



GETA NEWSLETTER

Vol. 26, No. 3

November 2005

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

"New Frontiers in Biotechnology Drug Development"

Tuesday, December 6, 2005

**Bayer Healthcare Auditorium
800 Dwight Way, Berkeley, CA 94710**

(please sign in at Security)

Registration 12:30 - 1:00 pm

Presentations 1:00 - 4:00 pm

Followed by a Wine & Cheese Reception

The Genetic and Environmental Toxicology Association (GETA) of Northern California would like to invite you for an afternoon to hear about recent technologies and issues in biotechnology. We hope the meeting will stimulate discussions about the future of biotechnology drug development.

Biotechnology has made great contributions to medical therapeutics and has influenced dramatic changes in the treatment of disease and the improvement of quality of life. But the price of innovation is increasing. Technologies and drug development have become more complex over the past years, increasing costs and development time. In light of these hurdles, some see a decline of the once promising biotechnology industry; whereas, many others still believe we are on the threshold of a new era.

The GETA Fall meeting will feature three accomplished individuals who will share their knowledge and experiences on "high-tech" approaches of protein drug production, innovative ways of selecting small molecule drugs for novel targets, and the challenges of preclinical and toxicological testing.

Registration Deadline is November 28th!
For security reasons,
you MUST sign up prior to the meeting so that
a security pass can be prepared with your name.
You may pre-pay or pay at the door

New Frontiers in Biotechnology Drug Development Meeting Agenda

12:30 pm Registration

1:00 pm Welcome and GETA News

*Thomas A. McDonald, Ph.D., GETA President, Manager, Toxicology,
Arysta LifeScience North America Corporation*

Presentations – New Frontiers in Biotechnology Drug Development

Meeting Chair: Inge Ivens

1:10 pm Introduction

Inge Ivens, Ph.D., GETA Program Chair

1:20 pm Development of Processes for the Manufacturing of Recombinant Therapeutic Proteins

Konstantin Konstatinov, Ph.D., Director of Process Sciences, Bayer Healthcare

2:15 pm Plexxikon's Scaffold Based Drug Discovery

Peter Hirth, Ph.D., CEO, Plexxikon

3:10 pm Novel Challenges for Safety Assessments in Biotechnology

Peter Working, Ph.D., Senior Vice-President R&D, Cell Genesys

4:00 pm Wine & cheese reception

DIRECTIONS TO BAYER HEALTHCARE:

Take Ashby Ave. exit off I-80 and continue to the first signal at 7th street.

Turn left onto 7th street and continue North approximately eight blocks.

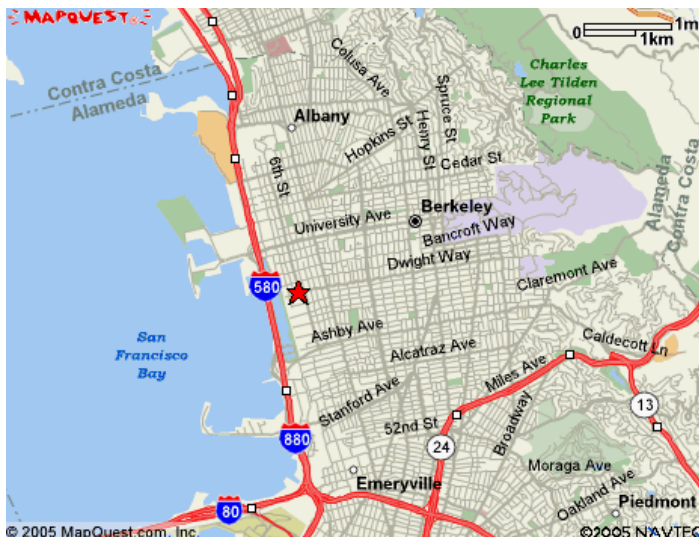
Turn left at Dwight Way (third signal).

The main entrance (gate) to Bayer is on your left.

Please register at security. Follow the signs (GETA Meeting) to the Auditorium (about a 3 minute walk).

Either park on the street or in the visitor parking area.

