



Texas A&M University Faculty of Toxicology
News & Reviews

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Announcements

Meeting Attendance

The 41st Annual Meeting of the Society of Toxicology (SOT) was held in Nashville, TN from March 17-21. Thirty faculty, staff and graduate students from Texas A&M attended and presented 34 abstracts (*listed on page 4*). Congratulations to **Dr. Ron Tjalkens** (Asst. Professor, VAPH) who received the prestigious American Chemistry Council Early Award in Neurotoxicology. This award is intended to enhance the career development of an investigator in academia in North America, and to encourage innovative research. **Mr. Spencer Williams** (Ramos laboratory, VTPP) is the recipient of the Covance Corporation Graduate Fellowship, one of three graduate student fellowships offered through SOT. **Ms. Jeong-Eun Lee** (Safe laboratory, VTPP) received a travel award from SOT to attend the conference. Several people received awards for the abstracts presented at the meeting. The Best Abstract in the Occupational Health Section was awarded to **Dr. Charlie Johnson** (Postdoctoral Fellow, Ramos-VTPP). **Spencer Williams** received 2nd Place in the In Vitro Section. **Hadi Falahatpishah** (Ramos laboratory, VTPP) and **Brad Saville** (Safe laboratory, VTPP) received 3rd Place and Honorable Mention, respectively, in the Mechanisms Section.

Seven students from Dr. Stephen Safe's laboratory participated in the Texas Forum for Female Reproduction (TFFR) conference on May 2-3, 2002 in Houston. Those attending and presenting their data were Genetics doctoral students **Shaheen Khan** and **Leela Kotha**, Biochemistry doctoral student **Sharon Ngwenya**, Toxicology doctoral students **Maen Abdelrahim**, **Xiangrong Li** and **Shu Zhang**, and postdoctoral fellow **Dr. Matt Stoner**. All seven received travel awards from the Life Science Task Force to attend the conference. Their abstracts were as follows: Mr. Abdelrahim presented "*Small Inhibitory*

RNA Duplexes for Sp1 Protein Block Basal and Estrogen-Induced Gene Expression and Cell Cycle Progression in MCF-7 Breast Cancer Cells." Ms. Khan presented "*Mechanism of Hormonal Regulation of cad Gene Expression in Breast Cancer Cells.*" Ms. Kotha presented "*Inhibition of Estrogen Receptor Negative Breast Cancer Cell Growth by Selective Aryl Hydrocarbon Receptor Modulators.*" Mr. Li presented "*Estrogen Activation of Lactate Dehydrogenase A Gene Expression.*" Ms. Ngwenya presented "*Cell Context-Dependent Differences in the Mechanism of Estrogen Regulation of E2F-1 in Breast Cancer Cells.*" Dr. Stoner presented "*Hypoxia Induces Proteasome-Dependent Degradation of Estrogen Receptor Alpha Protein in ZR-75 Breast Cancer Cells.*" Ms. Zhang presented "*Phytochemicals as Aryl Hydrocarbon Receptor Agonists/Antagonists: Effects of Structure and Cell Context.*"

Ismael Samudio (Safe laboratory, VTPP) participated in the Genetics Recruiting Symposium, February 21-24. His presentation entitled "*Chromatin Immunoprecipitation Analysis of Estrogen Receptor α : Aryl Hydrocarbon Receptor Cross-talk in MCF-7 Human Breast Cancer Cells*" was awarded Third Place.

Charles Partridge (Ramos laboratory, VTPP) traveled to San Francisco, CA from February 20-24 to participate in the American Physiological Society Conference.

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Maya Scott, DVM, (Boothe laboratory, VTPP) traveled to Tucson, AZ on April 22-25 to attend a Vitron Laboratories workshop on the liver. She also traveled to Dallas, TX on May 29-June 1 to attend the American College of Veterinary Internal Medicine annual meeting, and to Athens, Georgia, on July 14-26 to take Phase I of the board certification exam for the American College of Veterinary Clinical Pharmacology.

Honors & Awards

At the College of Veterinary Medicine Honors Convocation held on April 12, 2002, **Hadi Falahatpisheh** and **Matthew Stoner** were co-recipients of the George T. Edds Award for outstanding students in Toxicology. **Dr. Maya Scott** received one of two Outstanding Graduate Student Awards from the College.

December 2001 Graduates

Tae-Hyeon Cho (Castiglioni/Donnelly) is an NIH-sponsored Postdoctoral Fellow at the University of

Alabama at Birmingham.

Chunhua Qin (Safe) is a Postdoctoral Fellow at Texas A&M University, Dept. of Veterinary Physiology & Pharmacology in Dr. Steve Safe's laboratory.

May 2002 Graduates

Charles Ake (Phillips) is a Product Line Specialist for OI Analytical in College Station.

Shane Gold (Wild) is a Postdoctoral Fellow at TAMU, Dept. of Biochemistry & Biophysics, in Dr. Jim Wild's laboratory.

Henry Huebner (Phillips) is now an NIEHS-sponsored Postdoctoral Fellow in Dr. Tim Phillips' laboratory in Veterinary Anatomy & Public Health at TAMU.

Matthew Stoner (Safe) is a Postdoctoral Fellow in Dr. Curtis Omicinski's laboratory at Penn State.

Students that completed Preliminary Exams:

Gary Barbee	Donnelly lab, VAPH
Anca Petrescu	Schroeder lab, VTPP
Michelle Pine	Busbee lab, VAPH
Spencer Williams	Ramos lab, VTPP



Faculty Honors

During the May 11, 2002 commencement, **Dr. Evelyn Tiffany-Castiglioni**, Professor and Head, Department of Veterinary Anatomy and Public Health, received the 2002 Distinguished Alumnus Award from the Graduate School of Biomedical Sciences at the University of Texas Medical Branch at Galveston. This is the highest award presented to a graduate, and is indicative of superior achievement and dedication as a research scientist, teacher and administrator.

