NorCal SOT newsletter

May 2008

Message from the President

Northern California is a Mecca for toxicologists from a diversity standpoint. We are a collage of scientists, researchers, teachers and administrators from academia, government, industry, occupational health, animal health, plant protection, consultants, clinical laboratories, large, mid-sized and small pharma and biotechnology companies. We have evolved as a dynamic organization in the Northern California Chapter of the Society of Toxicology that has, as a primary goal, to spawn programs on the cutting edge of the toxicological sciences. Our ranks have grown to 300 members and our programs are designed to wet the interest and satisfy the needs of all our members, while at the same time foster and develop relationships that will persist into and throughout our careers. While it is impossible to develop programs that will ring the bell each and every time, we strive to offer a broad spectrum of topics, venues and dynamic presenters that will make it hard for our members not to attend our meetings.

NorCal SOT was teased out of hibernation in 2001 by Bob Howd with a kick-off meeting on January 31, 2002 at Jupiter Brewery in Berkeley. Continued strong leadership followed in the presidencies of Susan Rice, Lin DePass, George Alexeeff and Sanjay Chanda as well as a terrific supporting cast of vice-presidents, councilors, treasurers, secretaries and student representatives. We have added a newsletter, the step child of Tao Wang, listing job postings, publications by our members, details of our programs, committees and activities. Our programs have been held at outstanding venues: on the Pacific Coast at the Ritz Carlton, at the Air Museum in San Carlos, and at wonderful host member companies such as SRI and Roche. To these meetings we have included meals and wine and cheese receptions at very low cost, if any, to our members. In addition, we have made cost of membership and travel free for students. Meeting expenses have been offset by the generous sponsorship of local and North American contract research organizations with which we have nurtured warm relationships.

Some of our strongest efforts have come in developing ties with our students. We have forged linkages with UCs Davis, Berkeley, San Francisco and Santa Cruz. We have provided funding for students in the way of travel grants, cash grants for poster presentations and provided networking opportunities that could become stepping stones for career development.

NorCal SOT is as capable and as strong as you want to make it - so to you our members - we welcome your commitment to attend meetings, to serve on committees or volunteer to run for office - and to tell us about what kind of programs/topics would interest you. Contact information for your current Board is listed in this Newsletter.

Warmest regards,

George R. Clemens, President
Northern California Chapter of the Society of Toxicology

Local Reports

Safety Assessment of Fish and Shellfish Impacted by the M/V Cosco Busan Oil Spill in San Francisco Bay, California

By: Susan Klasing, Robert Brodberg, Margy Gassel, George Alexeeff

On November 7, 2007, the M/V Cosco Busan accidentally struck the San Francisco Bay Bridge, releasing approximately 58,000 gallons of IFO 30 bunker fuel into the San Francisco Bay. On November 13th, Governor Arnold Schwarzenegger issued an Executive Order suspending all fishing for human consumption in the Bay and surrounding waters and directing the Office of Environmental Health Hazard Assessment, in consultation with the California Department of Public Health, to determine whether a significant human health risk was posed by consumption of marine life in areas impacted by the spill. On November 14th, a sampling plan was developed and on sampling began the following day. Over the following two weeks, staff of the Office of Environmental Health Hazard Assessment, Department of Fish and Game and other agencies, implemented agenicies, implemented a fish and shellfish sampling and analysis plan in response to the spill, developed risk-based criteria for cancer and non-cancer risks for selected polycyclic aromatic hydro-carbon (PAH) compounds, and produced findings of the study. The project collected over 1000 samples and analyzed over 42 composites. Of all seafood analyzed, only mussels at two Bay sites had sufficient benzo [a]pyrene equivalent (BaPE) concentrations to warrant a continued health advisory, which is expected to be lifted by Spring. The detailed report can be found at:

http://catchinganainbowblogs.letelegramme.com/images/medium_1_Photo_single_mussel.jpg

http://www.oehha.org/fish/special_reports/fish112907.html

NorCal SOT newsletter

May 2008

2008 Spring Meeting

In early April, NorCal SOT hosted the 2008 Spring Meeting at the SRI International Conference Center in Menlo Park, California. Besides a terrific symposium focusing on "Developmental Neurobehavioral Toxicology", we also had poster competition from student and scientist/postdoctoral fellow groups, and the Lunch with Experts event for students and postdoctoral fellows. Attendees included toxicologists from academia, government, and industry, as well as students and postdoctoral fellows from Stanford, UC Davis, and UC Berkeley, etc.