IF YOU GET LOST, CALL INGE'S CELL PHONE AT 415-322-1452





President's Comments

.... by *Tom McDonald*

Time seems to be at a premium for everyone these days. Fewer and fewer individuals seem to have time to devote to activities outside their work duties. That is why I am so pleased to have a slate of top-quality individuals who have put their names forward to run for GETA Executive Board. Please take the time to vote for the new officers, as they will be the ones who will continue the great run of timely and interesting GETA-sponsored meetings.

Hurricanes Katrina, Rita, and Wilma, the earthquake in Pakistan, and ongoing regional conflicts have marked 2005 as a year of upheaval and suffering on a scale that we have not seen for many years. Although the forces of nature seem to be working against us, we as scientists must continue to make advancements in our field today in order to improve the quality

of life tomorrow. In that vein, our Program Chair, Inge Ivens, has organized a set of experienced speakers to discuss "New Frontiers in Biotechnology Drug Development." This meeting examines the significant contributions that biotechnology has made to medical therapeutics. The event should be interesting and highly educational.

I have thoroughly enjoyed my tenure as the GETA President, and I look forward to participating on the Executive Board for another year as Past President. I want to thank the members of the GETA Board, with whom I have enjoyed interacting. The toxicology and environmental health community in Northern California is really a "small world." It is individuals and individual relationships that carry the day. GETA is a wonderful institution that helps foster those relationships.



Symposium Review

...by *Inge Ivens*

The GETA Spring meeting was jointly sponsored by NorCal SOT. The meeting topic was "Stem Cell Applications in Pharmacology and Toxicology." The stem cell topic proved to be a very timely subject, especially for California scientists. The day-long meeting on May 24th at SRI International was very successful. We had selected great speakers with excellent presentations. The number of participants exceeded our expectations: after the morning registration, more than 100 participants had signed up and we had registered 13 posters.

Stem cell research has made large strides in recent years and bears great promises for human therapies, research and development of drugs. We had four very knowledgeable speakers who gave excellent presentations. In the morning Julie Baker, Assistant Professor from Stanford, introduced us to embryonic and adult stem cell functions and their differences and their potential applications. She was followed by David Schaffer, Assistant Professor from UC Berkeley speaking about Proposition 71 and the presence and discovery of stem cells in the nervous system (interestingly first found in birds). In the afternoon Emer Clarke and Ralph Snodgrass introduced us to currently available assays and stem cell application in drug discovery and development. We were able to give 5 poster awards, 2 for student posters. During the presentations and at lunch and the afternoon breaks we enjoyed lively discussions with the speakers and participants. SRI contributed with its great facilities to the success of this meeting. Thanks to all who helped to make this meeting a great success.

The following presents summaries of three of the presentations:

Molecular Engineering of Stem Cell and Gene Therapies in the Nervous System by David Schaffer, Ph.D.

Stem cell research has made large strides in recent years, and the advent of Proposition 71 in California promises to enhance stem cell efforts in the state. In particular, new molecular therapies based on stem cells and gene delivery have significant potential for tissue engineering and repair for numerous diseases. Before these approaches can succeed, however, a number of fundamental engineering challenges must be overcome. Neural stem cells are present throughout the adult nervous system, but we must learn at a quantitative, molecular level the signaling mechanisms that control these cells before we can harness them for neuroregeneration. We have identified novel signaling factors that regulate neural stem cells and are investigating the mechanisms by which the cells process these signals into functional decisions. Gene therapy is also highly promising for tissue repair, particularly in its potential synergy with stem cell approaches, but gene delivery vectors still require engineering for enhanced efficiency and safety. We are therefore pursuing novel directed evolution approaches to overcome numerous challenges in the performance of viral vectors.

