



# Texas A&M University Faculty of Toxicology News & Reviews

Volume 14, Number 1

August 2003

## New Students for Fall 2003:

**Adam Marchand** comes from the University of Louisiana Monroe, where he received a BS in Toxicology. Adam will rotate in several toxicology laboratories this fall.

**Christine Naspinski**, has a BS in Chemical Engineering from Penn State University, and will also rotate in environmental toxicology laboratories this fall.

**Ziad Naufal** is a native of Lebanon and holds two degrees from the American University of Beirut. He has been a student in the TAMHSC School of Rural Public Health for the past year, but transferred to the Toxicology Program and will work in the Donnelly laboratory.

**John Taylor** also recently completed a BS in Toxicology at University of Louisiana Monroe, and will rotate in several toxicology laboratories this fall.

## Meeting Attendance

**Leamon Viveros** (Wild) attended the Homeland Food and Water Security Workshop on August 15, 2002 sponsored by US AF School of Aerospace Medicine in Brooks City Base, TX.

**Marc Holderman** and **Dr. Ken Ramos** traveled to Tucson, Arizona, on October 11-12, 2002 to attend a Proteomics Conference at the Southwest Environmental Health Science Center.

The Annual Meeting of the Gulf Coast Chapter Society of Toxicology was held in College Station, TX, October 24-25, 2002. The venue was the Clayton Williams Alumni Center on the TAMU campus. Keynote speakers were Dr. Larry Donehower from Baylor College of Medicine, Dr. Dan McConkey from UT MD Anderson Cancer Center, and our own **Dr. Stephen Safe**. There was also a "Careers in Biosciences" Discussion Panel featuring **Drs. Weston Porter** and **Ken Ramos** from TAMU and Dr. Stacey Tepera from Baylor College of Medicine. The TAMU Toxicology students and postdoctoral staff presented 34 abstracts at the meeting. Among those, **Karin Lum** won 2<sup>nd</sup> Place and **Kelcey Walker** received Honorable Mention for their Platform Presentations, while **Charlie Partridge** received 2<sup>nd</sup> Place and **Spencer Williams** received Honorable Mention for Poster Presentations. Special thanks to the Conference Organizing Committee that included Co-Chairs, **Drs. Weston Porter** and **Ron Tjalkens**, **Dr. K.C. Donnelly** (2003-2003 GCSOT President),

**Leslie Cizmas**, **Kim Daniel**, **Carolyn Kotzot**, **Wan-Ru Lee**, **Rebecca Lingenfelter**, **Karin Lum**, **Laura Minjares**, **Annika Parr**, **Ashley Pendergrass**, **Nancy White**, **Suzanne Weid** and **Spencer Williams**.

**Tracie Phillips** (Donnelly), **Erica Reese** (Autenrieth), **Mindy Wiles** (Phillips), and **Dr. K.C. Donnelly** traveled to Salt Lake City, UT, to attend the Society of Environmental Toxicology and Chemistry (SETAC) Annual Meeting from November 16-18, 2002. Each of them presented posters at the meeting.

The 42<sup>nd</sup> Annual Meeting of the Society of Toxicology (SOT) was held in Salt Lake City, UT, from March 5-13, 2003. A large group of our faculty, staff and students attended this meeting, and presented a total of 35 abstracts (see pages 4-5 for the complete list). **Dr. Larry Johnson** worked in the K-12 Education section and presented "Scientists in Public Classrooms: Invitation, Presentation, Expectation, and Need" to that group. **Kim Daniel** worked in the Undergraduate Minority Education sessions and **Dr. Shashi Ramaiah** joined her for the graduate recruiting session there. Postdoctoral fellow **Dr. Udayan Apte** (Ramaiah) received 2<sup>nd</sup> prize from the Comparative and Veterinary Specialty Section for the paper: Apte, U. M., Limaye, P.B., **Ramaiah, S.K.**, Viadya, V.S., Bucci, T.J., Warbritton, A. and Mehendale, H.M. Unregulated prometogenic signaling via cytokines and growth factors: potential mechanism of robust liver tissue repair in caloric restricted rats upon toxic challenge. *Toxicol. Sci.* 69: 448-459, 2002. Former student, **Dr. Kimberly Miller**, (Ramos) was awarded the prestigious "Colgate-Palmolive Postdoctoral Award in In-Vitro Toxicology." Eleven students received travel awards to attend the meeting:

