



GETA NEWSLETTER

Vol. 25, No. 2

April 2004

A publication of the Genetic and Environmental Toxicology Association (GETA) of Northern California

SPRING SYMPOSIUM

Co-hosted with MIT-Stanford-UC Berkeley Nanotechnology Forum

"Ultrafine Particles & Nanomaterial - Common Toxicity Concerns"

Friday, May 7, 2004

**Auditorium, Elihu Harris State Building
1515 Clay Street, Oakland, CA
(Near the 12th Street BART Station)**

9:30 am to 4:30 pm

***Stay for the Silver Jubilee Reception to Celebrate GETA's 25th Anniversary
at the Oakland Art Gallery across the street from the State Building!***

The Genetic and Environmental Toxicology Association (GETA) of Northern California and the MIT-Stanford-UC Berkeley Nanotechnology Forum are hosting this day-long conference on ultrafine particle toxicity and nanomaterial safety. The scientific conference will explore common toxicological issues between two areas of research, namely research on ultrafine particles as air pollutants and research on nanomaterial being developed for pharmaceutical and technology applications. In addition to the conference presentations and discussions, there will be a GETA cash award poster session for students, postdoctoral fellows and non-PI technical staff.

Ultrafine particles are generally defined as particles of less than 0.1 micron in diameter and are produced in many processes including fuel combustion and welding. Ultrafine particles are being actively studied and may be important risk factors in air pollution-related diseases such as asthma. Nanoparticles (less than 0.05 microns in diameter) include nanotubes and quantum dots and are being developed at a rapid pace in many industries, and are already being marketed in consumer products like sunscreens and cosmetics. Federal funding for research in nanotechnology is estimated to be approximately 1 billion dollars for fiscal year 2004, with overall state funding likely to rival federal research monies. The potential health impacts of nanomaterials have not been well studied. Nanomaterials, similar in size to the smaller end of the "ultrafine" particles size distribution, may interact with biological systems in similar ways, relative to their surface area and composition. Thus, this program will compare nanomaterial and ultrafine pollutants to see if they have common toxicological threads.

***Registration Deadline and Reception RSVP is May 5th!
Abstracts for Poster Session Due April 30th!***

GETA and MIT-Stanford-UC Berkeley Nanotechnology Forum

MEETING AGENDA

9:30 a.m. Registration and refreshments

Session 1. Expert Presentations — Ultrafine Particles and Nanomaterial

Meeting chair: T. McDonald

10:00 a.m. *Welcome and Goals for the Meeting*

Thomas A. McDonald, M.P.H., Ph.D., GETA Program Chair, and Staff Toxicologist, Office of Environmental Health Hazard Assessment (OEHHA), California EPA

10:15 a.m. *Some Remarks on Nanotechnology*

Wasiq Bokari, Ph.D., Partner, Quantum Insight, and Program Chair of the MIT-Stanford-UC Berkeley Nanotechnology Forum

10:30 a.m. *Environmental Applications and Implications of Nanotechnology: an Overview from U.S. EPA*

Barbara Karn, Ph.D., Program Director, National Center for Environmental Research, U.S. EPA

11:15 a.m. *Research on Ultrafine Particles in the Southern California Particle Center and Supersite*

John R. Froines, Ph.D., Chairman of California's Scientific Review Panel, and Professor and Director, UCLA Center for Occupational and Environmental Health, Southern California Particle Center and Supersite

12:00 p.m. **Lunch (on your own) and poster session** (*The poster session will take place in the atrium, outside the auditorium.*)

1:45 p.m. *Impact of Carbon Nanotubes and Nanoparticles on Respiratory Health - Studies in Rats and Relevance of Findings for Humans*

David B. Warheit, Ph.D, Research Fellow, DuPont Haskell Laboratory for Health and Environmental Sciences

2:30 p.m. *Health Effects of Ultrafine Ambient and Combustion Particles in the California Air*

Kent Pinkerton, Ph.D., Professor and Director, Center for Health and the Environment, UC Davis

Session 2. Panel Discussion – Nanomaterial Safety

3:15 pm. Panel discussion

Moderator: Melanie Marty, Ph.D., Chief, Air Toxicology and Epidemiology Section, OEHHA, Cal EPA
Panel members: Wasiq Bokari, Barbara Karn, John Froines, Kent Pinkerton, David Warheit, and others

4:15 p.m. Poster awards

4:30 p.m. Conference participants: refreshments in the atrium

4:40 p.m. GETA members: "**Silver Jubilee**" celebration

JOIN GETA AT THE SILVER JUBILEE CELEBRATION FOLLOWING THE MEETING (AND LET THE TRAFFIC THIN OUT!)