Symposium

Our NorCal SOT Board of Directors put together a great symposium. The BOD assisted in a variety of tasks that included making decisions on the various topics, inviting speakers and arranging their travel itineraries, as well as seeking sponsorships. Special thanks to our President, George Clemens, who made major contributions in putting the program together.

Poster Competition

The "Best Poster" competition was held in two categories: 1) students; and 2) postdoctoral fellows and scientists. For each category, a Best Poster Presentation Award was given during the dinner. In the student category, a $50 cash award was also given for each poster presented. The Chair of the Award Committee was George Alexeeff, and the Judges were Susan Rice, Chuck Barton, and Derrick Gammon. Special thanks also to George, Susan, Chuck, and Derrick.

Lunch with Experts

For student and postdoctoral fellows, the 2008 NorCal Spring Meeting offered a Lunch with Experts event. More than twenty toxicologists from volunteered to meet with students. Almost all the students and postdoctoral fellows who attended the meeting signed up for this event. During the lunch, students and postdoctoral fellows were paired with toxicologists from all three fields -industry, government, and academia at each table. The discussion was very lively and informative. Students and postdoctoral fellows asked a lot of questions, such as:

"How can I become a faculty member?"
"How can I find a job in Industry?"
"What I need to do to prepare myself if I want to seek a industrial position upon graduation?"
"Only recently I started thinking about finding a job in industry, and I almost finished my graduate program. Is it too late? Am I going to be marketable?"

Our toxicologists gave a lot of sound advice based on their own their own extensive experience. Students indicted that it was truly helpful to talk to our toxicologists. In addition, this was an excellent opportunity allowing students and postdoctoral fellows to network with our toxicology experts.

Keynote Speakers

Edward P. Riley, PhD (San Diego State University) FASD – Not just another pretty face: The effects of prenatal alcohol on behavior and brain

Charles V. Vorhees, PhD (University of Cincinnati College of Medicine) Effects of Developmental Exposure to MDMA on Brain and Behavior

Kathleen K. Sulik, PhD (University of North Carolina) CNS and Craniofacial Imaging in a FASD Mouse Model

Virginia (Ginger) Moser, PhD (Office of Research and Development of the US EPA) Guideline Developmental Neurotoxicity Testing for Risk Assessment

Les Freshwater, MS (BioSTAT Consultants, Inc.,) Statistical Analysis of Developmental Neurotoxicity Assessments

Paul D. Connor, PhD (University of Washington) As if Brain Damage Wasn't Enough – The Lifelong Impact of FASD on Social Interaction

(abstracts pg 3&4)

Sponsors

SRI International
Pacific BioLabs
BioReliance Corporation
MPI Research
Bioanalytical Systems
Ricerca
LAB Research
Harlan/RCC
Charles River Laboratory

Sanjay Chanda and George Clemens.

The guest speakers in front of SRI International and networking with members inside ...

NorCal SOT newsletter

May 2008

2008 Spring Meeting

Posters Competition

Best Poster – Student Category
Wegesser, T., Last, J. University of California, Davis
Lung Response to Coarse Particulate Matter in a Mouse Bioassay.

Honorable Mention – Student Posters
1 .Hopkins, L., Pinkerton, K. University of California, Davis. Rapid Nose to Brain Transport of Inhaled Quantum Dots.
2. Schetter, L., Murphy, S., Chow, G., Shen, J. University of California, Davis. DEHP: The Litigation of DEHP in Baxter Health Products.
3. Dong, B. Matsumura, F. University of California, Davis. Roles of Cytosolic Phospholipase A2in the Action of TCDD though a New Pathway in MCF10A Cells.

Best Poster - postdoctoral fellow & scientist :
Kim, Y-M, Koetter, E, Wang, L. Rabinovich, M. Stanford University Murine Herpes Virus-68 Infection Induces Pulmonary Vascular Disease in 2100A4/ MTSL Over-expressing in Mice in Association with Elastase Activity.