Continued on page 4

Toxicity Testing Using Stem Cell Assays by Emer Clarke

The understanding of the various cell populations that contribute to hematopoiesis and clinical engraftment has been facilitated during the last 40 years through the rigorous study of cell phenotype and the development of functional assays. Hematopoietic stem cells and progenitor assays can be used as a research tool to investigate growth and differentiation of cells in response to positive and negative regulators of hematopoiesis. In addition, these assays provide us with tools to assess the potential toxicity of compounds on specific primitive hematopoietic (myeloid, erythroid, megakaryocytic) cell populations. Within the bone marrow there are non-hematopoietic cell populations that are less well characterized. Mesenchymal cells are very rare, existing at an estimated frequency of 1 in 100,000 human bone marrow cells. These primitive cells go through a series of proliferation and differentiation steps to produce various mature tissue cell populations in a process termed mesengensis. The phenotype of the mesenchymal precursor in the bone marrow has remained elusive but may be quantified *in vitro* using the colony forming unit-fibroblast (CFU-F) assay. This affords us the possibility of assessing the influence of compounds on microenvironmental cells or tissue development. The addition of compounds including 5-fluorouracil, taxol and hydroxyurea have demonstrated that hematopoietic and microenvironmental cell populations differ in their tolerance to the drugs—a feature which may be of interest if new compounds are being directed towards the treatment of specific cellular or tissue based malignancies. Until recently, it was believed that in the adult, the central nervous system had limited capacity for new cell genesis. However, researchers have now identified primitive cells in the brains of mouse, rats and man that have extensive proliferative potential *in vitro*. When cultured under appropriate conditions, the developing neurospheres can differentiate into neural cells, oligodendrocytes and astrocytes. This recently described *in vitro* assay may allow the screening of multiple compounds to generate a few targeted lead compounds, which then can be directed to the most appropriate animal model for further examination. The continuous examination of primitive cell populations and an understanding of the molecules that regulate their growth, should facilitate a more directed approach to the development of highly targeted drugs and address toxicity issues early in drug development.

Embryonic Stem Cells: Biological Tools for Drug Discovery and Development by H. Ralph Snodgrass

Diseases like cancer, Alzheimer's, diabetes, stroke, heart disease, and various traumatic brain and spinal cord injuries are still not well treated. The enormous biological power of embryonic stem cells gives scientists the ability to experimentally study—under carefully controlled conditions—the growth and development of the many different cell types that are important to diseases like cancer, Alzheimer's, diabetes, stroke, heart disease, and various neurological diseases. Embryonic stem cells provide a clinically relevant biological system that offers an unprecedented powerful discovery tool for understanding these disease processes, evaluating drug effects, and ul-

timately developing novel therapies for devastating diseases. In addition, embryonic stem cell differentiation systems offer the ability to produce virtually unlimited amounts of mature cells for predictive toxicology screening assays, which is a major cause of drug failures. There has been significant discussion about the utility of embryonic stem cells for cell-based therapies. This talk addressed the utility of embryonic stem cells as research tools for conventional drug discovery, drug screening, and predictive toxicology assays.

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!

**Don't Forget
to Vote!**

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@yahoo.com. If you do not wish to belong to getamembers, you may unsubscribe by sending an e-mail to getamembers-unsubscribe@yahoo.com.

To see and modify all of your groups, go to <http://groups.yahoo.com/mygroups>

Regards,
Laurie Monserrat
Moderator, "getamembers"



In Memorium Anthony Carrano

Dr. Anthony "Tony" V. Carrano, a long time friend to, founding member and first President of GETA, lost his battle with lymphoma and died Monday, Oct. 10, 2005. He was 63.

"Tony was an outstanding scientist, an insightful leader, and a gentleman," said Lawrence Livermore National Laboratory (LLNL) Director Michael Anastasio. "As an Associate Director (AD) at LLNL, Tony laid the groundwork for bioscience programs at the Lab that are today considered among the nation's best. We are all saddened to hear of his passing and our thoughts go out to Tony's family. His legacy will remain a lasting influence here at LLNL."

Tony's leadership as a founding member and first president of GETA was a key factor in shaping this organization and making it a success. He also brought the Environmental Mutagen Society through a difficult financial period and helped to establish it as the leading society for research on environmental mutagenesis, first as Treasurer and then as President. He is remembered fondly by all members of those societies who had the opportunity to know and work with him.

Dr. Carrano's contributions to LLNL began in 1973, when he joined what was then known as the Biomedical and Environmental Research Program. He served as Associate Director from 1992 until 2000 and retired shortly thereafter. During his tenure as AD, the lab significantly broadened its bioscience efforts and he led the development of new programs in a number of areas.

