Water. Amherst, MA.

Wester, R. C. (1999). An innovative method to determine dermal uptake of solvents from soil and water. Presentation at the Faculty and Student Undergraduate Research Education Conference, Argonne National Laboratory. Argonne, IL.

Project: 60037

Title: Estimation of Potential Population Level Effects of Contaminants on Wildlife

PI: Dr. James Loar

Institution: Oak Ridge National Laboratory

Publication Type: Journal

Sample, B. E. & Arenal, C. A. (1999). Allometric models for interspecies extrapolation of wildlife toxicity data. *Bull. Environ. Contam. Toxicol.* 62, 653-663.

Publication Type: Poster

Mann, L. K., Sample, B. E., Arenal, C., Rose, K. A., & Suter, G. W. (2000, Apr. 24-27). Estimation of population-level effects on wildlife based on individual-level exposures: Influence of life-history strategies. Poster presentation at the Environmental Management Science Program National Workshop, Atlanta, GA.

Sample, B. E. & Arenal, C. (1998, Nov. 15-19). Allometric models for interspecies extrapolation of wildlife toxicity data: Expanding the database. Presentation at the 19th annual SETAC meeting in Charlotte, NC.

Sample, B. E., Arenal, C. A., & Mann, L. K. (1999). Determination of sensitivity of birds and mammals to environmental contamination. Poster presentation at the SETAC annual meeting.

Sample, B. E., Arenal, C., & Mann, L. (1999, Nov. 14-18). Determination of sensitivity of birds and mammals to environmental contaminants. Poster presentation at the 20th Annual SETAC Meeting, Philadelphia, PA.

Sample, B. E., Rose, K., & Suter, G. (1998, Dec. 1-3). Estimation of potential population-level effects of contaminants on wildlife. Poster presentation at Partners in Environmental Technology 98, SERDP Technical Symposium and Workshop, Crystal City, VA.

Sample, B. E., Rose, K., & Suter, G. (1998, Jul. 27-30). Estimation of potential population-level effects of contaminants on wildlife. Poster presentation at the 1st Annual Environmental Management Science Program National Workshop, Chicago, IL.

Publication Type: Presentation

Sample, B. E., Rose, K., & Suter, II, G. W. (1998, Jul. 27-30). Estimation of potential population-level effects of contaminants on wildlife. Presentation at the 1st annual meeting of the U. S. Department of Energy Environmental Management Science Program. Chicago, IL.

Sample, B. E., Rose, K., & Suter, II, G. W. (1998, Dec. 1-3). Estimation of potential population-level effects of contaminants on wildlife. Presentation at the Partners in Environmental Technology 98: SERDP Technical Symposium and Workshop. Crystal City, VA.

Sample, B. E., Rose, K., & Suter, II, G. W. (1999, Apr.). Estimation of potential population-level effects of contaminants on wildlife. Platform presentation at the NorCal SETAC meeting. Concord, CA.

Sample, B. E., Rose, K., Suter, II, G. W., & Arenal, C. (1998, Nov. 15-19). Wildlife toxicity data and ecological risk assessment: Problems and solutions. Platform presentation at the 19th annual SETAC meeting. Charlotte, NC.

Publication Type: Proceeding

Sample, B. E., Rose, K. A., & Suter II, G. W. (1998, Oct.). Estimation of population-level effects on wildlife based on individual-level exposures: Influence of life history strategies. Proceedings of Symposium on Environmental Contaminants and Terrestrial Vertebrates: Effects on Populations, Communities, and Ecosystems. College Park, MD. 18-21.

Project: 73942 (Renewal of Project No. 59918)

Title: Improved Radiation Dosimetry Risk Estimates to Facilitate Environmental Management of Plutonium Contaminated Sites

PI: Dr. Bobby R. Scott

Institution: Lovelace Biomedical & Environmental Research Institute

Publication Type: Journal

Cheng, Y. -S., Zhou, Y., & Chen, B. T. (1999, Oct.). Particle deposition in a cast of human oral airways. *Aerosol Sci. Tech.* 31(4), 286-300.

Hoover, M. D., & Newton, G. J. (1998). Performance testing of continuous air monitors for alpha-emitting radionuclides. *Radiat. Prot. Dosim.* 79(1-4), 499-504.

Hoover, M. D., et. al. (1998). Characterization of enriched uranium dioxide particles from a uranium handling facility. *Radiat. Prot. Dos.* 79(1-4), 57-62.

Hoover, M. D., Mewhinney, C. J., & Newton, G. J. (1999). Modular glovebox connector and associated good practices for control of radioactive and chemically toxic materials. *Health Phys.* 76(1), 66-72.

Osovets, S. V. & Scott, B. R. (1998, Mar. 6). Nonmonotonous character of dose-response relationships. *Viniti No. ¼*, 645, B98 (in Russian).