The "**Silver Jubilee**" celebrates 25 years since the founding of the society IN 1979. Come enjoy wine and appetizers and mix with GETA members, including many Past Presidents, at the **Oakland Art Gallery**, located by walking straight across the plaza from the State Building. The Gallery is on the ground floor of the 150 Frank Ogawa building (i.e., the Port of Oakland Building), which is directly across from City Hall. The plaza is located on 14th street between Clay and Broadway in Downtown Oakland. The current exhibit is "Visual Alchemy," an exhibition of mixed media works by renowned Bay Area Artists Rick Arnitz, Michelle Lopez, Robert Ortbal and Irene Pijoan. Visual Alchemy highlights these artists' shared approach of the alchemist - transforming common materials and found objects into works of art. See www.oaklandartgallery.org for more information on the exhibit.

DIRECTIONS TO MEETING

MEETING LOCATION

The Elihu M. Harris, State of California office building is located at 1515 Clay Street, in Oakland, California. The building sits one block West of Oakland City Hall, between 16th and 14th Streets (to the North and South), and Clay and Jefferson Streets (to the East and West). The building is easily accessible by the BART light-rail system, AC transit buses and AMTRAK.

- BART's 12th Street/Oakland City Center station is a short, two-block walk from the building.
- AC Transit buses stop at many locations close to the building.
- AMTRAK's Jack London Village terminal is a short bus ride away.

PARKING

Parking for the public is not available in the building garage, however, two-hour, metered parking is available on the streets around the building. Meters accept quarters and debitcards. There are also several public parking garages in the area. The closest garages are:

- *Clay Street Garage*, entrance directly across the street, on Clay, between 14th and 16th Street.
- *Dalziel Building Garage*, entrance around the corner, on 16th St., between Clay and San Pablo.
- *City Center Garage*, entrance one block away, on 14th Street, between Clay and Broadway.

DRIVING DIRECTIONS

From Sacramento or North of Oakland

1. Take the Interstate-80 West towards San Francisco/Los Angeles.
2. Just before Berkeley, Interstate-80 merges with Interstate-580 East. Continue straight for 4.35 miles on Interstates-80/580, toward Oakland/San Francisco.
3. When you see the University or Ashby Avenue exits, move into the second lane from the left. It will put you onto the Interstate 580 East ramp, towards Downtown Oakland. (Be Careful! The far left lane is a diamond lane that will take you across the Bay Bridge into San Francisco.)
4. Take the Interstate-580 East ramp towards Downtown Oakland/Hayward/Stockton.
5. Move toward the right lanes and follow Interstate-580 East for 1.34 miles
6. Merge onto Interstate-980 West towards Downtown Oakland. Follow Interstate-980 for 0.2 miles.
7. Exit Interstate-980 at 14th - 18th Street. (The exit will merge you onto Brush Street).
8. Follow Brush Street to 2 blocks to 17th Street.
9. Turn left onto 17th Street.
10. Follow 17th Street 4 blocks to Clay Street.
11. Turn right onto Clay Street.
12. Follow Clay Street 1 block across 16th Street.
13. We are in the, State of California building, on the right.

From Contra Costa or East of Oakland

1. Take Hwy 24 West or Hwy 580 West (Toward San Francisco)
2. Merge onto Hwy 980 (toward downtown Oakland)
3. Exit at 18th/14th Street.
4. Merge onto Brush Street.
5. Cross 18th Street.
6. Turn left onto 17th Street.
7. Follow 17th Street to Clay Street.
8. Turn right onto Clay Street.
9. We are in the, State of California building, on the right.

From Hayward or South of Oakland

1. Take Hwy 880 North (toward Sacramento).
2. Merge onto Hwy 980 (towards Walnut Creek).
3. Exit at 17th Street/San Pablo Avenue.
4. Turn right onto 17th Street.
5. Turn right onto Clay Street.
6. We are in the, State of California building, on the right.