Dr. Carrano was instrumental in bringing work on the Human Genome Project to LLNL and the U.S. Department of Energy. "He was instrumental in DOE's foundational contributions to

the human genome project and led the team at Livermore that mapped human chromosome 19. The Joint Genome Institute in Walnut Creek and the Laboratory's pioneering work in DNA forensics and DNA diagnostics are a lasting credit to Tony," Director Anastasio said.

Throughout his career, Dr. Carrano played significant roles in many scientific societies, on editorial boards in the various facets of bioscience, on committees and advisory boards, including EMS in the 1980s and with Odyssey Thera, Inc. after his retirement from LLNL. In 1996 he was appointed vice president of the International Human Genome Organization.

A great friend and mentor to many throughout his life, Dr. Carrano was equally known for his good-natured sense of humor. He was known to family and friends as an educator and a person who encouraged and challenged all people to learn more and better themselves.

Dr. Carrano was raised in New York and attended Rensselaer Polytechnic Institute, where he received his bachelor's degree in Chemistry in 1964. He received his Master's degree in 1970 in Radiobiology and his Doctorate in Biophysics in 1972, both from UC Berkeley. Dr. Carrano was buried in New York; funeral services were private.

A member of St. Michael's Church in Livermore, Dr. Carrano volunteered at the school as well as the parish. Contributions in memory of Dr. Carrano, may be sent to St. Michael School and will be used for educational purposes. They can be made payable to St. Michael School, In Memory of Anthony Carrano, c/o St. Michael School, 345 Church St., Livermore, 94550; Attn: Sister Emmanuel.

GETA Past Presidents

1980	Anthony Carrano	1989	Regine Goth-Goldstein	1998	Kim Hooper
1981	Robert Hill	1990	Carol Green	1999	Janice Yager
1982	James MacGregor	1991	Charles Salocks	2000	Jim Cleaver
1983	James Bartholomew	1992	James Tucker	2001	Steve Dizio
1984	Joseph Brown	1993	Jon Mirsalis	2002	Melanie Marty
1985	James Felton	1994	Collette Rudd	2003	Melanie Marty
1986	Caroline Sigman	1995	George Alexeff	2004	Karen Steinmetz
1987	Martyn Smith	1996	Andrew Wyrobek		
1988	Ann Burrell	1997	Rob Scofield		

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.

Senior Toxicologist, California. Oversee toxicology and safety pharmacology studies to support drug discovery and development programs. Responsibilities include interacting with project teams, consultants and CROs to ensure GLP compliance and coordinate and execute various aspects of the toxicology, safety pharmacology and toxicokinetic studies. Requirements: PhD in Toxicology or related field with 3-7 years industry experience. Knowledge of regulatory and GLP guidelines in toxicology and safety pharmacology is essential. Experience in drug development, toxicokinetics and biochemical toxicology is highly desirable. Contact: Christy Payne Bertolino, Senior Search Consultant, Drug Discovery & Development, Albrecht & Associates, 832-623-7216 Direct; 832-746-8552 Cell; 800-882-1132 x 703; christy@albrecht-assoc.com

Senior Toxicologist, Massachusetts. Design and oversee the nonclinical safety testing programs (including safety pharmacology, pharmacokinetics, and toxicology testing) for clinical candidates in development. Specific responsibilities will include: nonclinical study design, CRO selection/study director interactions/monitoring, study result interpretation, report finalization, and preparation of nonclinical summaries for IND and NDA submissions. Requirements: PhD with 5-10 years of experience as a toxicologist in the biopharmaceutical industry. Must be familiar with worldwide nonclinical testing guidelines to support clinical development and registrational filings. Experience in developing IND testing programs and in preparing IND and NDA/MAA filings is critical. Knowledge of PK is desirable. Contact: Christy Payne Bertolino, Senior Search Consultant, Drug Discovery & Development, Albrecht & Associates, 832-623-7216 Direct; 832-746-8552 Cell; 800-882-1132 x 703; christy@albrecht-assoc.com

Postdoctoral Fellowship--Toxicology and Metabolism, SRI International. Conduct research on *in vitro* drug metabolism as it relates to both cytochrome P450, and conjugative enzymes. The successful candidate will be involved in a variety of projects in this area, including the development, validation, and application of assays to select candidates with favorable drug-like properties. Another project will be to fully characterize the metabolism of polyphenols and other natural compounds by human liver and small intestine. Experience and Education Requirements: Background in drug metabolizing enzymes required, pharmacogenomics and pharmacogenetics is desirable. Recent Ph.D. Pharmacology, toxicology or related field. Physical examination required. Apply on-line at www.sri.com Job #2588.