Dr. Stephen Safe received a Highly Cited Researchers Award in Pharmacology from ISI Thomson Scientific. A 1984 paper entitled "High Resolution PCB Analysis: Synthesis and Chromatographic Properties of All 209 PCB Congeners" was highlighted in the journal *Environmental Science and Technology* as one of their most highly cited papers in environmental sciences. This work was earlier featured in *Current Contents* as a Science Citation Classic. Coauthors on the paper are Marjorie Romkes, Lorna Safe, Sheila McCrindle, Michael Mullin and Cynthia Pochini. Dr. Safe is a Distinguished Professor in the Department of Veterinary Physiology & Pharmacology, and Toxicology, Genetics, Biochemistry & Biophysics, and Biotechnology, and has a joint appointment at the TAMUS Health Science Center Institute of Biosciences and Technology. He is the former Chair of the Interdisciplinary Faculty of Toxicology.

The Board for International Food and Agricultural Development (BIFAD) of the U.S. Agency for International Development recently named **Dr. Timothy Phillips** as winner of its' Award for Scientific Excellence. He was recognized for the breakthrough discovery and application of the properties of clays to deactivate mycotoxins in peanuts. Phillips' scientific contribution is especially notable because it has so critically affected the safety of feeds and the health of people and animals, particularly in developing nations, though an inexpensive and practical technology. It has been estimated that this technology is being used in ten percent of animal feeds worldwide. Dr. Phillips is a Professor in the Dept. of Veterinary Anatomy & Public Health, Chair of the Interdisciplinary Faculty of Toxicology, and Director of the Center for Food Safety.

Environmental Health Sciences at TAMU

SBRP

Several members of the TAMU **Superfund Basic Research Program** (SBRP) attended the second annual meeting for the nineteen Superfund Research Programs in Gainesville, FL. The conference theme was "Assessing Risks of Hormonally Active Agents." **Dr. K.C. Donnelly** participated in a session entitled Assessing Risks, and presented a lecture entitled "*Risk Assessment of Complex Mixtures—Regulatory Realities and Recent Research*," which focused on problems associated with risk assessment of polynuclear aromatic hydrocarbon (PAH) mixtures. He presented several examples of research carried out at Texas A&M. **Dr. Stephen Safe** participated in the session on Human Health and presented a lecture entitled "*Problems for Risk Assessment of Xeno- and Phytoestrogens*." He discussed basic mechanistic considerations that would predict the highly variable estrogenic activity of these compounds and problems this posed for both screening and risk assessment of these compounds. Graduate student **Leslie Cizmas** presented her poster on the "*Genotoxicity and Chemical Analysis of Wood-Preserving Waste*" (co-authors K.C. Donnelly, T.J. McDonald and R. Barhoumi). She discussed results on the fractionation of wood-preserving waste and the variable toxicities of different fractions. Another graduate student, **Cole Matson**, presented a poster entitled "*Characterization of Contaminants and Their Effects in Wildlife from the Heavily Contaminated Industrial Zone of Sumgayit, Republic of Azerbaijan*" (co-authors C.D. Swartz, K.C. Donnelly, A. Islamzadey, G. Palatnikov, T.J. McDonald, R.L. Autenrieth and J.W. Bickham). His presentation highlighted the analytical and biological field studies that are being carried out in Azerbaijan as a "high dose" contaminated area. **Dr. Robin Autenrieth** presented a poster on outreach activities of the SBRP at Texas A&M. In addition, **Nancy White** attended the SBRP Administrators sessions. The annual meeting was highly successful in bringing together scientists from the diverse Superfund Programs. The next meeting will be hosted by the University of Arizona in Tucson, November 3-6, 2002. All faculty and students associated with the Texas A&M University SBRP should plan to attend and present their results at this meeting.

CERH

Border Safe Drinking Water Project in Hidalgo County, Texas. The Community Education and Outreach Program (COEP) of the **Center for Environmental and Rural Health** (CERH) is working on an outreach

project aimed at reducing waterborne illnesses in *colonias* (communities) in Hidalgo County, Texas. It is a collaboration between CERH, Texas Department of Health and the Center for Housing and Urban Development.

The U.S. General Accounting Office reported in March 2000 that border communities experience higher rates of waterborne illnesses than the rest of the state and nation. Texas Department of Health (TDH) data show that hepatitis A, shigellosis, salmonellosis, dysentery, and cholera occur at much higher rates in *colonias* than the rest of the State (1997). These diseases pose significant health concerns since they can affect the liver and gastrointestinal tract of affected individuals, particularly children with immature organs. Issues of concern in the *colonias* include contamination of shallow aquifers from inadequate disposal of fecal material, exposure to rodent and arthropod vector-borne diseases due to inadequate solid waste disposal, poor hygiene due to lack of adequate potable water, and exposure to pesticides due to close proximity of agriculture (Texas Border Low Income Housing Coalition, 1993).

COEP Director, **Dr. Irma Ramos** says this project, funded by the Human Resources and Services Administration (HRSA) and the Environmental Protection Agency (EPA), will increase knowledge among health care professionals and residents of *colonias* in Hidalgo County about prevention and control of waterborne illness. A secondary objective is to identify existing data sources and recommend potential avenues for tracking and reporting waterborne contaminants as a mechanism for prevention and timely response to outbreaks.