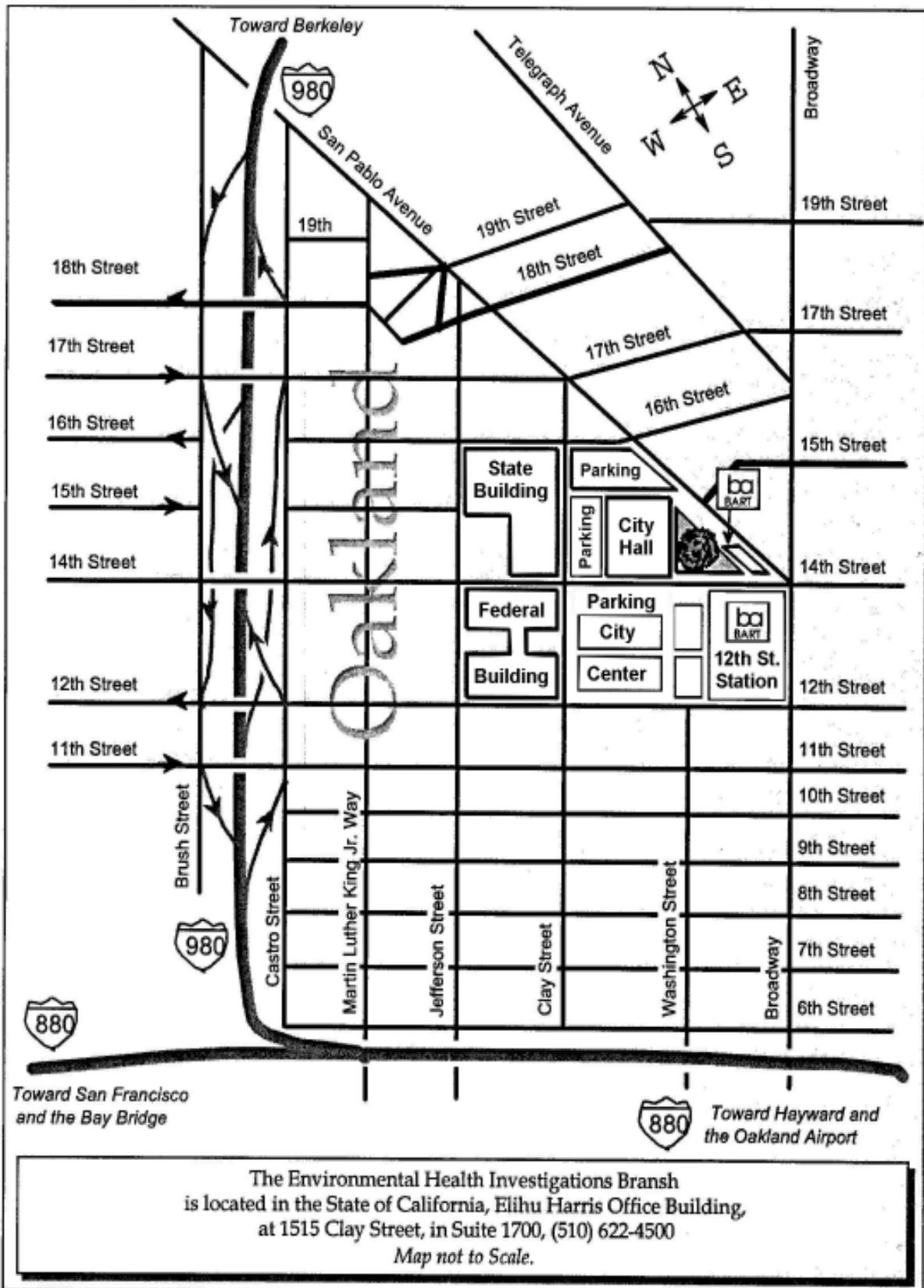
From San Francisco or West of Oakland

1. Go east across the Bay Bridge.
2. Follow the signs to Hwy 580 East (toward Hayward).
3. Merge onto Hwy 980 (toward downtown Oakland).
4. Exit at 18th/14th Street.
5. Merge onto Brush Street.
6. Cross 18th Street.
7. Turn left onto 17th Street.
8. Follow 17th Street to Clay Street.
9. Turn right onto Clay Street.
10. We are in the, State of California building, on the right.