Biochemistry Graduate Student Association –  
**Kelly Higgins**, **Fei Wu** and **Qian Wu**  
CVM Graduate Student Association – **Evans Afriyie-Gyawu**,  
**Xiangrong Li**, **Kelcey Walker**, **Mindy Wiles** and **Shu Zhang**  
Faculty of Neuroscience – **Kerry Thuett**  
Society of Toxicology – **Maen Abdelrahim** and **Adrian Nanez**

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The 7<sup>th</sup> Annual Meeting of the Texas Forum on Female Reproduction (TFFR) was held at the Institute of Biosciences and Technology in Houston on April 24, 2003. Five graduate students from the Safe laboratory, **Maen Abdelrahim, Kyoungyun Kim, Leela Kotha, Sharon Ngwenya** and **Qian Wu** presented posters (see pages 4-5 for the abstract list). **Dr. Bob Burghardt** was a co-organizer of this meeting.

**Charlie Partridge** (Ramos) attended the 5<sup>th</sup> annual Atherosclerosis, Thrombosis and Vascular Biology meeting in San Francisco May 6-8, 2003, and presented "Oxidant-Induced Atherogenic Injury Involves the Extracellular Matrix-Integrin-Cytoskeletal Axis."

**Spencer Williams** (Ramos) traveled to Washington, D.C., on May 7-10, 2003, to attend a conference hosted by the American Heart Association and present his research.

**Dr. Maya Scott** (Boothe) traveled to Charlotte, NC, on June 2-7, 2003, to attend the American Academy of Veterinary Pharmacology and Therapeutics and American College of Veterinary Internal Medicine Conference and learn about recent advances in drug discovery, drug delivery and emerging therapies.

**Denise Hill, Hadi Falahatpisheh, Emily Wilson, Marc Holderman,** and **Drs. Rick Finnell, Kenneth Ramos, Yanan Tian and Weston Porter** attended the Gordon Conference in Lewiston, Maine on July 21-26, 2003.

**Sairam Bellum** (Abbott) traveled to Knoxville, TN, July 30-August 3, 2003 to attend and participate in the American Association of Veterinary Anatomists (AAVA)/World Association of Veterinary Anatomists (WAVA) Summer Meeting. He won second place with the poster "Comparison of Mitochondrial Membrane Potential in Acutely Isolated Cerebellar Granule Cells from Wild Type and Homozygous Leiner Mutant Mice."

#### Honors & Awards

**Kelcey Walker** (Safe), **Melinda Wiles** (Phillips), **Xiangrong Li** (Safe) received recognition for outstanding poster presentations at the 2003 Research Symposium. They received first, second and third places, respectively.

**Dr. Udayan Apte** (Ramaiah) received the 2003 John P. McGovern Award funded by the Texas Research Society on Alcoholism for his proposal entitled "Regulation of Osteopontin (OPN) Gene by Ethanol (EtOH): Potential Mechanism behind OPN-Mediated Hepatic Neutrophilic Infiltration in Alcoholic Steatohepatitis."

**Dr. Tom Spencer** received the Young Animal Science Research Award at the Southern Association of Agricultural Scientists annual meeting held in Mobile, AL February 2-4. He was cited for excellence in reproductive biology research.

**Dr. Tim Phillips** was selected as the 2003 Outstanding Texas A&M University Distinguished Scientist by the Texas A&M University Chapter of Sigma Xi. This award is given to one TAMU scientist each year, based on their achievements and success in the area of scientific research. The award was announced at the Sigma Xi Banquet held on March 27.

**Jeong Eun Lee** and **Wan-Ru Lee**, both from the Safe Lab, received George T. Edds Awards presented at the College of Veterinary Medicine Honors Convocation on April 11, 2003.

**Anca Petrescu** (Schroeder Lab) was awarded a "Distinguished Graduate Student Award" from the Association of Former Students on April 15, 2003.

#### Graduates

*Omission from May 2002*

**Kimberly Miller, PhD** (Ramos) is working as a Postdoctoral Fellow at the University of Maryland School of Medicine in Baltimore.