PEER

The **Partnership in Environmental and Rural Health Education** (PEER) has been very busy. In May, **Dr. Larry Johnson** attended the NIEHS Environmental Health Sciences as an Integrative Context (EHSIC) annual meeting. He presented two posters: "*Problem-Solving Adventures Integrate Environmental Health Science into Rural Middle School Curricula*" and "*Enhancing Rural Middle School Science Education with Teacher Training, School Visits and Web-based Environmental Health Curriculum*." In June, several of the PEER team including **Dr. K.C. Donnelly, Kristy Hardy, Vince Hardy, Dr. Bill Klemm, Jennifer Reed** and **Brett Rose**, presented workshops to middle school teachers in the Marshall, Temple and Edinburg areas. Presentations occur throughout the year, to students and teachers statewide.

SOT 2002 Abstracts

APPLICATION OF THE RNA INTERFERENCE ASSAY TO INVESTIGATE THE ROLE OF Sp1 AS A TRANSCRIPTION FACTOR IN BREAST CANCER CELLS. **M.H. Abdelrahim**, I. Samudio and S.H. Safe.

17 β -ESTRADIOL-AND 4-HYDROXYTAMOXIFEN-INDUCED TRANSACTIVATION IN BREAST AND ENDOMETRIAL CANCER CELLS IS DEPENDENT ON ER-SUBTYPE, CELL AND PROMOTER CONTEXT. **E. Castro-Rivera** and S.H. Safe.

MECHANISM OF HORMONAL ACTIVATION OF EARLY GROWTH RESPONSE-1 (*egr-1*) IN BREAST CANCER CELLS. **C.C. Chen** and S.H. Safe.

REMEDICATION OF ORGANOPHOSPHORUS NEUROTOXICITY IN SY5Y NEUROBLASTOMA CELLS BY ORGANOPHOSPHORUS HYDROLASE (OPH). **T.M. Cho**, J.R. Wild, K.C. Donnelly and E. Tiffany-Castiglioni.

MICROBIAL GENOTOXICITY OF MODEL CHLORINATED ALIPHATIC HYDROCARBONS AND BINARY MIXTURES. **K.C. Donnelly**, T.C. Hudson and M.M. Mumtaz.

DISRUPTION OF NEPHROGENESIS BY BENZO (A)PYRENE, AN ARYL HYDROCARBON RECEPTOR LIGAND, INVOLVES INTERFERENCE WITH ALTERNATIVE SPLICING AND POST-TRANSCRIPTIONAL REGULATION OF THE WILMS' TUMOR SUPPRESSOR-1 GENE. **M. Falahatpisheh** and K.S. Ramos.

SELECTIVE LOSS OF N-CADHERIN EXPRESSION IN THE KIDNEYS OF AGED FISHER 344 RATS, BUT NOT SHR RATS. **S. Gaylor**, J. Jiang, R.C. Burghardt, W.H. Griffin and A.R. Parrish.

DIFFERENTIAL EFFECTS OF 17 β -ESTRADIOL ON VASCULAR ENDOTHELIAL GROWTH FACTOR RECEPTOR EXPRESSION IN ENDOMETRIAL AND BREAST CANCER CELLS LINES. **K. Higgins**, M. Stoner and S.H. Safe.

DISRUPTION OF N- AND KSP-CADHERIN LOCALIZATION AND EXPRESSION IS ASSOCIATED WITH MERCURY-INDUCED ACUTE RENAL FAILURE. **J. Jiang**, R.C. Burghardt and A.R. Parrish.

GLOBAL GENE EXPRESSION PROFILES IN CHEMICAL ATHEROGENESIS. **C.D. Johnson**, K.P. Lu, P.D. Beremand, T.L. Thomas and K.S. Ramos.

MECHANISM OF HORMONAL REGULATION OF *cad* GENE EXPRESSION IN BREAST CANCER CELLS. **S. Kahn**, M. Wormke and S.H. Safe.

MECHANISM OF ESTROGEN RECEPTOR α /Sp1-MEDIATED ACTIVATION OF ESTROGEN-RESPONSIVE GC-RICH PROMOTERS. **K. Kim**, N. Thu, B. Saville, I. Samudio and S.H. Safe.

INHIBITION OF ESTROGEN RECEPTOR NEGATIVE BREAST CANCER CELL GROWTH BY SELECTIVE ARYL HYDROCARBON RECEPTOR MODULATORS. **L. Kotha**, A. McDougal and S.H. Safe.

VITAMIN D-INTERACTING PROTEIN 150 (DRIP 150) AS A COACTIVATOR OF ESTROGEN RECEPTOR α ($ER\alpha$)-AND $ER\alpha$ /Sp1-MEDIATED TRANSACTIVATION IN ZR-75 CELLS. **J.E. Lee**, and S.H. Safe.

PROTEIN INHIBITOR OF STAT-1 (PIAS) AS

COACTIVATORS OF ESTROGEN-INDUCED GENE EXPRESSION IN BREAST CANCER CELLS. **W.R. Lee**, B. Saville, H. Felix and S. Safe.

HORMONAL ACTIVATION OF LACTATE DEHYDROGENASE GENE EXPRESSION IN BREAST CANCER CELLS. **X. Li** and S.H. Safe.

UNRESTRICTED BASE PAIRS WITHIN THE ARE/E_PRE CORE SEQUENCE OF *c-Ha-ras* CONFER UNIQUE PROTEIN BINDING SPECIFICITY IN VASCULAR SMOOTH MUSCLE CELLS. **K.P. Miller** and K.S. Ramos.