**See Map
on Next Page**

Map of the Oakland City Center Area





President's Comments

.... by Karen Steinmetz

2004 marks GETA's 25th anniversary. For a quarter of a century, GETA has provided a forum for individuals to meet and share ideas in the field of toxicology. When GETA formed in 1979, we focused primarily on mutagenesis, carcinogenesis, developmental toxicology, and short-term testing – their mechanisms, how these fit into regulatory packages, the latest findings, and of course, what all this meant in relation to humans. Back then, the Ames test was the key to identifying all carcinogens until Vogelstein's multistage tumor model cast a new perspective on the role of mutations in carcinogenesis. Back then, cloning of a single gene required years of effort, whereas the advent of PCR and other technologies now allow

a graduate student to identify and clone a gene in an afternoon. Back then, we knew the sequences of a handful of genes; today we have the complete genomes of human, mouse, and several other species. Today, a Palm Pilot has more computing power than a 1980s supercomputer. Today, we have microarray technologies to study 'OMICs', HPLC coupled to mass spectrometry allows detection of chemicals at concentrations below 1 ng/mL, and immunotoxicology is a whole new field of study...and yes, we're still doing the Ames test!

Please join me in celebrating GETA's *Silver Jubilee* at our upcoming May 7th meeting.

GETA Past Presidents

| | |
|------|-----------------------|
| 1980 | Anthony Carrano |
| 1981 | Robert Hill |
| 1982 | James MacGregor |
| 1983 | James Bartholomew |
| 1984 | Joseph Brown |
| 1985 | James Felton |
| 1986 | Caroline Sigman |
| 1987 | Martyn Smith |
| 1988 | Ann Burrell |
| 1989 | Regine Goth-Goldstein |
| 1990 | Carol Green |
| 1991 | Charles Salocks |
| 1992 | James Tucker |
| 1993 | Jon Mirsalis |
| 1994 | Collette Rudd |
| 1995 | George Alexeff |
| 1996 | Andrew Wyrobek |
| 1997 | Rob Scofield |
| 1998 | Kim Hooper |
| 1999 | Janice Yager |
| 2000 | Jim Cleaver |
| 2001 | Steve Dizio |
| 2002 | Melanie Marty |
| 2003 | Melanie Marty |

GETA WEBSITE

The Environmental Mutagen Society (EMS) is generously hosting our website. To get to the site, first go to the EMS website at

www.ems-us.org

and click on the link for **GETA** on the Information Power Page. The Membership Directory is on-line too!

GETA NOW HAS YAHOO GROUPS

GETA now has a YAHOO group. The URL for the GETA group is: <http://groups.yahoo.com/group/getamembers/>

Using the links to the left members can post messages, list files, create polls, etc. It's easy and best of all it's free. Using the "Members" link on the left members can access and edit preferences (some groups generate TONS of e-mail and people can choose a "digest version" with e-mail all grouped on a page, or no mail at all and read messages on the web.

The following message is sent to each new member.

"Hello, Welcome to the getamembers group at Yahoo! Groups, a free, easy-to-use e-mail group service. Please take a moment to review this message. To learn more about the getamembers group, please visit <http://groups.yahoo.com/group/getamembers>. To start sending messages to members of this group, simply send e-mail to getamembers@yahoogroups.com. If you do not wish to belong to getamembers, you may unsubscribe by sending an e-mail to getamembers-unsubscribe@yahoogroups.com. To see and modify all of your groups, go to <http://groups.yahoo.com/mygroups>

Regards,
Laurie Monserrat
Moderator, getamembers"

SPEAKER BIOS

Wasiq Bokari, Ph.D., Partner, Quantum Insight, Menlo Park, California

Dr. Bokari received his Ph.D. in physics from the Massachusetts Institute of Technology. He was part of the team that discovered the top quark at the Fermi National Accelerator Laboratory. He has done post-doctoral research on fundamental physics and has more than 50 scientific publications and presentations to his name. He was also part of a small team that designed next generation particle detectors at Fermilab. As an entrepreneur, he has been part of the founding teams of various ventures including Clickmarks, an enterprise software provider. As the Senior Vice President of Products, he oversaw the creation and successful launch of the company's award-winning software. He has spoken on various industry forums as an invited speaker. He is cited as a co-inventor on 10 industry patents.