*August 2002*

**W. Scott Wilkie, MS** (Boothe) entered the doctoral program in Toxicology at the University of Connecticut.

*December 2002*

**Mark Wormke, PhD** (Safe) accepted a postdoctoral fellowship in Neuherberg, Germany.

**Michelle Pine, DVM, PhD** (Busbee) is a Research Assistant Professor working with Dr. Les Dees in Veterinary Anatomy & Public Health at TAMU.

**Paul Herrera, DVM, PhD** (Phillips) is a Postdoctoral Research Associate in Poultry Science at TAMU.

**Cristi Gomez, MS** (Donnelly) moved to the Dallas area where she works as a toxicologist for the Mary Kay Cosmetics Corp.

*May 2003*

**Anca Petrescu, PhD** (Schroeder) works as a Postdoctoral Research Associate for Dr. Schroeder in Veterinary Physiology & Pharmacology at TAMU.

*August 2003*

**Leslie Cizmas, PhD** (Donnelly) is working as a Postdoctoral Research Associate for Dr. Donnelly in Veterinary Anatomy & Public Health at TAMU.



## Environmental Health Sciences at TAMU

### Superfund Basic Research Project (SBRP)

**Dr. K. C. Donnelly** traveled to Azerbaijan on April 8-13 to train investigators in Sumgayit and at the Institute of Physiology while working on recruitment of subjects for a research study.

The TAMU SBRP Outreach program provided a Risk Communication course to more than 100 public health professionals across the state of Texas. In addition, their Environmental Health course has been offered to public health professionals and nurses in College Station, and via distance education in Corpus Christi, Austin, San Antonio, Laredo, McAllen, Tyler and Amarillo.

**Dr. K.C. Donnelly (PI)** and co-investigators **R.H. Finnell, G.M. Shaw** and **S.H. Safe** received a grant from the US Environmental Protection Agency entitled "Issues in Human Health Assessment: Novel Mechanistic Approaches in Human Health."

The Fort Worth Museum of Science and History displayed an exhibit called "**RISK!**" created in part by **Dr. Robin Autenrieth**, Texas A&M Environmental Engineer. The exhibit's purpose was to teach what risks are found in people's lives and give a tangible picture of statistics and probability.

On November 3-6, 2002, **Drs. KC Donnelly, Tim Phillips,** and **Robin Autenrieth**, accompanied by **Nancy White, Melinda Wiles, Tracie Phillips, Lorna Safe** and **Petros Dimitriou-Christidis** attended the Superfund Basic Research Program Annual Meeting "Transitioning Basic Science into Practical Application to Meet Environmental and Public Health Challenges" in Tucson, Arizona.

### Center for Environmental & Rural Health(CERH)

**Dr. Ken Ramos**, former director of the CERH, is now at the University of Louisville School of Medicine, and **Dr. Steve Safe** is the new acting director. Dr. Ramos was instrumental in the successful renewal of the CERH grant application and his contributions to research in environmental health sciences at Texas A&M University are greatly appreciated.

During the past few months there has been a flurry of CERH-related activities. **Mrs. Carmen Sumaya** has been appointed the new director of the community outreach and education program (COEP) and she has replaced the outgoing director **Dr. Irma Ramos**. Carmen has already developed a new advisory board which includes several residents in the Rio Grande Valley and she has been developing interactions with students and staff in the School of Rural Public Health and the PEER program investigators. Carmen, **Dr. K.C. Donnelly** and **Genny Carrillo** have organized a town meeting in Laredo to discuss environmental health issues.

Several faculty have recently become full members of the CERH: **Drs. Deborah Bell-Pederson, Vincent Cassone, David Earnest,**

**Susan Golden, Mingyao Liu, Laura Mitchell, Andrew Spicer** and **Fen Wang**. A number of CERH investigators are interested in Clock/PAS protein and the upcoming annual CERH Scientific Symposium (December 2003) will focus on this area of research. Invited speakers include **Drs. Steve McNight** (UT-Southwestern), **Joe Takahashi** (Northwestern) and **Chris Bradfield** (Wisconsin). In addition, the CERH has just completed a successful Pilot Project competition with 23 applicants. PI's on the six funded projects were **Drs. Abbott, Atshaves, McGuire, Peck, Ramaiah** and **Sharkey**. The CERH family of investigators and Pilot Project awardees includes investigators from the College of Medicine, Institute for Biosciences and Technology, School of Rural Public Health and numerous TAMU departments and interdisciplinary faculties.