Biochemist/Bioanalytical Chemist II. SRI International. 1. Conduct analyses of drug and metabolite levels in samples from *in vitro* and *in vivo* studies (tissues, plasma, blood) by measurement of radioactivity and bioanalytical techniques including HPLC and LC-MS. 2. Perform *in vitro* drug metabolism assays in subcellular fractions of human and animal tissues -

cytochrome P450, glucuronidation, sulfation and other enzyme assays. Knowledge of LC-MS/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. Experience and Education Requirements: Requires 3-7 yrs work experience; experience with bioanalytical techniques including HPLC and LC-MS, 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.com Job #2078.

Postdoctoral Fellow, Molecular Genetics. Carry out research in the area of pharmacogenetics of nicotine addiction and treatment. This individual will compile and curate genomic information for candidate genes, design and conduct polymorphisms discovery and genotyping assays and analyze genotyping results. He/she will also contribute to genetic study design, data analysis and preparation of manuscripts. A variety of high throughput genomic technologies will be employed to delineate genetic predisposition in complex traits and characterize gene-gene and gene-environmental interaction. Experience and Education Requirements: Strong writing skills, and prior research experience in statistical genetics and/or bioinformatics is highly desired. Ph.D. in human genetics, biostatistics or related field is required. Apply on-line at www.sri.com Job #2662.

Postdoctoral Fellow--Polymer Chemistry. Working in the Chemical Science and Technology Laboratory within the Physical Sciences Division of SRI, this position involves performing organic, organometallic, and polymer synthesis and evaluating the resulting product in a variety of end use applications. Additional duties include literature searches and writing reports. Experience and Education Requirements: Experience with polymer characterization and/or polymer physics is desirable. Ph.D. Organic/Polymer Chemistry. U.S. Citizenship and the ability to obtain and maintain a security clearance required. Apply on-line at www.sri.com Job #2377.



QC Chemist II. SRI Biosciences' Quality Control is part of a dynamic and growing independent contract drug development unit, specializing in Tablets and Capsules, Parenteral solutions and Emulsions, Nonirritating ophthalmic dosage forms, Oral solutions and suspensions, Topical gels, and implantable and injectable controlled release formulations. We provide individual or integrated services to clients supporting formulation development, analytical and stability services, clinical trial materials, and regulatory and clinical affairs in a cGMP environment. Our staff is friendly, hardworking and highly motivated.

Responsibilities: identify problems and provide preliminary troubleshooting for analytical methods and equipment; release testing of cGMP raw materials, in-process and finished products; stability testing and report writing; provide interpretation of results; compare results to established specifications; anticipate trends; participate in development and validation of test methods; and effectively communicate with supervisors on project status and problems encountered. Perform testing using HPLC, GC, FTIR, NMR, Karl Fisher, Dissolution, Disintegration, Viscometry, Osmolarity, pH, and Particle Counting. Must be able to work independently and also contribute to a high performing analytical or cross-functional team by using excellent communication skills (writing, presentations, verbal) and technical skills that can add to and complement the team. Experience and Education Requirements: BS with 3-5 years of relevant GMP experience or MS and 1-3 years relevant GMP experience -- prefer in pharmaceutical setting. Working knowledge of ICH and FDA guidelines required. BS/MS in Chemistry Physical examination required. Other Duties: Additional responsibilities will include inventory control, sampling and dispensing bulk material and finished products, shipping materials, equipment maintenance and calibration, monitoring stability studies, and preparing reports. Apply on-line at www.sri.com Job #2633.