John R. Froines, Ph.D., Chairman of California's Scientific Review Panel, Professor and Director, UCLA Center for Occupational and Environmental Health, Southern California Particle Center and Supersite

Dr. Froines received his B.S. in Chemistry from the University of California at Berkeley in 1963. He received his M.S. (in 1964) and Ph.D. (in 1966) in Physical-Organic Chemistry from Yale University. Dr. Froines was a NIH postdoctoral fellow with Nobel Laureate, Sir George Porter at the Royal Institution of Great Britain. From 1974 to 1977, he was the Director of the Occupational and Radiological Health Division of the Vermont Department of Health and the Director of Occupational Lung Disease at the Vermont Lung Center. Dr. Froines was the Director of Toxic Substances Standards at Occupational Safety and Health Administration from 1977 to 1979. From 1979 to 1981, he was the Deputy Director of the National Institute of Occupational Safety and Health. In 1981, Dr. Froines was recruited to the UCLA School of Public Health and from 1991 to 1998 he was the Chair of the Department of Environmental Health Sciences. Dr. Froines is the chairman of the California's Scientific Review Panel, he is charged with reviewing data on proposed toxic air contaminants to ensure the appropriate applications of science and risk assessment. As the current director of the UCLA Center for Occupational and Environmental Health, Dr. Froines leads a multidisciplinary Center comprised of the UCLA schools of Public Health, Medicine, Nursing, Engineering and Urban Planning. Dr. Froines' air related research includes the health effects of particulate matter in the ambient environment, lung cancer and non-cancer health effects attributable to air pollution, and the biochemical mechanism of the carcinogenicity of toxic air contaminants, just to name a few. He directs the Southern California Particle Center and Supersite, a major research center devoted to studying the effects of particulate matter on human health.

Dr. Froines is Director of the NIH Fogarty's UCLA Program in Occupational and Environmental Health and he is Associate Director of the NIEHS Southern California Environmental Health Sciences Center. In addition to his research on air pollution he has conducted research on the carcinogenicity of arsenic and chromium during the past decade. In the former case he has focused on the genetic determinants of the mechanism of arsenic related systemic cancers. He serves on the National Toxicology Board of Scientific Counselors. Dr. Froines has received numerous honors including recent citations for his contributions from the Governor and the head of CAL/EPA.

Barbara Karn, Ph.D., Project Director, National Center for Environmental Assessment, U.S. Environmental Protection Agency, Washington, D.C.

Dr. Karn oversees U.S. EPA funding for research on environmental issues related to nanotechnology. She also leads efforts at federal EPA to address the issue of nanomaterial safety. Dr. Karn has given many presentations nationally about the promise and potential implications of nanotechnology on the environment.

Melanie Marty, Ph.D., Chief, Air Toxicology and Epidemiology Section, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency

Dr. Melanie Marty received her Ph.D. from the University of California, Davis in March 1983 in Pharmacology and Toxicology. Dr. Marty is Chief of the Air Toxicology and Epidemiology Section at the Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA). As Section Chief, she functions as OEHHA's Lead for risk assessment in the Criteria Air Pollutant program, Air Toxics Hot Spots program and the Toxic Air Contaminant program in Cal/EPA. This responsibility also includes acting as Departmental Lead on children's environmental health issues with respect to air pollution. Her Section is responsible for the scientific documents, including quantitative risk assessments and recommendations for Ambient Air Quality Standards, developed under California statutes relating to health impacts from air pollution, and which serve as the basis for regulation in the state of California. She is also responsible for developing long-term strategies to address key risk assessment issues, including those related to: children's environmental health and early-life exposure to toxic air contaminants; use of mechanistic data in risk assessment of both carcinogens and noncarcinogens; evaluation and refinement of use of uncertainty factors in noncancer risk assessment; incorporating new data into setting ambient air quality standards. She has presented a large number of seminars and invited lectures on a wide variety of topics, mostly related to health effects of airborne toxicants. She has also authored/co-authored numerous articles and publications relating to environmental risk assessment, including evaluation of children's health risks and cancer risk assessment. Currently, Dr. Marty is the Chair of the U.S.EPA's Office of Children's Health Protection Advisory Committee.

SPEAKER BIOS

Kent Pinkerton, Ph.D., Professor and Director, Center for Health and the Environment, UC Davis

Dr. Kent Pinkerton completed his M.S. and Ph.D. degrees in Pathology at Duke University Medical Center. In 1986, he joined the faculty in the Department of Anatomy, Physiology and Cell Biology in the School of Veterinary Medicine at the University of California (UC) at Davis.

His research interests are the health effects of environmental air pollutants on lung structure and function; the interaction of gases and airborne particles within specific sites and cell populations of the lungs in acute and chronic lung injury; and the effects of environmental tobacco smoke and combustion emissions on lung growth and development.

Dr. Pinkerton serves as director of the Center for Health and the Environment at UC Davis. He is a member of the American Thoracic Society and Society of Toxicology.