COMPARATIVE ARYL HYDROCARBON RECEPTOR-HORMONE RECEPTOR CROSSTALK IN BREAST AND PROSTATE CANCER CELLS. **D. Morrow**, A. McDougal, S. Safe.

CELL CONTEXT-DEPENDENT DIFFERENCES IN THE MECHANISM OF ESTROGEN REGULATION OF E2F1 IN BREAST CANCER CELLS. **S. Ngwenya** and S.H. Safe.

MERCURY DECREASES TRANSEPIHELIAL RESISTANCE IN MDCK I CELLS: ASSOCIATION WITH ALTERATIONS IN CADHERIN/CATENIN COMPLEXES. **A.R. Parrish** and J. Jiang.

ALTERED EXPRESSION OF OSTEOPOINTIN, ALPHA-1 INTEGRIN SUBUNIT, AND ALPHA-SMOOTH MUSCLE ACTIN IN VASCULAR TISSUE IN RESPONSE TO OXIDATIVE INJURY. **C.R. Partridge**, E. Wilson, G. Meinger, E.S. Williams and K.S. Ramos.

BLOCKAGE OF COPPER RELEASE BY LEAD IN ASTROGLIA VIA TARGETING HEAVY METAL BINDING DOMAIN OF ATP7A. **Y. Qian**, Y. Zheng and E. Tiffany-Castiglioni.

INDUCTION OF p53 GENE EXPRESSION IN MCF-7 BREAST CANCER CELLS BY 17 β -ESTRADIOL IS MEDIATED BY CALMODULIN KINASE IV-DEPENDENT ACTIVATION OF AN NF- κ B/CTF-1 COMPLEX. **C. Qin**, T. Nguyen, J. Stewart, I. Samudio, R.B. Burghardt and S. Safe.

DISRUPTION OF GLOMERULAR MESANGIAL AND VISCERAL EPITHELIAL CELL INTERACTIONS *IN VITRO* BY BENZO(A)PYRENE. **K.S. Ramos**, N.F. Alejandro and J.K. Kerzee.

ANALYSIS OF ESTROGEN RECEPTOR α ($ER\alpha$) AND Sp1 PROTEIN INTERACTIONS WITH PROMOTERS OF ESTROGEN RESPONSIVE GENES IN BREAST CANCER CELLS BY CHROMATIN IMMUNOPRECIPITATION. **I. Samudio** and S.H. Safe.

COOPERATIVE COACTIVATION OF ESTROGEN RECEPTOR α IN ZR-75 HUMAN BREAST CANCER CELLS BY SNURF AND TATA-BINDING PROTEIN. **B. Saville**, M. Wormke, M. Stoner, I. Samudio and S. Safe.

HYPOXIA INDUCES PROTEASOME-DEPENDENT DEGRADATION OF ESTROGEN RECEPTOR α ($ER\alpha$) IN HUMAN BREAST CANCER CELLS. **M. Stoner** and S.H. Safe.

TNF- α TREATMENT SUPPRESSES CYP1A1 TRANSCRIPTION BY INHIBITING ACETYLATION OF HISTONE H4 AND PHOSPHORYLATION OF THE C-TERMINAL DOMAIN OF RNA POLYMERASE II. **Y. Tian**, A.B. Rabson, M.A. Gallo and S. Ke.

GENOMIC INSTABILITY AND GENE COPY NUMBER CHANGES IN THREE CELL LINES COMMONLY UTILIZED IN TOXICOLOGICAL STUDIES. **V.S. Venkatraj**, P.H. Rao, T.M. Cho, I. Samudio, S.H. Safe, J.R. Wild and E. Tiffany-Castiglioni.

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IN VIVO ANALYSIS OF ESTROGEN-INDUCED CYCLIN D1 EXPRESSION UTILIZING *IN SITU* HYBRIDIZATION AND CHROMATIN IMMUNOPRECIPITATION (ChIP) ASSAYS IN A MURINE MODEL. **K.B.Walker**, I.Samudio and S.H.Safe.

MATRIX-DEPENDENT ALTERATIONS IN REL PROTEIN EXPRESSION AND NF-KAPPAB ACTIVITY AFTER OXIDATIVE INJURY. **E.S.Williams**, A.Ridall, E.Wilson and K.S.Ramos. VITAMIN D INTERACTING PROTEIN 205 (DRIP 205) AS

A COACTIVATOR OF ESTROGEN RECEPTOR α /Sp1-MEDIATED TRANSACTIVATION. **Q.Wu** and S.H.Safe.

1, 2-DICHLOROBENZENE MEDIATES THE PRODUCTION AND RELEASE OF FACTORS IN HEPATOCYTES THAT ENHANCE KUPFFER CELL ACTIVITY. **H.S.Younis**, A.R.Parrish, J.J.Jang and I.G.Sipes.

PHYTOCHEMICALS AS ARYL HYDROCARBON RECEPTOR AGONISTS/ANTAGONISTS: EFFECTS OF STRUCTURE AND CELL CONTEXT. **Shu Zhang**, C Qin, S.Safe.