**Dr. K.C. Donnelly, Carmen Sumaya, Kim Daniel** and **Genny Carrillo** attended and participated in the Association of Schools of Public Health' Conference, Children's Environmental Health: Protecting Our Future held on the campus of the U.S. EPA in Research Triangle Park, NC, August 10-11, 2003. Dr. Donnelly presented an abstract titled, "Childhood Exposure to Pesticides in Rural Communities on the Texas-Mexico Border."

### Partnership for Environmental Education & Rural Health (PEER)

PEER recently teamed up with the TAMU chapter of Sigma Xi and the Provost's Office to interact with and share TAMU resources with regional middle schools through the University Lecture Series. PEER sent out 703 letters to teachers in 55 middle schools within a 70 mile radius outlining a drawing and essay contest. One hundred fifteen drawings were submitted, in which students created a "cave drawing" that shows a current event which will allow people 1000 years from now to understand what our culture is like today. Eighty-two interpretative essays were submitted in response to studying a picture. The contest was judged by six undergraduate students. The eleven winners of the contest were presented a certificate from the Provost's Office and a \$50 check from the NIH-funded PEER project. Students received their awards on April 8 at the dinner prior to Dr. Marvin Rowe's lecture, "Picture This: Using Chemistry to Date Ancient Cave Art." All entries were displayed outside the University Lecture Series lecture room at the Bush Conference Center.

The PEER team, including **Drs. Larry Johnson, Vince Hardy, Jon Hunter,** and **Bill Klemm**, as well as **Kristy Hardy, Charles Payne** and **Kimberly Hargrove**, have traveled extensively within Texas making environmental health science presentations to middle school students and teachers. They have also conducted Integrative Curriculum Workshops to 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade school teachers, and Teachers' Technology Workshops.

Outside of Texas, **Dr. Johnson** attended the "Environmental Health Science as an Integrated Context for Learning" meeting in Miami, Florida, on February 25-28, 2003 where he presented the poster "K-12 Risk Communication." He also traveled to Raleigh and Charlotte, NC where he made presentations and recruited schools for participation in the PEER project.

## Abstracts Index

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**M Abdelrahim**, R Smith III, and SH Safe. ✓●❖

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URINARY METABOLITES OF AFLATOXIN IN DOGS AND DIETARY PROTECTION BY CLAY AGAINST CANINE AFLATOXICOSIS. **AK Bingham**, TD Phillips, HJ Huebner, and JE Bauer. ●

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AH RECEPTOR-MEDIATED TRANSCRIPTIONAL SUPPRESSION OF INTERLEUKIN-6. **M Chen**, S Ke, T Sheng and Y Tian. ✓●

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TOXICITY ASSESSMENT OF COMPLEX MIXTURES REMAINS A GOAL. **KC Donnelly**, E Castiglioni, K Ramos and M Mumtaz. ●

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NO PRODUCTION IN GLIAL CELLS THROUGH ACTIVATION OF MAP KINASE AND NF- $\kappa$ B. **J Faske**, X Liu, M Zhao, R Mounemne, and R Tjalkens. ✓●

SNURF AND MMS19 AS COACTIVATION OF ESTROGEN RECEPTOR  $\alpha$ -MEDIATED GENE EXPRESSION IN BREAST CANCER CELLS. **KJ Higgins**, B Saville, and SH Safe. ✓●

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DECREASED N- AND KSP-CADHERIN EXPRESSION ASSOCIATED WITH HGCL2-INDUCED ACUTE RENAL FAILURE IS RELATED TO THE SPATIAL EXPRESSION PATTERN OF CADHERINS ALONG THE NEPHRON. **J Jiang**, D Dean, RC Burghardt and AR Parrish. ●

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|---|-------------------------|
| ✓ | Presented at GCSOT 2002 |
| ● | Presented at SOT 2003   |
| ✦ | Presented at SETAC 2002 |
| ⊙ | Presented at SBRP 2002  |
| ❖ | Presented at TFFR 2003  |

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ARYL HYDROCARBON RECEPTOR-MEDIATED INHIBITION OF ESTROGEN RECEPTOR-NEGATIVE BREAST CANCER CELL GROWTH. **L Kotha** and SH Safe. ✓●❖