David B. Warheit, Ph.D., D.A.B.T., Research Fellow, DuPont Haskell Laboratory for Health and Environmental Sciences

David B. Warheit graduated from the University of Michigan in Ann Arbor with a BA in Psychology. He received his Ph.D in Physiology from Wayne State University School of Medicine in Detroit. Subsequently, he was awarded an NIH Postdoctoral Fellowship, and 2 years later, a Parker Francis Pulmonary Fellowship, both of which he took to NIEHS to study mechanisms of asbestos-related lung disease with Arnold Brody. In 1984, he moved to DuPont Haskell Laboratory to develop a pulmonary toxicology research laboratory. His major research interests are pulmonary toxicological mechanisms and corresponding risk related to inhaled particulates, fibers and nanomaterials. He is the author or co-author of > 100 publications and has been the recipient of the ILSI Kenneth Morgareidge Award (1993 - Hannover, Germany) for contributions in Toxicology by a Young Investigator and the Robert A. Scala Award and Lectureship in Toxicology (2000). He has also attained Diplomat status of the Academy of Toxicological Sciences (2000) and the American Board of Toxicology (1988). He has served and currently serves on NIH review committees (NIH SBIR, NIH Bioengineering) and has participated on working groups at IARC, ECETOC, and the National Academy of Sciences, as well as several editorial boards. (including current Associate Editor – Inhalation Toxicology)

**E-MAIL ABSTRACTS FOR THE
 POSTER SESSION TO
 TOM McDONALD
 TMCDONAL@oehha.ca.gov
 BY APRIL 30th!!
 CASH AWARDS!!**

2004 GETA Executive Board

The Executive Board is given the responsibility of determining all policy and business related to the Association. To this end, you are urged to contact any Board member with any suggestions you may have, concerns, meeting topics, and general business to be considered.

| Officers (*Program Chair) | | Phone | FAX | E-Mail |
|---------------------------|------------------------|--------------|--------------|----------------------------|
| President | Karen Steinmetz | 650-859-4145 | 650-859-3444 | karen.steinmetz@sri.com |
| President-Elect* | Tom McDonald | 510-622-3187 | 510-622-3211 | tmcdonal@oehha.ca.gov |
| Past President | Melanie Marty | 510-622-3154 | 510-622-3210 | mmarty@oehha.ca.gov |
| Secretary | Marion Russell | 510-495-2915 | 510-486-7303 | mlrussell@lbl.gov |
| Treasurer | Marina Chiarappa-Zucca | 925-422-2144 | 925-423-9014 | chiarappazucca1@llnl.gov |
| Newsletter Editor | Linda Rausch | 650-859-5008 | 650-859-2889 | linda.rausch@sri.com |
| Membership Officer | Laurie Monserrat | 916-327-7333 | | lmonserr@oehha.ca.gov |
| Placement Officer | Janet Baulch | 530-752-9872 | 530-752-5300 | jebaulch@ucdavis.edu |
| Steering Committee | | | | |
| At-Large | Moire Creek | 925-948-2965 | 925-948-2901 | Moire.Creek@valent.com |
| Business | Bob Baldwin | 408-245-6912 | 360-838-0888 | DrBob@iname.com |
| University | Nina Holland | 510-642-8781 | 510-642-5815 | ninah@uclink4.berkeley.edu |
| Government | Karen Dingley | 925-423-8156 | 925-422-2282 | dingley1@llnl.gov |
| Student/Postdoc | Elaine Khan | 530-752-4174 | 530-752-3394 | emkhan@ucdavis.edu |

GETA Job

GETA provides selected Bay Area job listings as a service to its members. If you would like to post a position, contact Janet Baulch jebaulch@ucdavis.edu. For additional job listings we encourage you to check out the Placement Service on the EMS website at www.ems-us.org.

Biochemist/Bioanalytical Chemist I. SRI International in Menlo Park, CA, has an opening for a Biochemist/Bioanalytical Chemist I. This individual will: Perform *in vitro* incubations for drug metabolism studies using human and animal cells; collect samples for ADME studies in animals; perform radiochemical analyses using liquid scintillation counting; conduct analyses of drug and metabolite levels in samples from *in vitro* and *in vivo* studies (tissues, plasma, blood) using HPLC. Knowledge of bioanalytical chemistry is desired. Duties will include qualitative and quantitative analyses of drugs and/or toxic chemicals in samples generated from human and animal tissues; *in vitro* metabolism assays; method development and assay validation; calculation and summary of data. Work will require the use of hazardous chemicals and radioisotopes. Meticulous record keeping under federal Good Laboratory Practices guidelines is required.