GETA Student/ Post Doctoral Travel Award for 2006

In 1996, GETA established an award to assist graduate students or post doctoral members with travel to the upcoming EMS, or Society of Toxicology (SOT), or other related meetings. The award will be given to an active GETA member in good standing for the best abstract submitted. Candidates are asked to submit an abstract for the 2006 EMS, SOT, or other related national meeting by **January 30, 2006**. The winner will be announced at the Winter GETA dinner meeting. Send a copy of your submitted abstract and a letter of recommendation to:

Tom McDonald, GETA President
c/o Arysta LifeScience North America Corporation
100 First Street, Suite 1700
San Francisco, CA 94105

Phone: 415-778-4118
E-mail: thomas.mcdonald@arystalifescience.com

2005 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	Tom McDonald	415-778-4118		thomas.mcdonald@arystalifescience.com
President-Elect*	Inge Ivens	515-332-9272		ingeivens@aol.com
Past President	Karen Steinmetz	650-859-4145	650-859-3444	karen.steinmetz@sri.com
Secretary	Marion Russell	510-495-2915	510-486-7307	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	916-322-9705	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	Adrian Rodriguiz	408-924-4846	408-924-4840	rodriaga@email.sjsu.edu
Government	Karen Dingley	925-423-8156	925-422-2282	dingley1@llnl.gov
Student/Postdoc	Andrew Olaharski	510-643-5349		drewski@berkeley.edu

ELECTION OF 2004 GETA OFFICERS: OFFICIAL BALLOT

Vote for only ONE person in each category

President-elect: _____ Amy Arcus-Arth
_____ (write in)

Secretary: _____ Linda Rausch
_____ (write in)

Member-at-Large: _____ Hanna Honghin Ng
_____ Louping Zhang

Government Representative: _____ Stephen M. DiZio
_____ (write in)

Student/Post-doc Representative: _____ Rebecca Erickson
_____ (write in)

Any winners selected by write-in have the option of declining.

Because of the short notice we ask all GETA members to please vote and *MAIL, FAX, or e-mail* your ballot immediately!

Ballots received at SRI after December 5th will not be counted.

***MAIL* Ballots To:** Tom McDonald, GETA President
c/o Arysta LifeScience North America Corporation
100 First Street, Suite 1700
San Francisco, CA 94105

E-mail Choices To: thomas.mcdonald@arystalifescience.com

***YOU MUST SIGN THE OUTSIDE OF THE ENVELOPE IF MAILED
OR INCLUDE YOUR NAME AND ADDRESS IN YOUR
E-MAIL IF SENT ELECTRONICALLY FOR YOUR BALLOT TO BE COUNTED!***

You may also bring your ballot to the December 6 Fall Meeting and submit it at the Registration Table.

Biographic Profiles of the Candidates

President Elect/Program Chair

Amy Arcus-Arth, D.V.M.

Amy Arcus-Arth has been a GETA member for several years, and served a two-year term as a councilor for the Northern California Chapter of the Society for Risk Analysis. Dr. Arcus-Arth welcomes the opportunity to contribute to GETA, and its tradition of sponsoring interesting and timely seminars. Dr. Arcus-Arth has been a research scientist with the Office of Environmental Health Hazard Assessment (Cal/EPA) for the past 11 years. She has been involved with exposure and health risk assessment projects, including indoor air issues and developing statistical distributions of exposure parameters specific to infants and children (e.g., children's age-specific breathing rates). Before this time she worked with the California Department of Health Services to investigate a cluster of toddler iron supplement poisoning deaths and to characterize emergency department visits after moderate (6.0 – 7.0) earthquakes. Dr. Arcus-Arth earned a doctorate of veterinary medicine from the University of Illinois and practiced clinical veterinary medicine for nine years before studying epidemiology and biostatistics at UC Davis. She is particularly interested in childhood cancers, and early childhood exposures.

Secretary

Linda Rausch

Linda Rausch is currently a mammalian toxicologist with SRI International. She has also worked as a veterinary surgical technician and genetic toxicologist. Linda has a M.S. and over 15 years of experience in numerous areas of toxicology. Linda has helped to develop various toxicology assays and is a member of several professional societies including NorCal SOT, SOT. She is also the GETA Newsletter Editor.

Member-at-Large

Hanna Honchin Ng, Ph.D., D.A.B.T.