... from top to bottom

Teresa Wegesser, UC Davis
Laurie Hopkins, UC Davis
Y-M Kim, Stanford University

Symposia Abstracts

Effects of Developmental Exposure to MDMA on Brain and Behavior
Charles V. Vorhees, Ph.D., Dept. of Pediatrics, Div. of Neurology, Cincinnati Children's Research Foundation, University of Cincinnati College of Medicine

3,4-Methylenedioxymethamphetamine (MDMA, 'ecstasy') is a major drug of abuse whose use increased dramatically during the 1990's and has remained relatively high to the present. MDMA is primarily used by adolescents and young adults. Unlike some drugs, MDMA is equally used by men and women. There are no data on how many women using MDMA become pregnant or their use patterns during pregnancy, but related drugs (cocaine and methamphetamine) show high rates of persistent use beyond the first trimester in those who are chronic users. We have developed an animal model of late gestational exposure to MDMA. We focused on later stages of development because these are periods when brain regions critical to learning and memory (hippocampus, entorhinal and frontal cortices) are undergoing final stages of neurogenesis and neuronal migration, differentiation and synaptogenesis. Doses scaled from humans to rats were tested after different exposure intervals. We find that exposure during one window (postnatal days 11-20 in the rat, which is approximately equivalent to third trimester intrauterine brain development in humans) leads to pronounced spatial learning and memory impairments in the offspring when tested as adults. More recently we have also found impairments in the offspring on a test of path integration learning. The drug also causes hypoactivity in the progeny but this effect is unrelated to the effects we see on learning ability. During treatment, MDMA causes the acute release of ACTH and corticosterone in plasma and of 5-HT in prefrontal cortex, striatum and hippocampus. The corticosterone effects recover within about 30 h. 5-HT release is followed by a severe reduction that shows partial recovery by 78 h, but by 90 days of age the reductions appear larger than at 78 h in the prefrontal cortex and hippocampus. Long-term changes also occur in NE but these appear unrelated to the l earning effects. We also find changes in 5-HT1A receptor sensitivity, and PKA activity that persist. Using Affimatrix microarrays, we screened for long-term changes in gene expression after early MDMA treatment. After RT-PCR verification of selected gene expression changes and additional screening, we found protein expression changes using immuno-histochemistryassociated with the NMDA receptor complex in the hippocampus that were not seen in a control region of the brain (striatum). Unexpectedly, expression changes in glutamatergic receptor-associated proteins (NMDA-NR1, nNOS and PSD95) were increased rather than decreased as we might have expected given the learning impairments. To determine the functional status of these circuits, we performed slice electrophysiology for long-term potentiation (LTP), a cellular correlate of spatial learning and memory. We found that the upregulation of NMDA receptor complex proteins was associated with impaired LTP induction, consistent with the learning effects. Together, the data support the view that early MDMA has multiple effects on the developing brain that induce lasting changes in 5-HT and glutamatergic pathways and these are pathways known to be associated with spatial and path integration learning. We are presently testing the causal link between the neurochemical and behavioral effects.

NorCal SOT newsletter May 2008

2008 Spring Meeting

Symposia Abstracts cont'd

FASD–Not just another pretty face: The effects of prenatal alcohol on behavior and brain
Edward P. Riley, Department of Psychology, San Diego State University

Fetal alcohol syndrome (FAS) is a major public health issue that has life long consequences for society and the functioning of the individual. FAS was described independently in France in 1968 and in the United States in 1973, and is currently estimated to affect about 1 or 2 of every 1000 births worldwide. To receive a diagnosis of FAS, an individual must present with a specific pattern of dysmorphic facial features, growth deficiency, and central nervous system dysfunction. However, FAS is only one of several possible outcomes of heavy prenatal alcohol exposure. The term fetal alcohol spectrum disorders (FASD) has been adopted to acknowledge that effects from prenatal alcohol exposure can range from FAS to subtle behavioral effects, growth deficits, or isolated physical anomalies. The introduction to this presentation will provide an overview of FASD, including a brief history and diagnosis. The majority of the presentation, however, will focus on the changes in brain structure and function and the effects on behavioral and cognitive development. Prenatal alcohol exposure has regional effects on brain structures, with some structures such as the frontal lobes, corpus callous, the basal ganglia, and cerebellum being more affected than others. Behaviorally, individuals with histories of heavy prenatal alcohol exposure often have attentional problems, specific learning and memory deficits, and inhibitory problems. A relationship between the brain alterations and the behavioral changes will be made. The presentation will end with current research trends, possible interventions, and prevention efforts.
.