Requires 0-3 yrs work experience; experience with analytical techniques including HPLC, use of radiolabeled chemicals, *in vitro* biochemical and drug metabolism assays, and computer data handling are required. Excellent organizational skills and good record keeping necessary. BS degree in chemistry or biochemistry or related field is required. New grad (BS level) with relevant experience acquired in school. Physical examination required. Apply on-line at www.sri.hrdpt.com Job# 2098.

Biochemist/Bioanalytical Chemist II. SRI International in Menlo Park, CA, has an opening for a Biochemist/Bioanalytical Chemist II. This individual will: Conduct analyses of drug and metabolite levels in samples from *in vitro* and *in vivo* studies (tissues, plasma, blood) by measurement of radioactivity and analytical techniques such as HPLC or TLC methods; perform *in vitro* drug metabolism assays in subcellular fractions of human and animal tissues - cytochrome P450, gluconidation, sulfation and other enzyme assays. Knowledge of LC/MS, GC/MS and/or NMR and experience with metabolite identification is desired. Duties will include qualitative and quantitative analyses of drugs and/or toxic chemicals in samples generated from human and animal tissues; *in vitro* metabolism assays; method development and assay validation; calculation and summary of data. Work will require the use of hazardous chemicals and radioisotopes. Meticulous record keeping under federal Good Laboratory Practices guidelines is required.

Requires 3-7 yrs work experience; experience with analytical techniques including HPLC, use of radiolabeled chemicals, *in vitro* biochemical and drug metabolism assays, and computer data handling are required. Excellent organizational skills and good record keeping necessary. BS/MS degree in chemistry, biochemistry or related field is required. Apply on-line at www.sri.hrdpt.com Job# 2078.

Chemical Technician I/II. SRI International in Menlo Park, CA, has an opening for a Chemical Technician I/II. This individual will: Under supervision, prepare drug solutions, buffers, and vehicles for pharmaceutical safety and development studies; receive and ship test chemicals; dispense and track use of chemicals used in GLP and GMP studies; keep accurate log books and prepare data packages and respond to QA Audits. Other duties include laboratory housekeeping and equipment maintenance and calibration.

Requires BS in Chemistry (physical chemistry, biochemistry) with 0-3 years experience. Recent graduates (bachelor's level) encouraged. Strong math and communication skills required. Attention to detail, with adherence to deadlines. Physical exam will be required. Local candidates — no relocation assistance available. Apply on-line at www.sri.hrdpt.com Job# 1407.

ADME-TOX Scientist I/II, San Diego, CA. We seek a Scientist I/II to provide guidance to discovery projects to improve compound's physicochemical, ADME-T and safety properties. You will be responsible for collating the physicochemical, ADME-T and safety data; providing SAR analyses, new assay development including validation and implementation; and coordinating efforts for a multi-disciplinary team. To qualify, you should be a recent PhD (toxicology, drug metabolism, pharmacology, pharmaceuticals) with 0-2 years industry experience, with strong analytical skills. Contact: Doug Rashid, National Search Associates, 760-431-8210 (x168), dougr@nsasearch.com





Dinner Meeting Review

...by Tom McDonald

The Forge Room at H's Lordships in Berkeley was filled to capacity for the GETA Annual Dinner Meeting, held March 3, 2004. It was a beautiful evening, blue skies yielding to a great sunset and nighttime reflections off the water. The nice evening seemed to translate to a good mood among the meeting participants, as evidenced by the lively conversations that extended from inside the room, out the door and half way around the bar!

The highlight of the evening was our featured speaker, Dr. Dino Di Monte, Director of Basic Research at the Parkinson's Institute in Sunnyvale. Dr. Di Monte was quite an entertaining speaker and delivered an interesting presentation. He summarized research findings, conducted by his Institute and others, that have attempted to unravel the mystery of what causes Parkinson's Disease. At times in the past, researchers have leaned towards a primarily genetic explanation, whereas at other points, have pointed to environmental triggers as the important determinants. Research, spanning several decades, seems to have converged recently. Several genes have been

recently identified that are linked to families with a history of early-onset Parkinson's Disease. One such gene codes for a protein called α -synuclein, whose endogenous function is unclear, but tends to aggregate to form fiber-like structures that may be involved in the pathogenesis of the disease. This protein is highly expressed following toxic insult to the region of the brain where neuronal cell damage and loss occurs in Parkinson's Disease. Interestingly, work in Dr. Di Monte's lab and others have shown that exposure to environmental agents, such as the pesticides paraquat and rotenone, induce the expression of α -synuclein. Thus, current research points to the possibility that a gene-environment interaction may be the root cause of the majority of Parkinson's Disease cases. Who knows where the research winds will blow the story next?