Conferences

September 10-12, 2002

International Conference on Chemical Mixtures (ICCM 2002)

Atlanta, GA

www.atsdr.cdc.gov/iccm.html

September 10-12, 2002

Risk Communication Challenge

Brussels, Belgium

www.hsph.harvard.edu/ccpe

September 15-18, 2002

Eurotox 2002 40th Congress of the European Societies of Toxicology

Budapest, Hungary

www.eurotox2002.org

September 18-20, 2002

World Genomics Symposium & Expo

Atlantic City, NJ

www.world-genomics.com

September 25-27, 2002

Environmental Chemistry for Characterizing & Remediating Soil & Groundwater Contamination

Madison, WI

<http://edpweb.engr.wisc.edu/brochures/E315.html>

October 9-12, 2002

Advances in Islet Cell Biology

Anaheim, CA

Abstract deadline: August 1, 2002

www.levinesymposium.coh.org

October 9-13, 2002

AACR: Proteases, Extracellular Matrix & Cancer

Hilton Head Island, SC

Abstract deadline: August 16, 2002

www.aacr.org

October 13-16, 2002

Molecular Approaches for Early Diagnosis & Treatment of Respiratory Disease

Santa Fe, New Mexico

<http://www.lovelace-symposium.org>

October 14-18, 2002

AACR: Frontiers in Cancer Prevention Research

Boston, MA

www.aacr.org

October 15-18, 2002

55th Annual Symposium on Fundamental Cancer Research: Maintenance of Genomic Integrity

Houston, TX

Abstract deadline: August 15, 2002

Contact: 55th Research Symposium, Conference Services-HMB 131, UT M.D. Anderson Cancer Center, 1515 Holcombe Blvd., Houston, TX 77030-4095. Fax 713-794-1724

October 27-31, 2002

Intl. Society for the Study of Xenobiotics (ISSX), 11th North American Mtg

Orlando, Florida

www.issx.org

November 10-13, 2002

Third NSF International Conference of Food Safety

Orlando, Florida

www.nsf.org/conference/food3

November 10-13, 2002

American College of Toxicology 23rd Annual Mtg

Hershey, Pennsylvania

Contact: Tel: (301) 571-1840; Fax: (301) 571-1852; E-mail: ekagan@actox.org;

www.actox.org.

November 13-16, 2002

Chemotherapy Foundation Symposium XX: Innovative Cancer Therapy for Tomorrow

New York, NY

www.mssm.edu/tcf

November 15-16, 2002

Emerging Use of Genomics & Proteomics in Endocrinology

and November 17-18, 2002

Molecular Basis of Metabolic Regulation

New Orleans, LA

www.endo-society.org/scimeetings/hot-topics.cfm

November 16-20, 2002

Society of Environmental Toxicology & Chemistry (SETAC) 23rd Annual Meeting

Salt Lake City, UT

www.setac.org

December 14-18, 2002

American Society for Cell Biology 42nd Annual Mtg

San Francisco, CA

Abstract deadline: August 1, 2002

www.ascb.org

March 1-5, 2003

Biophysical Society 47th Annual Mtg

San Antonio, TX

Abstract deadline: October 6, 2002

www.biophysics.org

March 9-13, 2003

Society of Toxicology (SOT) 42nd Annual Mtg

Salt Lake City, UT

Abstract deadline: October 1, 2002

www.toxicology.org

March 9-14, 2003

PITTCON 2003

Orlando, FL

Abstract deadline: August 2, 2002

www.pittcon.org

April 27-May 1, 2003

ISSX 8th European Mtg

Dijon, France

www.issx.org.

June 21-25, 2003

4th Intl Symposium on Hormonal Carcinogenesis

Valencia, Spain

www2.kumc.edu/kci/hormonal

July 13-17, 2003

Coastal Zone Management Through Time

Baltimore, MD

Abstract deadline: September 16, 2002

www.csc.noaa.gov/cz2003

Employment Opportunities

F POSTDOCTORAL POSITIONS F

Department of Health and Human Services. Receptor-mediated gene regulation and signal transduction in response to occupational and environmental stimuli using genetic, molecular/biochemical, and whole animal approaches. Will investigate regulation of Ah receptor and signal transduction and role of Nrf2 in occupational chemical toxicity. Background in cell biology, biochemical/molecular biology, drug metabolism, or toxicology/pharmacology required. Contact: Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH), 1095 Willowdale Road, Morgantown, WV 26505-2888. Phone: 304-285-6241. Fax: 304-285-5708. Email: qam1@cdc.gov

U.S. Environmental Protection Agency (6 positions)

Pharmacokinetic Modeling. *Integration of kinetic and dynamic aspects of toxicity for drinking water contaminants.* Quantitate relationship between target tissue dosimetry of drinking water contaminants and development of early physiological or toxicological responses. Chemicals of interest are metalloids, arsenic, and candidate contaminant list chemicals. Involves simulation modeling (statistical model fitting, physiologically based pharmacokinetic (PBPK), biologically based dose response (BBDR) modeling). Requires Ph.D. or equivalent in Pharmacology, Toxicology or related field with strong quantitative orientation, Biomedical engineering, or Applied Math. Familiarity with modeling concepts and their implementation. Contact Dr. Elaina M. Kenyon. Phone (919) 541-0043; email: kenyon.elaina@epa.gov.

Reproductive Toxicology Division. Three positions.

(1) *Disruption of luteinizing hormone secretion as a common mode of action for altered fertility, reproductive disease and reproductive system cancer.* Evaluate effect of environmental compounds on neuroendocrine regulation of reproductive and thyroid axes. Identify and evaluate toxicants effect on hypothalamic mechanisms controlling pituitary function, evaluate changes in steroid receptor function and expression, neuropeptide and neurotransmitter synthesis and turnover in defined brain regions.

(2) *Identification of mechanisms through which environmental chemicals disrupt steroidogenesis.* Conduct *ex vivo*, *in vitro* and *in vivo* studies designed to improve existing methodology for detecting toxicant-induced alterations in steroidogenic pathway via (1) direct effects on enzymatic activity, (2) alterations of mRNA levels for enzymes, (3) reduced substrate availability, and (4) feedback induction/inhibition by altered circulating concentrations of steroids and gonadotropins.