CNS and Craniofacial Imaging in a FASD Mouse Model
Kathleen K. Sulik, Ph.D. Cell and Developmental Biology, University of North Carolina, Chapel Hill, NC.

High resolution magnetic resonance imaging (MRI) is being applied as a high throughput screening method for analyses of craniofacial and central nervous system (CNS) abnormalities in a mouse model of Fetal Alcohol Spectrum Disorders (FASD). This work is directed toward informing human diagnostic tests and promises to provide new information that will be helpful in reducing the incidence of FASD. To date, MRI-based studies have been conducted on gestational day (GD) 17 mouse fetuses following acute maternal ethanol treatment at stages corresponding to those in the human third through fifth weeks post-fertilization. Control and ethanol-exposed fetal mice are imaged at a resolution of 25µm (isotropic) using a 9.4 Tesla magnet. 3-D reconstructions generated from these images are utilized to provide accurate reconstructions of the face as well as volume determinations for a number of CNS regions. Following the earliest treatment times (GD7), correlation has been shown between severity of ethanol-induced insult to the forebrain and the upper midface. Notable CNS abnormalities include deficiencies in the septal region, olfactory bulbs, and ganglionic eminences as well as aqueductal stenosis. GD8 ethanol treatment has yielded notable reductions in the hippocampus and caudate-putamen (striatum), accompanied by enlargement of the third ventricle. One day later (GD9) the frontal regions of the brain are less affected than more caudal areas such as the midbrain, pons and medulla. This, along with comparable studies employing treatment at additional developmental stages, is providing key information regarding stage-related sensitivities. Noteworthy is that the results of the studies to date support the premise that very severe ethanol-induced damage to the human CNS can result from maternal ethanol exposure prior to the time that pregnancy is typically recognized.

Statistical Analysis of Developmental Neurotoxicity Assessments
Les Freshwater, M.S., BioSTAT Consultants, Inc

Developmental Neurotoxicity (DNT) assessments present unique issues and the statistical analysis plan should be taken into consideration at the protocol study design stage. Common to most toxicology studies, the primary objective of these assessments is to evaluate the effects of increasing test article dose levels. In addition, the statistical analysis methodology of DNT data should also address: 1) the repeated measurements on each individual animal; 2) the response differences, if any, between sexes; and 3) the dual sources of random variation that exists between animals from different litters as well as that which exists between animals from the same litter. Understanding each of these unique issues and their impact on the statistical analysis and interpretation of results will be the primary focus of this discussion

NorCal SOT newsletter
May 2008

2008 Spring Meeting

Symposia Abstracts cont'd

Guideline Developmental Neurotoxicity Testing for Risk Assessment"
Virginia (Ginger) Moser, PhD, Neurotoxicology Division, National Health and Environmental Effects Research Laboratory, Office of Research and Development of the US EPA

The talk will begin with a brief history of the developmental neurotoxicity guidelines (US EPA and OECD), when and how it is conducted, and use of the data in risk assessment. The components of the test paradigm will be described, with historical control and exemplary chemical data presented. The use and value of the data in risk assessment will also be addressed.

As if Brain Damage Wasn't Enough – The Lifelong Impact of FASD on Social Interaction
Paul D. Connor, PhD, Department of Psychiatry and Behavioral Sciences, University of Washington

The effects of FASD are far reaching. They go beyond the structural and functional changes to the brain and neuropsychological impairments. They impact how the individual interacts with the environment. This talk will discuss the secondary disabilities that can occur with individuals who were damaged by prenatal alcohol exposure. These secondary disabilities are not directly caused by the damage to the brain or neuropsychological deficits, but are caused by how these deficits color their interactions with the environment. Secondary disabilities include mental health problems (also a primary disability due to alterations in the brain and brain chemistry), disrupted school experiences, troubles with the law, psychiatric and legal confinement, inappropriate sexual behaviors, drug and alcohol problems, troubles with employment, and difficulties with independent living. Risk and protective factors that can affect the emergence of these secondary disabilities will also be discussed.

Congratulations to our Poster Contest Winners and Honorable Mentions ...