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CARBON-IMMOBILIZED ORGANOCCLAY FOR THE REMOVAL OF TOXIC CONTAMINANTS FROM GROUNDWATER. **M Wiles**, C Ake, TD Phillips, KC Donnelly, RC Burghardt, R Autenrieth, and T McDonald. ✓☼

MATRIX-IMMOBILIZED ORGANOCCLAY FOR THE REMOVAL OF TOXIC CONTAMINANTS FROM GROUNDWATER. **M Wiles**, C Ake, TD Phillips, KC Donnelly, RC Burghardt, R Autenrieth, and T McDonald. ✦

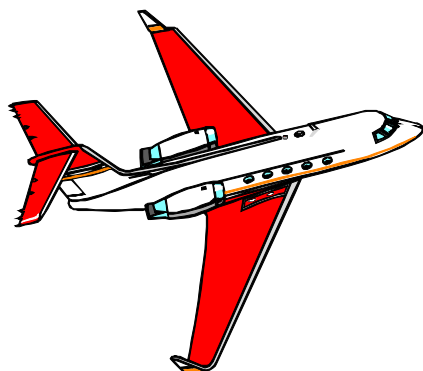
NF- $\kappa$ B DYSREGULATION IN ATHEROSCLEROTIC VASCULAR SMOOTH MUSCLE CELLS: COMPLEX COMPOSITION AND REDOX SENSITIVITY. **ES Williams**, E Wilson, and KS Ramos. ✓●

THE ARYL HYDROCARBON RECEPTOR MEDIATES DEGRADATION OF THE ESTROGEN RECEPTOR  $\alpha$  THROUGH ACTIVATION OF PROTEASOMES. **M Wormke**, M Stoner, B Saville, KB Walker, M Abdelrahim, RC Burghardt and SH Safe. ✓●

COACTIVATION OF ESTROGEN RECEPTOR  $\alpha$  BY DRIP 205 IN HUMAN BREAST CANCER CELLS. **Q Wu** and SH Safe. ✓●

INSULIN-LIKE GROWTH FACTOR 1-ESTROGEN RECEPTOR  $\alpha$  CROSSTALK IN MCF-7 BREAST CANCER CELLS. **S Zhang** and SH Safe. ✓●

# Conferences



## October 2003

*October 1-4*

Understanding Renal and Cardiovascular Function through Physiological Genomics

Augusta, Georgia

Abstract Deadline: **May 7, 2003**

Advance Registration Deadline:

**August 15, 2003**

[www.the-aps.org](http://www.the-aps.org)

*October 6-10*

Princeton Groundwater: The Remediation Course  
Orlando, Florida

<http://www.princeton-groundwater.com>

*October 8-10*

NIEHS Superfund Quad-University/  
EPA Region 9 Conference  
University of California, Berkeley  
Campus

<http://www-sf.ucdavis.edu>

*October 8-12*

AACR Advances in Breast Cancer Research: Genetics, Biology, and Clinical Implications  
Hyatt Regency Huntington Beach Resort & Spa, Huntington Beach, CA

Abstract Deadline: **September 3, 2003**

[www.aacr.org](http://www.aacr.org)

*October 12-15*

6<sup>th</sup> Annual International Lovelace Respiratory Symposium: New

Therapies and Diagnostic Techniques for Respiratory Disease

Lovelace Respiratory Research Institute, Santa Fe, New Mexico

[www.LRRI.org](http://www.LRRI.org)

*October 12-16*

ISSX, 12<sup>th</sup> North American Meeting  
Providence, Rhode Island

Abstract Deadline: **June 2, 2003**

[www.issx.org](http://www.issx.org)

*October 14-17*

Cancer Immunity: Challenges for the Next Decade-56<sup>th</sup> Annual Symposium on Fundamental Cancer Research  
JW Marriott Hotel, Houston, TX

Abstract Deadline: **August 15, 2003**

Info: UT M.D. Anderson Cancer Center, Conference Services, HMB 131, #30070218, 1515 Holcombe Boulevard, Houston, TX 77030-4009

*October 20-23*

Cancer: Pathophysiology, Current Therapies, Clinical Trials and Drug Development

Georgetown University Conference Center, Washington, DC

[www.peri.org](http://www.peri.org)

*October 23-26*

Hoaxes, Myths, and Manias (CSICOP- Committee for the Scientific Investigation of Claims of the Paranormal)