Thanks to all who attended and made it an enjoyable evening. A special thank you goes to Marina Chiarappa-Zucca, our new GETA treasurer, Karen Steinmetz, the GETA President, and the other GETA board members for making it a smooth-running and successful event.

GETA Job Continued

XXX Pharmaceutical Inc. The Pharmacology and Toxicology Department is seeking a Senior Scientist or Scientist. Scientists within the Pharmacology and Toxicology Department at XXX provide scientific leadership and play a pivotal role in the process of drug development from late-stage research to nonclinical development, clinical development and commercialization of XXX drug candidates and products. Working collaboratively both internal and external to XXX, the candidate will be expected to lead the pharmacological assessment of XXX therapeutics by creating a best-evidence synthesis of existing knowledge and designing, implementing, interpreting and reporting comprehensive investigations of pharmacologic activity. The successful candidate will be responsible for in vitro and in vivo pharmacology/toxicology/ pharmacokinetic studies supporting XXX nonclinical programs. The candidate work closely with Study Coordinators, Pharmacokineticists and Veterinary Pathologists as well as Contract Research Organizations and Academic Investigators to deliver high quality GLP and non-GLP study reports and, as needed, represent XXX in meetings with regulatory authorities. Other responsibilities include interdisciplinary project team collaboration and leadership, generation and peer review of regulatory documentation, study protocols/reports and manuscripts, leadership in nonclinical initiatives, and participation in other cross-functional collaborations. Managerial responsibilities include, but are not limited to, participation in hiring and mentorship of scientific and operational staff.

REQUIREMENTS: PhD in pharmacology, pharmacokinetics or toxicology with at least 3 years experience in the pharmaceutical/biotechnology/CRO industry. Excellent written and verbal communication skills. Experience in GLP documentation. Experience in submissions to, and interactions with, regulatory authorities is desirable. Ability to build and foster productive cross-functional collaborations both within and external to XXX. Contact: Doug Rashid, National Search Associates, 760-431-8210 (x168), doug@nsasearch.com

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|--|
| <p align="center">National Meetings Environmental Mutagen Society (EMS) October 2-6, 2004 Pittsburgh, Pennsylvania</p> |
|--|

What's New With You?

Do you have a new job? Has your address, phone number or e-mail changed? Contact GETA Membership Officer Laurie Monserrat at lmonserr@oehha.ca.gov to update your information so you won't miss out on GETA Newsletters and meetings. And while you're at it, make sure your dues are current! Expired memberships will be dropped from the mailing list!

Registration Form
GETA SPRING SYMPOSIUM

Friday, May 7, 2004

Auditorium, Elihu Harris State Building

Name: _____

Address: _____

Phone: _____

Fax: _____

E-mail: _____

GETA Member? **Yes** **No** **(circle one)**

Registration Fee (everyone): \$20

TOTAL ENCLOSED: _____

Silver Jubilee Reception

PLEASE RSVP by APRIL 30th to

Tom McDonald (510) 622-3187 TMCDONAL@oehha.ca.gov

so we can get a headcount

Send this completed registration form and check made payable to **GETA** to:

GETA
c/o Marina Chiarappa-Zucca
Forensic Science Center
Lawrence Livermore National Laboratory
PO Box 808, L-178
Livermore, CA 94551-0808

Phone:

You may also make reservations by **E-mail:** **chiarappazucca1@llnl.gov**

Please bring your check to the meeting.

*You will be billed if you fail to attend the meeting, unless you
cancel before Wednesday, May 5, 2004.*



GETA MEMBERSHIP

(New or Renewing Members)

Name _____

Title _____

Affiliation _____

Address _____

Business Phone _____

FAX Number _____

E-Mail Address _____

Please give the above information as you would like it to appear in the On-Line Membership Directory.

RENEWING MEMBERS PLEASE TAKE A MINUTE TO UPDATE YOUR ADDRESS!!

New Member _____ Renewal _____ Check here if above address is new _____

Regular Member, 1 year \$15
Regular Member, 2 year \$25 (*save 5 bucks!*)
Regular Member, 3 year \$35 (*save 10 bucks!!*)
Student/Postdoc, 1 year \$ 7

Total Enclosed _____

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