NorCal SOT newsletter

May 2008

2008 Annual Meeting

Dear all, did you have a productive and fun time at the recent 48th SOT Annual meeting in Seattle? Many of our members did! Besides presenting their work and attending many and diverse Symposia, Workshops, Roundtable and Historical Highlight sessions, our members were also involved in many voluntary activities to support the mission and programs of the national SOT. Here are some stories….

K-12 Activities at the Annual Meeting

The k-12 booth was quite popular at this year's annual meeting, with a prime location in the "sky-way" of the convention center that connected the poster presentations and hundreds of vendors. With plenty of space, SOT was able to display the work of several budding young scientists who had prepared posters for the meeting. One high school student was even on hand to give an in-depth and impressive explanation of her research to passers-by. SOT members had a wide range of materials available to them, including information on books describing science and toxicology in a basic format for young children, posters documenting the "Milestones in Toxicology" and ideas for experiments for older kids, and pamphlets on career options for early-career toxicologists and the college-bound. Susanne Brander, NorCal SOT's student representative and the K-12 committee graduate student liaison, assisted with setting up and manning the booth, and also participated in the annual k-12 committee's meeting on current activities and plans for k-12 activities at next year's annual meeting in Baltimore. At next year's annual meeting in Baltimore the k-12 committee will add an interactive component, in that children will be welcomed to participate in simple on-site experiments that will demonstrate that science is fun and that just about anyone can be a scientist. We all look forward to 2009!

"Paracelsus needs you to join the TEAMS Project! "

Each year the SOT K-12 Education Committee sponsors an educational program in conjunction with the Annual Meeting. This year's event is called TEAMS (Toxicologists Educating And Mentoring Students). The activities started in January 2008 and culminated in a live videoconference symposium and poster session at the SOT Annual Meeting in Seattle. The goal of the TEAMS Project is for small groups of students from Washington State to develop a 10-minute presentation to educate other students about a health or environmental issue of importance to them or to their community and understand the role that toxicology plays in identifying, characterizing and solving such issues. During the preparation of their presentations, each student group was paired with a toxicologist mentor for consultation, advice and discussion. Since these students were located in Washington State, SOT K-12 Education Committee asked for volunteers to work as toxicology mentors and/or panel judges from four nearby regional SOT chapters including Pacific Northwest, Northern California (NorCal), Southern California, and Mountain West SOT chapters. The participation from NorCal SOT was great! Among 18 volunteers, 10 were from our NorCal SOT chapter. The Chair of the event the TEAMS Steering Committee, Katie Sprugel, made a nice comment about the participation from NorCal SOT chapter. These volunteers are: George C.T. Jiang (ChemRisk, Inc. San Francisco), Karen Riveles (California EPA, Sacramento), Teresa Wegesser (UC Davis), Donna W. Lee (Buck Institute for Age Research, Novato), Mark Fielden (Roche Palo Alto), Linda G. Roberts (Chevron Energy Technology Company, Richmond), Jane Gunther (Elan Pharmaceuticals, South San Francisco), Jeff Tepper, (Catalyst BioSciences, South San Francisco), Surekha Akella (PDL BioPharma, Redwood City), and Chunmei Ji (Elan Pharmaceuticals, South San Francisco). Besides, Tao Wang (Novartis, Emeryville) served on the Steering Committee for this event. The program was truly successful. The teachers appreciated the access to mentors and the opportunity; and the mentors had fun working with the teachers and students. One of the volunteers from our chapter, Jeff Tepper, commented afterwards "Great job all. I had fun and will volunteer again."

Student Reception

The student reception, held on the first night of the annual meeting, did an excellent job of bringing together students from many different parts of the United States and other countries with vastly varied backgrounds. Student representatives from each chapter presented posters summarizing the latest news from their regions, and students reps from specialty sections also distributed information and invited students to attend their respective receptions later in the week. This included a poster presentation by Susanne Brander, NorCal SOT's graduate student representative, on the events and accomplishments of NorCal SOT and it's members over the past year. Several students and post-doctoral researchers from the Northern California area - UC Davis and UC Berkeley - were present at the reception. Much networking and brainstorming took place over plenty of delicious food and drink and students began to solidify working relationships that they will likely have for the remainder of their careers at toxicologists.