Scott, B. R. & Fencl, A. (1999). Variability in PuO₂ intake by inhalation: Implications for worker protection at the US Department of Energy. *Radiat. Prot. Dosim.* 83(3), 221-232.

Scott, B. R. (1999). Evaluating the risk of death via the Hematopoietic syndrome mode from prolonged exposure of nuclear workers to radiation delivered at very low rates. *Health Physics.* 74, 545-553.

Scott, B. R. (1999). Transformation of C3H 10T1/2 cells. Letter to Editor, *J. Radiol. Prot.* 19(2), 177-179.

Scott, B. R. (1999). Variability in PuO₂ intake by inhalation: Implications for worker protection at the U.S. Department of Energy. *Radiation Protection Dosimetry.* 83(3), 221-232.

Scott, B. R., Lyzlov, A. F., & Osovets, S. V. (1998). Evaluating the risk of death via the hematopoietic syndrome mode for prolonged exposure of nuclear workers to radiation delivered at very low rates. *Health Physics.* 74 (5), 545-553.

Publication Type: Other

Glissmeyer, J. A., et. al. (1999). American national standard for sampling and monitoring releases of airborne radioactive substances from the stacks and ducts of nuclear facilities. ANSI/HPS N13.1-1999, Health Physics Society. McLean, VA.

Guilmette, R. A. & Scott, B. R. (1998.) Radiation toxicology. In Wexler, P. (Ed.), *Encyclopedia of Toxicology*. 3, 5-18. Academic Press. San Diego, CA.

Publication Type: Poster

Scott, B. R., Hoover, M. D., Neft, R. E., & Fencl, A. F. (1999, Aug. 22-26). Recommendations for improving the interim radionuclide soil action levels for the Rocky Flats Cleanup Agreement. Poster presentation at the 218th American Chemical Society National Meeting. New Orleans, LA.

Publication Type: Presentation

Cheng, Y. -S., Yeh, H. C., Smith, S. M., Cheng, K. H., & Swift, D. L. (1998, Sept. 14-18). Deposition of ultrafine particles in the nasal and tracheobronchial airways. 1998 International Aerosol Conference. Edinburgh, UK.

Hoover, M. D. (1998, Apr. 24). Workplace air sampling methods and good practices. Technical Workshop on Air Sampling: The Big Picture. Savannah River Chapter, Health Physics Society. Aiken, SC.

Hoover, M. D. (1998, Jul. 12). Statistical considerations for aerosol sampling, professional enrichment short course. 43rd Annual Meeting of the Health Physics Society. Minneapolis, MN.

Hoover, M. D. (1999, Jan. 24). Statistical considerations for aerosol sampling. Professional Enrichment Short Course. 32nd Midyear Meeting of the Health Physics Society. Albuquerque, NM.

Hoover, M. D., Newton, G. J., & Cox, F. M. (1998, Jul. 15). Flow measurements with rotameters and appropriate corrections. 43rd Annual Meeting of the Health Physics Society. Minneapolis, MN.

Hoover, M. D., Newton, G. J., & Cox, F. M. (1998, Feb. 7). Sampling radioactive aerosols. American Academy of Health Physics Short Course. 31st Midyear Meeting of the Health Physics Society. Mobile, AL.

Scott, B. R. (1998, Aug.). Improved radiation dosimetry/risk estimates to facilitate environmental management of plutonium contaminated sites. Presentation at the American Chemical Society. New Orleans, LA.

Scott, B. R., et. al. (1998, Jul. 27-30). Evaluating the intake via inhalation of plutonium oxides for the stochastic exposure paradigm. Poster 13 presented at the Environmental Management Science Program Workshop. Chicago, IL.



A particle size analyzer deployed at Fernald which is currently used to supplies airborne particulate concentration and size data at the waste pits, the soil dryer and at buildings being removed. [see Project #74050, renewal of #59882]

Smith, S. M., Cheng, Y. S., & Yeh, H. C. (1998, Sept. 14-18). Diffusional deposition of ultrafine particles in human tracheobronchial airways. 1998 International Aerosol Conference. Edinburgh, UK.

Zhang, Z., Wang, X., & Cheng, Y. -S. (1998, Sept. 14-18). Flow pattern and aerosol deposition in the human oral airway. 1998 International Aerosol Conference. Edinburgh, UK.

Publication Type: Proceeding

Glissmeyer, J. A., et. al. (1999). American national standard for sampling and monitoring releases of airborne radioactive substances from the stacks and ducts of nuclear facilities. ANSI/HPS N13.1-1999, Health Physics Society. McLean, VA.

Scott, B. R. (1998). Improved radiation dosimetry/risk estimates to facilitate environmental management of plutonium contaminated sites. In Environmental Management Science Program Workshop, U. S. Department of Energy Publication CONF-980736. Washington, D. C. 25-26.