For (1) and (2): Requires Ph.D. or other doctorate in Biology, endocrinology, Toxicology or related field, and familiarity/expertise with varied instrumental analysis techniques, genomics, molecular biology. Basic knowledge of reproductive physiology. Three year duration. Endocrinology Branch, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency. Scientific contact: Dr. Ralph L. Cooper, (919 541-4084; Cooper.ralph@epa.gov); Dr. Susan C. Laws (919 541-0173; Laws.susan@epa.gov)

(3) *Role of genetic variability in breast cell response to environmental toxicants.* Team-based, multi-disciplinary approach to study effects of exposure to environmental toxicants known to affect mammary function or tumor development, in human breast cells. Could include primary cell culture, real-time PCR, genomic and proteomic endpoints, SNP analysis, as well as traditional mutagenesis/DNA repair assays. Requires Ph.D. in Molecular/Cellular Biology, Genetics, Toxicology or related field, and US citizenship or Permanent Resident status. Funded three years, salary range of \$37,428-\$70,555. Position RTD-5/30/02-89 at <http://www.epa.gov/nheerl/postdocs/>. Contact Dr. Suzanne Fenton, PhD, Research Biologist, Reproductive Toxicology Division, U.S. EPA, MD-72, NHEERL, Research Triangle Park, NC 27711; fenton.suzanne@epa.gov, (919) 541-5220.

Respiratory Toxicology. Assess effects of PM and its components on animal models of cardiopulmonary disease during inhalation exposure. Design exposure systems which could accommodate exposure to different sources. Develop hypotheses and specific aims for animal models of allergy/asthma in exposures to multisource PM. May collaborate with Genomics Initiative at Duke University to select mouse mutants with altered pulmonary function. Two-three years of funding. Contact: Stephen H. Gavett, Ph.D., Research Biologist / Pulmonary Toxicology Branch, Experimental Toxicology Division, National Health and Environmental Effects Research Laboratory, Pulmonary Toxicology Branch (MD-82), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; gavett.stephen@epa.gov, Phone: 919-541-2555, Fax: 919-541-0026.

Toxicokinetics of Type I and Type II pyrethroids, to correlate target tissue levels of pyrethroid to neurotoxic effect. Examine several compounds with suspected common mode of nervous system toxicity, with emphasis on compounds with most prevalent agricultural and residential applications. Seeking to understand rat exposure-dose-response relationship to develop models to estimate human exposure and dose. Will use *in vivo* and *in vitro* methodologies. Requires Ph.D. in Toxicology, Pharmacology or related field and experience with *in vivo* or *in vitro* metabolism studies and analytical techniques (HPLC, GC). National Health & Environmental Effects Research Laboratory (NHEERL). Contact Michael DeVito, Ph.D. (919-541-0061, devito.mike@epa.gov) or Michael Hughes, Ph.D., DABT (919-541-2160, hughes.michael@epa.gov).

International Agency for Research on Cancer. Areas include epidemiology, biostatistics, environmental and viral carcinogenesis, cancer prevention, molecular cell biology, molecular genetics, biochemistry, immunology, molecular pathology and mechanisms of carcinogenesis. Doctoral degree required. Contact: Cancer Research Fellowship Programme, International Agency for Research on Cancer, 150 cours Albert-Thomas, 69372 Lyon Cedex 08, France. Phone: +33 (0) 472-73-84-48. Fax: +33 (0) 472-73-80-80. Email: fel@iarc.fr Website: <http://www.iarc.fr>

Univ. of Missouri. Porcine Genomics. Focus on gene expression after LH surge and through luteal formation. Excellent opportunity to study ovulation, luteinization, and CL function. Contact: Dr. Matthew C. Lucy, Associate Professor of Animal Sciences, 164 Animal Sciences Research Center, 920 East Campus Drive, Univ. of Missouri, Columbia, MO 65211. Phone: 573-882-9897 Fax: 573-882-6827 Email: lucym@missouri.edu

Univ. of Pennsylvania. Hormone receptor signaling/breast cancer. Research includes action of Tec/Vav complex in proximal receptor signaling, pathophysiologic function of six recognized human prolactin receptor isoforms, contribution of prolactin receptor phosphorylation to receptor function, and role of cyclophilin B in intranuclear actions of prolactin. Send CV, statement of research interests, and three references to: Dr. Charles Clevenger, Dept. of Pathology and Lab Medicine, Univ. of Pennsylvania, 513 Stellar-Chance Laboratories, 422 Curie Blvd, Philadelphia, PA 19104. Fax: 215-573-8944. Email: clevengc@mail.med.upenn.edu.

Univ. of Texas M.D. Anderson Cancer Center, Science Park. Breast cancer biology. Interact with multidisciplinary faculty and utilize state of the art instrumentation and techniques to investigate mechanisms by which growth factors regulate mammary tumor development and progression. Requires recent doctorate in biomedical sciences. Must show evidence of productivity, US citizen or perm. resident. Send CV, names and contact information of three references, and short statement of research interests to: Dr. Robin Fuchs-Young, email: rofy@sprd1.mdacc.tmc.edu. Phone: 512-237-9547. Website: <http://sciencepark.mdanderson.org>.

Texas Tech Univ. System, Laboratory for Biotxin Studies, Institute of Environmental and Human Health. Developing rapid analytical method to detect biotoxins in environmental samples and in animal and human body fluids. Doctoral degree required. Send CV and names, phone numbers, and email addresses of three references to: Dr. J-S Wang, Box 41163, TIEHH, Texas Tech Univ., Lubbock, TX 79409. Email: js.wang@ttu.edu. Phone: 806-885-0320 Fax: 806-885-2132.