TEAMS
oxicologists Educating And Mentoring Students

NorCal SOT
newsletter
May 2008

2008 Annual Meeting

NorCal SOT Reception

The NorCal and Pacific Northwest chapters of SOT held a joint reception mid-week during the annual meeting, and the event was attended by many of our members from academia, industry, and government organizations. Among the universities and companies represented were U.C. Davis, U.C. Berkeley, the EPA, OEHHA, Roche, Amgen, etc. Student members were well represented also, and the NorCal SOT Young Investigator's Award was given to Teresa Wegesser of U.C. Davis and Nygerma Dangleben of U.C. Berkeley. A raffle was also held during the gathering. The raffle ncluded two bottles of Wente Vineyards Livermore Valley "Morning Fog" Chardonnay, and two bottles of Murietta's Well Livermore Valley red "Meritage" (A Bordeaux-style blend of Cabernet Sauvignon, Petite Verdot, Merlot and Cabernet Franc), which were kindly donated to NorCal SOT by Kathleen and Steve DiZio family. Both Kathleen and Steve work for the local wingrowers association, and they only picked the best! Four lucky winners got to take a bottle of California wine home with them.

Student and post-doc members of NorCal SOT posing with their raffle prizes !

George Clemens, Sanjay Chanda & his daughter, and Student Rep Susanne Brander enjoying the food.

Many thanks for those who have recently served NorCal SOT: Sanjay Chanda as President, George Alexeeff as Councilor (Past-President), Stephen Dizio as Vice-President Elect, and Tao Wang as Secretary.

2008-2009 NorCal SOT Board of Directors

President:	George Clemens, Rigel Pharmaceuticals, South San Francisco gclemens@rigel.com (650) 624-1377
Vice President	Stephen Dizio, Department of Toxic Substances Control, Sacramento sdizio@dtsc.ca.gov (916) 255-6634 office (916) 869-5392 gov't cell
Vice-President Elect	Tao Wang, Novartis Pharmaceuticals, Emeryville tao.wang@novartis.com (510) 923-3562
Secretary	Charles Barton, Xoma, Berkeley barton@xoma.com (510) 204-7553
Treasurer:	Jeffrey S Tepper, Catalyst BioSciences, South San Francisco jtepper@catbio.com (650) 266-8673
Councilor (Past President):	Sanjay Chanda, Anacor Pharmaceuticals, Palo Alto schanda@anacor.com (650) 543-7592
Councilor:	John A Wisler, Amgen, South San Francisco jwisler@amgen.com (805) 447-9787
Councilor	Karen Steinmetz, SRI International, Menlo Park karen.steinmetz@sri.com (650) 859-4145
Student/Postdoc Liaison:	Susanne Brander, University of California at Davis smbrander@ucdavis.edu (707) 227-0384

Career Opportunity

ChemRisk®

Chem*Risk*® is seeking applicants with graduate degrees (MS, PhD, MD) and training in toxicology, epidemiology, the environmental sciences, risk assessment, biomedical engineering, industrial hygiene, medicine, or health physics. Key job duties will include:

- Assisting in studies concerning human health and risk assessment for the protection of public health and workers.
- Analyzing environmental or workplace data to synthesize expert opinions on chemical toxicity or human health effects.
- Becoming a noted health scientist by performing defensible work that is presented in peer-reviewed journals and conferences.
- Expand the envelope of knowledge of workplace and environmental toxicants and their relationship to human health effects.

Chem*Risk*®, a nationwide scientific consulting firm provides state-of-the-art toxicology, industrial hygiene, epidemiology, and risk assessment services to organizations that confront public health, occupational health, and environmental challenges. We have a long-standing reputation for thorough scientific analysis and for sharing our work in the peer-reviewed scientific literature. Many of the over 250 papers published by scientists in the firm are frequently referenced in both litigation and regulatory decision-making. We believe we provide one of the best environments for occupational and environmental professionals to rapidly advance their careers. Our mission is to provide creative and scientifically rigorous approaches to answering questions about the human health hazards posed by chemical, biological, pharmaceutical, and radiological agents. Please visit our website at **www.chemrisk.com**.
Locations: San Francisco, CA; Boulder, CO; Austin, TX; Houston, TX; Atlanta, GA; Pittsburgh, PA.
Electronic resumes may be submitted to: hr@chemrisk.com