Project: 74050 (Renewal of Project No. 59882)

Title: Measurement of Radon, Thoron, Isotopic Uranium and Thorium to Determine Occupational and Environmental Exposure at US DOE Fernald

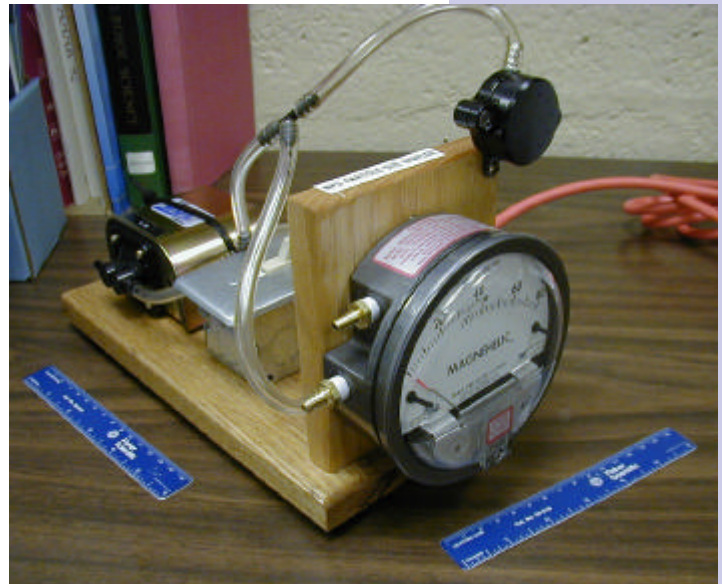
PI: Dr. Naomi H. Harley

Institution: New York University Medical School

Publication Type: Presentation

Harley, N. H. (1999, Jun.). Field results of personal radon and thoron monitor. Annual Health Physics Meeting. Philadelphia, PA. Health Physics. 76, 163.

Harley, N. H. (1999, Jun.). Results of particle size sampler field tests. Annual Health Physics Meeting. Philadelphia, PA. Health Physics. 76, 163.



A particle size analyzer that is used for size distribution measurements of inhaled radionuclides particles. Particle size is the major determinant of bronchial doses of radionuclides. [see Project #74050, renewal of #59882]

Low Dose Radiation

Project: 69904

Title: Low-Dose Risk, Decisions, and Risk Communication

PI: Dr. James Flynn

Institution: Decision Science Research Institute

Publication Type: Poster

Flynn, J. (2001, Jun.). Low dose risk, decision, & risk communication. U. S. Department of Energy/National Aeronautics and Space Administration. Washington, D. C.

Flynn, J. (2000, Apr.). The social geography of risk communication. U. S. Department of Energy, Environmental Management. Atlanta, GA.

Publication Type: Presentation

Flynn, J. (2001, Jun.). Low dose risk, decision, and risk communication. U. S. Department of Energy/National Aeronautics and Space Administration Radiation Investigator's Workshop. Hilton Arlington and Towers. Washington, D. C.

Flynn, J. (2001, Sept.). Public interaction and acceptance aspects. National Research Council, Board on Radioactive Waste Management, Workshop on Principles and Operational Strategies for Repository Siting Systems. Washington, D. C.

Flynn, J. (1999, Dec.). The role of risk communication in response to technological stigma. Society for Risk Analysis. Atlanta, GA.

Flynn, J. (1999, Nov.). The role of stigmatization in public risk perceptions of high-level radioactive wastes. Board on Radioactive Waste Management, National Research Council. Irvine, CA.

Flynn, J. (2000, Jan.). The social context for risk communication. National Cancer Institute/Center for Disease Control. Workshop on I-131 fallout from Nevada Test Site. Rockville, MD.

Flynn, J. (2000, Jul.). Radiation risk, decisions, and risk communication. Gordon Conference. Sawyer-Colby College. New London, CN.

Flynn, J. (2000, Jun.). Trust and risk management communications. International Conference on Trust. Western Washington State University. Bellingham, WA.

Flynn, J. (2001, Apr.). The social context for communication about radiation risk. American Chemical Society Symposium on Radiation Health and Safety: Myth and Reality. 221st ACS National Meeting. San Diego, CA.

Flynn, J. (2001, Mar.). The confusion of risk perception. DOE Workshop on the Communication of the Low-Dose Radiation Research Program. Freedom Forum World Center. Arlington, VA.

Project: 69939

Title: Sensitivity to Radiation-Induced Cancer in Hemochromatosis

PI: Dr. James E. Morris

Institution: Pacific Northwest National
Laboratory

Publication Type: Journal

Stevens, R. G., Morris, J. E., & Anderson, L. E. (2000). Commentary: Hemochromatosis heterozygotes constitute a radiation-sensitive subpopulation. *Rad. Res.* 153, 844-847.

Publication Type: Presentation

Morris, J. E., Anderson, L. E., & Sasser, L. B. (2000, Sept.). Sensitivity to radiation-induced cancer in hemochromatosis. Conference on Radiation Protection for our National Priorities. Columbia Chapter. Health Physics Society. Spokane, WA.