Albuquerque, New Mexico

Info: CSICOP Conference, P.O. Box 703, Amherst, NY 14226

Phone: 716-636-1425

## November 2003

*November 10-13*

3<sup>rd</sup> General Meeting of the International Proteolysis Society (IPS)

Nagoya, Japan

Abstract Deadline: **July 23, 2003**

<http://www.congre.co.jp/ips2003>

*November 12-15*

Chemotherapy Foundation Symposium XXI Innovative Cancer Therapy for Tomorrow

Marriott Marquis Hotel, New York City

[www.mssm.edu/tcf](http://www.mssm.edu/tcf)

*November 15-19*

APHA 131<sup>st</sup> Annual Meeting and Exposition: Behavior, Lifestyle and Social Determinants of Health  
San Francisco, California

[www.apha.org/meetings](http://www.apha.org/meetings)

*November 17-21*

Molecular Targets and Cancer Therapeutics: Discovery, Biology, and Clinical Applications

Hynes Center, Boston, Massachusetts

Abstract Deadline: August 4, 2003

Info: AACR, 615 Chestnut Street, 17<sup>th</sup> Floor, Philadelphia, PA 19106-4404

Phone: 215-440-9300

Email: [meetings@aacr.org](mailto:meetings@aacr.org)

*November 18-21*

1<sup>st</sup> International Conference on Polyphenols and Health

Conference Hall-Opera, Vichy-France

Abstract Deadline: **April 30, 2003**

[www.evicevents.com](http://www.evicevents.com)

## December 2003

*December 13-17*

43<sup>rd</sup> Annual Meeting: The American Society for Cell Biology

Moscone Convention Center, San Francisco, CA

Abstract Deadline: **July 31, 2003**

[www.ascb.org](http://www.ascb.org)

## January 2004

*January 25-29*

6<sup>th</sup> Joint Conference of the American Association for Cancer Research and the Japanese Cancer Association

Advanced Registration and Abstract Deadline: **October 20, 2003**

Hilton Waikoloa Village, Waikoloa, Japan

Website: [www.aacr.org](http://www.aacr.org)

## May 2004

*May 24-27*

4<sup>th</sup> International Conference (Battelle): Remediation of Chlorinated and Recalcitrant Compounds

Monterey, CA

Abstracts Due: **July 31, 2003**

Website: [www.battelle.org/chlorcon](http://www.battelle.org/chlorcon)

# Employment Opportunities

## Postdoctoral Positions

**The Center for Ecotoxicology** has an opening for a postdoctoral researcher for the Aquatic Toxicology program. Research will be conducted in the areas of environmental chemistry/toxicology. The candidate should have a Ph.D. degree in chemistry, toxicology or related field granted within the past 5 years. Experience in biochemical markers is desirable, GCMS expertise is required. The successful candidate will be involved in a number of research projects including lipid chemistry, petroleum and pesticide contamination assessments, understanding the impacts of endocrine disruptors, characterizing biomarkers of exposure and general aquatic toxicology. Send a CV, a description of research accomplishments and interests along with the names and telephone numbers of three references to: Dr. Dana Wetzel, Mote Marine Laboratory, 1600 Ken Thompson Parkway, Sarasota, Florida 34241.

**Oregon National Primate Research Center** has a postdoctoral fellowship available. The specific aims of the program include (1) Suppression of BTB in macaques: (a) establish breakthrough bleeding patterns in macaques bearing Silastic, intrauterine levonorgestrel-releasing devices, (b) assess endometrial factors associated with BTB, (c) establish an effective, bleeding-suppressive dose schedule of CDB 2914. (2) Suppression of BTB in women: (a) select women with normal menstrual cycles and fit Mirena, (b) finalize and establish a CDB 2914 treatment schedule that suppresses Mirena-induced breakthrough bleeding in women. Contact: Dr. Robert M. Brenner, Senior Scientist, Oregon National Primate Research Center, 505 NW 185<sup>th</sup> Ave, Beaverton, OR 97006. Phone: 503-690-5331 Email: [BrennerR@ohsu.edu](mailto:BrennerR@ohsu.edu)