Tufts Univ. School of Medicine, Breast and Rat Mammary Gland Carcinogenesis. Study role of stromal signals, receptors and nuclear and plasma membrane-bound steroid receptors in rat mammary gland carcinogenesis. Projects deal with genetic, molecular biology and tissue recombination technology in animals and in tri-dimensional cell culture. Send CV, statement of research interests, and names and phone numbers of three references to: Dr. Carlos Sonnenschein, Department of Anatomy and Cellular Biology, Tufts Univ. School of Medicine, Boston MA, 02111. Email: carlos.sonnenschein@tufts.edu.

Univ. of Vermont College of Medicine. Opportunity to learn cell imaging and analysis with focus on laser methods including laser capture microdissection and TaqMan approaches, microarrays and kinase proteomics, transgenic murine methodology, and characterization of animal inhalation models of airway hyperresponsiveness and pulmonary fibrosis. *Two positions not restricted to US citizenship, third on training grant.* Contact: Brooke Mossman, Ph.D., Professor of Pathology, Director, Environmental Pathology Program, Department of Pathology, Univ. of Vermont College of Medicine, A-145 Soule Medical Alumni Bldg., Burlington, VT 05405. Phone: 802-656-0382. Fax: 802-656-8892. Email: bmossman@zoo.uvm.edu.

Univ. of Virginia, Dept. of Pharmacology (2). Two positions available to study (1) how G protein α and $\beta\gamma$ subunits lead to specificity in

transmembrane signaling, (2) to define functional roles of G protein $\beta\gamma$ dimers expressed in cells and (3) to determine signaling role of dimers containing divergent subunits and certain RGS molecules. Requires Ph.D. with experience in molecular techniques, biochemistry and protein purification. Send CV and reference list to Dr. James C. Garrison, Dept. of Pharmacology, P.O. Box 800735, Univ. of Virginia Health System, Charlottesville, VA 22908-0735. 434-924-5618; jcg8w@virginia.edu. <http://www.med.virginia.edu/medicine/basic-sci/pharm/Pharm.html>.

F ACADEMIC POSITIONS F

Assistant/Associate Professor, Johns Hopkins Univ., Division of Toxicological Sciences. Complement research interests of current faculty that includes mechanism-based studies of metal and oxygen radical toxicity, carcinogenesis and chemoprevention, and toxicities of xenobiotics of nervous, pulmonary and hematopoietic systems. Send CV, statement of research interests and list of references to: Val Culotta, Ph.D., Department of Environmental Health Sciences, John Hopkins Univ. Bloomberg School of Public Health, room 7032, Baltimore, MD 21205.

Director of Toxicology Graduate Program/Head, Univ. of Maryland. Areas of interest are cellular, aquatic, molecular, reproductive or neurotoxicology and environmental/molecular epidemiology, including anthropogenic environmental change on human health. Responsible for directing Univ. of Maryland Toxicology Graduate Program, a multi-campus, interdisciplinary program designed to train scientists for careers in academia, government, or biotechnology. Send statement of research interests, CV and names of five references to: J. Glenn Morris, Jr. MD, MPH&TM, c/o Diane Lindt, Faculty/Staff/Recruitment Coordinator, 660 West Redwood Street, Suite 109, Baltimore, Maryland 21201. (position number 03-307-46)

Assistant Professor, North Carolina State Univ. Research areas include; toxicogenomic/proteomic and transgenic animal approaches to investigate mechanisms of toxicity, effects of environmental agents on cell signaling, gene regulation and function and susceptibility to environmental agents. Submit CV, statement of research goals and teaching philosophy, and names/addresses of three references to: Robert C. Smart, Ph.D., Chair, Search Committee, Department of Environmental & Molecular Toxicology, North Carolina State Univ., Raleigh, NC 27695-7633. Website: www.tox.ncsu.edu. Phone: 919-515-4376. Fax: 919-515-7169.

Assistant Professor, Purdue Univ., Environmental and Occupational Health. Participate in teaching undergraduate and graduate courses in health sciences, maintain independent, externally funded research program and supervise graduate students. Requires Ph.D. or equivalent. Submit letter of introduction, statement of research and goals, CV including publication list, past/current research funding, and names, addresses and phone numbers of three references to: Dr. George A. Sandison, Head and Chair, Search Committee, Purdue Univ., School of Health Sciences, West Lafayette, Indiana 47907-1338. Phone: 765-494-1419. Email: sandison@purdue.edu.

Assistant Professor, Univ. of Texas at Austin, Division of Pharmacology & Toxicology. Potential to develop extramurally funded research program in molecular/cellular toxicology, and interest in teaching at graduate/undergraduate level. Contact: James P. Kehrer, Ph.D., Professor and Head, Division of Pharmacology/Toxicology, College of Pharmacy, Univ. of Texas at Austin, Austin, TX 78712-1074. Phone: 512-471-1107 Fax: 512-471-5002. Web site: <http://www.utexas.edu/pharmacy/divisions/pharmtox>

Research Assistant Professor, Vanderbilt Univ. School of Medicine. Breast cancer research. Signal transduction in cells, transgenic mouse models of neoplasia, proteomics-based approaches to study development and transformation, and molecular therapeutic approaches. Send CV to Carlos L. Arteaga at Div. Oncology/VUMC, 2220 Pierce Avenue, 777 Preston Bldg., Nashville, TN 37232-6307. Phone: 615-936-3524. Fax: 615-936-1790. Email: carlos.arteaga@mcmail.vanderbilt.edu.