Hanna Hongchin Ng is the Associate Director of Preclinical Safety at SRI International. Dr. Ng has also served as one of the primary Study Directors for acute and subchronic toxicology studies of therapeutics and vaccines at SRI since 2001. Dr. Ng has a broad background in general toxicology, chemical carcinogenesis, and genetic and molecular toxicology. She received her B.S. in Biology from Beijing Normal University, her M.A. in Molecular Biology from Clark University, and her Ph.D. in Toxicology/Environmental Health Sciences from Johns Hopkins University. Before joining SRI, she was a postdoctoral fellow in the Department of Medicine at UCLA. She is a member of the GETA and SOT, and a Diplomate of American Board

of Toxicology. Dr. Ng is author or co-author of about 25 publications, abstracts and several IND-directed toxicology study reports.

Louping Zhang, Ph.D.

Dr. Luoping Zhang received her Ph.D. in 1993 from Simon Fraser University, British Columbia, Canada. She is currently a scientist in the division of Environmental Health Sciences in the School of Public Health at UC Berkeley. For the past 15 years, Dr. Zhang has been working toward understanding mechanisms of genotoxicity and hematotoxicity caused by benzene and other environmental pollutants. Dr. Zhang has been an innovator in developing new FISH (Fluorescence *in situ* Hybridization) assays and is recognized as a leading authority on FISH methodology. Since 1990, she has applied FISH methodology in studies involving benzene toxicity in human blood and progenitor cells of exposed workers. She is currently using FISH in studies of childhood leukemia and other types of cancer. Dr. Zhang has collaborated with the National Cancer Institute and other academic institutions for several large-scale molecular epidemiological studies. Most recently, she has turned her attention to toxicogenomics, leading research efforts to apply gene expression profiling in molecular epidemiology and RNAi in human cell culture studies of chemical exposure.

Government Representative

Stephen M. DiZio, Ph.D.

Dr. Stephen M. DiZio is the Chief of the Human and Ecological Risk Division, Department of Toxic Substances Control, California Environmental Protection Agency. Steve has been an active member of GETA for many years, including serving as President in 2001.

Student/Post-doc Representative

Rebecca Erickson, Ph.D.

Dr. Rebecca Erickson received her Ph.D. from UCLA in December 2004 with her dissertation entitled "Survival and Proliferation of Neural Stem Cells: Roles for Insulin and PTEN." Her graduate research focused on both genetic and local media factors critical for neural stem cell survival. She also investigated a variety of neurodegenerative diseases and brain cancer, the latter of which is thought to be initiated by neural stem cell transformation. In May 2005, Rebecca began postdoctoral research in SRI International's Mammalian Toxicology Program (under the direction of Dr. Karen Steinmetz). In her current research, she evaluates learning and memory deficits after chronic drug treatment to rats. Since her arrival, Rebecca implemented the 8-arm radial maze (ARM) to evaluate these endpoints and has selected model drugs for initial studies. After her recent move to the Bay Area, Rebecca is one of GETA's new student/post-doc members, and she is interested in getting involved by becoming one of GETA's Student/Post-Doc Representatives.

Registration Form
GETA FALL MEETING

Tuesday, December 6, 2005
Bayer Pharmaceutical Auditorium

Name: _____
Address: _____

Phone: _____
Fax: _____
E-mail: _____

GETA Member? Yes No (circle one)

All Registrations include Wine & Cheese Reception!

GETA Members \$20
Non-Members \$35 (includes 1-year membership)

TOTAL ENCLOSED: = _____

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

GETA
c/o Inge Ivens (APC1)
Bayer
800 Dwight Way
Berkeley CA 94701

You may also make reservations by **E-mail: ingeivens@aol.com**
Please bring your check to the meeting.

*You will be billed if you fail to attend the meeting, unless you
cancel before Monday, December 5, 2005.*



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 <i>(save 5 bucks!)</i>
Regular Member, 3 year	\$35 <i>(save 10 bucks!!)</i>
Student/Postdoc, 1 year	\$ 7

Total Enclosed _____

Please send this completed form and check made payable to **GETA** to:

GETA Membership
c/o Laurie Monserrat
P.O. Box 863
Point Reyes Station, CA 94956

Phone: 916-443-2358
Fax: 503- 905-7306
E-mail: lmonserr@oehha.ca.gov

**GETA Newsletter
c/o Linda Rausch
SRI International PN-169
333 Ravenswood Ave
Menlo Park, CA 94025**

RENEW YOUR MEMBERSHIP FOR 2006!