**The University of Wisconsin** has an NIEHS funded postdoctoral position available. The focus of the laboratory is molecular neurotoxicology and present projects are designed to determine: 1) the molecular mechanisms by which tert-butylhydroquinone (tBHQ) activate the antioxidant responsive element (ARE)-driven genes in neuroblastoma cells, primary neuronal and glial cultures, and in vivo through the use of transgenic reporter mice; 2) how ARE-driven genes block apoptosis; 3) the effect of overexpression of amyloid precursor protein (APP) on the ARE and antioxidant genes in neurons and glia using oligonucleotide microarrays; and 4) the regulation of ARE-driven genes in human neural stem cells using oligonucleotide microarrays. Please contact: Jeffrey A. Johnson, Ph.D., University of Wisconsin, School of Pharmacy, 6125 Rennebohm Hall, 777 Highland Avenue, Madison, WI 53705-2222. Email: [jajohnson@pharmacy.wisc.edu](mailto:jajohnson@pharmacy.wisc.edu)

**University of Pennsylvania** Department of Biology is looking for a postdoctoral candidate to identify genes that are differentially expressed in mouse oocytes and pre-implantation embryos by suppression subtractive hybridization and microarray analysis, and then to assess their function by transgenic RNAi. Send by email attachment to Richard Schultz a cover letter, CV, and names and addresses of three references at [rschultz@sas.upenn.edu](mailto:rschultz@sas.upenn.edu). Additional information can be found at [www.bio.upenn.edu/faculty/schultz/](http://www.bio.upenn.edu/faculty/schultz/)

**University of California** Department of Internal Medicine has two postdoctoral positions available immediately to study 1) the progesterone receptor (PR) and crosstalk pathways in pituitary cells with areas of focus including regulation of PR isoform expression, activation of PR transcription function, and identification of PR target genes in gonadotropes; and 2) signaling in pituitary gonadotropes with emphasis on the proximal membrane electrophysiological events and the distal kinetics of exocytosis using approaches including single cell fluorescence, patch clamp, and molecular biology and/or inquiries and CV including reference to: Judith Turgeon, PhD, Division of Endocrinology, Clinical Nutrition, and Vascular Medicine, Department of Internal Medicine, University of California, Davis, CA 95616. Email: [jlturgeon@ucdavis.edu](mailto:jlturgeon@ucdavis.edu)

**Colorado State University** has opportunities for postdoctoral work on the molecular basis of hormonal signaling including expression, regulation and contribution of capacitative Ca channels to myometrial smooth muscle Ca dynamics and role of scaffolding proteins in signaling crosstalk pathways involving cAMP and phospholipase C activation in myometrium. Send resume and three references to: [Barbara.Sanborn@colostate.edu](mailto:Barbara.Sanborn@colostate.edu)

**University of Illinois** seeks applications for a postdoctoral fellowship position in the Reproductive Biology Training Program (RBTP). Application deadline is **September 3, 2003**. Candidates must have an M.D., D.V.M., or Ph.D. and be a U.S. citizen at the time of appointment. Applications consist of a CV, copies of undergraduate and graduate transcripts, three letters of reference, a statement of career goals and research interests and a brief 1-2 page research proposal prepared in consultation with the prospective mentor. For info go to: <http://www.life.uiuc.edu/repro/>.

## Research Positions

**Kansas State University**, Department of Biochemistry, is seeking a Research Associate candidate to study the structure and function of ADAM proteins. A Ph.D. in biochemistry, molecular biology, or in a related discipline and research experience in protein expression, purification and characterization, molecular cloning, and cell biological techniques are required. Please forward an application letter, CV, including a list of all publications, and names and addresses of two references to Dr. Anna Zolkiewska, Kansas State University, Department of Biochemistry, 104 Willard Hall, Manhattan, KS 66506. Email: [zolkiea@ksu.edu](mailto:zolkiea@ksu.edu)

**California Toxicology Research Institute (CTRI)**, a brand new research institute, is offering research positions for toxicologists to help develop extensive programs in tissue and cellular toxicology, chemical and molecular toxicology, immunological and viral toxicology, as well as environmental toxicology. They are looking for young scientists as well as senior investigators to head divisions and take on a leadership role in building the institution. Please contact Tony E. Hugli, Ph.D., Scientific Director, California Toxicology Research Institute, 1989 Palomar Oaks Way, Carlsbad, CA 92009. Email: [thugli@CTRI-NP.org](mailto:thugli@CTRI-NP.org)

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