F GOVERNMENT POSITIONS F

Environmental Scientist (Toxicologist), Delaware Health & Social Services. Relating environmental concerns and exposures to public health issues. Requires experience, knowledge or training in human risk assessment, risk modeling, human health assessments, and health hazard evaluations. Contact: Applicant Services, Delaware Health and Social Services for State of Delaware application and/or copy of Recruitment #02-H196. Phone: 302-577-4690 Fax: 302-577-4252. Website for online applications: www.state.de.us/spo

U.S. Department of Agriculture (2 positions)

Animal Research Physiologist. Determine how secreted and membrane folate binding proteins interact to accomplish folate transport during preg-

nancy in pigs. Ph.D. in reproductive biology or related field required. Send letter of interest and CV, including three references to: Dr. Jeffrey L. Vallet, Roman L. Hruska U.S. Meat Animal Research Center, P.O. Box 166, Clay Center, NE 68933. Phone: 402-762-4187. Fax: 402-762-4382. Email: vallet@email.marc.usda.gov.

Research Molecular Biologist/Geneticist. Includes cloning/sequencing acetylcholinesterase (ACHE) gene from organophosphate (OP) resistant and OP susceptible laboratory strains of *Boophilus microplus* to find possible resistance-associated sequence differences. PCR-based detection assay and site-directed mutagenesis constructs. Requires recent Ph.D. in biochemistry, molecular biology or genetics, documented skill in DNA library screening, PCR, and expression of recombinant proteins. Contact: Dr. Felix D. Guerrero, USDA/ARS, Knippling-Bushland U.S. Livestock Insects Research Laboratory, 2700 Fredericksburg Rd., Kerrville, TX 78028. Phone: 830-792-0308. Fax: 830-792-0314. Email: felixg@ktc.com

F INDUSTRY & CONSULTING POSITIONS F

Microbiologist, DynCorp, Environmental Sampling & Analysis Practice Area. Participate in design and management of analytical method studies and environmental data collection programs supporting EPA Office of Water. Coordinate study activities with EPA clients and laboratories. Review and evaluate environmental data quality. Analyze and interpret method performance and contaminant occurrence data. Develop technical reports regarding collection and use of environmental data. Minimum of MS in microbiology. Contact: Kevin Connell, DynCorp I&ET, 6101 Stevenson Avenue, Alexandria, VA 22314. Email: kevin.connell@dyncorp.com

Investigator/Senior Investigator, GlaxoSmithKline. Use immunohistochemistry, in situ hybridization and laser capture microdissection with real-time RT-PCR to localize and quantify novel genes. Can choose to live in North Carolina or suburban Philadelphia. Contact: Susan Goldsworthy, Research Scientist, GlaxoSmithKline, Genomic Histology, P.O. Box 13398, 3.3175b, Research Triangle Park, NC 27709. Phone: 919-483-4557. Email: smg79801@GlaxoWellcome.com

Environmental Consultant, Menzie-Cura & Associates, Inc. Full-time position in ecological and environmental studies. Conduct literature searches, write reviews, manage environmental data, prepare risk assessments, fieldwork and support interdisciplinary risk studies team. Requires MS in aquatic or wildlife toxicology, ecology or related field, and skills in database management, spreadsheets, and writing. Firm provides support to government agencies, industry and engineering firms, specializing in assessment of ecological and human health risks due to contaminant exposure associated with hazardous waste sites and industrial discharge. Mail, fax or e-mail resume to Jerome J. Cura, Ph.D., Menzie-Cura & Associates, Inc., One Courthouse Lane, Suite Two, Chelmsford, MA 01824; fax (978)453-7260; e-mail penwrigh@menziecura.com.

PharmaSearch (two positions):

Study Director-Toxicology. Coordinate study team, develop protocols and ensure approval, review cost estimates, develop prices and communicate to client, monitor study progress, peer review reports of other Study Directors. Requires Ph.D., DVM, or equivalent degree.

Veterinary Pathologist. Study pathology of laboratory mouse models. Provide gross and microscopic pathology support, interact with other scientists in immunology, neurology, cardiology, oncology, endocrinology, and clinical diagnostic medicine. Requires DVM, ACVP certification or eligibility, and prior histopathology experience in rodents. For either position contact: Johanna Smith, PharmaSearch@ETR, 12801 North Central Expressway, Ste. 400, Dallas, TX 75243. Phone: 972-991-7569. Email: jsmith2@etrcareers.com.

Staff Scientist, Proctor and Gamble Drug Safety Assessment.

Responsible for supporting both Discovery and Development projects by designing in vitro metabolism strategies to speed new drug development. May involve supporting more than one ongoing project at a time. Requires Ph.D. in Toxicology, Pharmacology, Pharmaceuticals, or related field. On-line application: <http://www.pg.com/jobs/apply/referencing>. (Job Code AR2001)

Toxicologist, SciTech-Department of Development. Toxicology and safety pharmacology studies for research and product development programs. Research teams responsible for management of all aspects of safety evaluation for company's projects. Develop in-house non-GLP protocols for preliminary evaluation of lead chemical series in discovery programs and manage GLP nonclinic safety studies. Requires Ph.D. and 3-5 years experience as a study director. Contact: Barry Hamory, SciTech Recruiters. Phone: 650-323-3333. Fax: 650-323-2110. Email: barry@scitechrecruiters.com. Website: www.scitechrecruiters.com



The **Gulf Coast Chapter - Society of Toxicology (GCSOT)** Annual Meeting will be held October 24-25, 2002 in College Station. Look for more details in our next publication.

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