Chevron Human Energy™

Manager, Toxicology and Health Risk Assessment

Chevron Energy Technology Company is accepting online applications for a Toxicologist located in Richmond, CA. Key Job Responsibilities for this position may include but are not limited to:

- Manages corporate-wide competencies and technology services in toxicology, hazard evaluations, health risk assessments, global chemical control regulations, hazard communications, litigation support, toxicology testing, product stewardship, epidemiology, community health, product compliance, health impact assessments (HIAs), and 24/7 global emergency information center for product health emergencies. THRA is Chevron's global center for toxicology, epidemiology, MSDS/hazard communications and health risk assessments with teams located in Richmond, CA, Houston, TX and Ghent, Belgium, supporting all Chevron worldwide.
- Manages THRA Personnel and Resources – Oversees a team of 32 Toxicologists, Product Compliance specialists, Health Risk Assessors, Public Health experts, Epidemiologists and support personnel. Supervises, coaches, mentors, and does PMP for direct reports and oversees these activities throughout THRA. Provides career development for THRA employees. Helps create a motivational work environment, eliminates at-risk behaviors, and reinforces desired behaviors in THRA/HES.
- Serves as Chevron's senior representative on strategic industry management committees, like the American Chemistry Council Strategic Science Team, API Oversight Committee for the Industry Voluntary Testing Program on High Production Volume (HPV) chemicals, API Oversight Committee on 211(b) Testing Program, Benzene Health Research Committee, etc. The total leveraged value of these research programs is well over $100MM.
- Coordinates THRA participation in representing Chevron on major U.S. and International industry technical and advocacy committees at American Petroleum Institute (API), CONCAWE (main European petroleum association), American Chemistry Council (ACC), CEFIC (EU Chemical Assoc), Asphalt Institute, Western States Petroleum Institute (WSPA), and many other U.S. and int'l trade associations
- Allocates THRA resources where they will add the most business value. Provides resources to Team Leaders/Supervisors. Ensures continuous improvement in technology identification, product and service delivery and business processes.
- Legislative/Regulatory Monitoring and Advocacy

Required (Basic) Qualifications:

- Ph.D in Toxicology or closely related discipline.
- DABT: Diplomat, American Board of Toxicology, Board- Certificate in Toxicology.
- 15 years' management experience leading Toxicologist

Please apply online at Chevron.com to job 03228495.

Genentech
IN BUSINESS FOR LIFE Interested candidates, please email resume to Maguire.Sherry@gene.com

1) Senior Director, Preclinical Safety Assessment

We are seeking a highly motivated, dynamic leader for the Preclinical Safety Assessment function at Genentech. The Safety Assessment function composes of three critical organizations of toxicology, pathology and investigative safety. The Senior Director of Preclinical Safety Assessment will develop and lead the strategy and execution of efforts for the preclinical safety evaluation of drug candidates and molecules in the Development pipeline. The successful candidate will have a strong and compelling vision for the Safety Assessment organization which ensures meeting very critical needs for the company and its pipeline development. She/He will oversee an organization of dynamic individuals ranging from Associate Directors to Scientists and Research Associates applying their technical expertise in team settings. With an increase in the number of small molecules in our discovery and Development portfolio, we expect the leader to provide rich experiences in small molecule safety evaluation while also managing a healthy large molecule (antibodies, fragments, proteins) portfolio.

- Scope of the Position: Reporting to the Vice President of Development Sciences, the Senior Director of Safety Assessment will be responsible for the oversight of the development of pre-clinical toxicology strategies - from lead optimization to product approval. Additionally, the incumbent will provide management oversight for all toxicology programs.
- Responsibilities: *Be a key member of the organization's core leadership in drug development. * As a member of key decision making committees, represent nonclinical safety in strategic decisions. * Top level accountability for the strategy, experimental design, result interpretation, troubling shooting, and report writing of safety studies. * Partner directly with project/program teams in research (discovery), Early Development (to IND filing and Phase I) and full development (Phase I through POC to Market) to design and interpret the nonclinical safety aspects of drug development, including decision analysis, regulatory acceptability and issue resolution.* Understand the needs of and strongly influence partners in discovery and clinical development functions for the success of the programs.* Clearly identify and communicate potential project hurdles, suggests solutions and establishes priorities and contingency plans in collaboration with line function management, key partners in Research and Clinical and project team participants.* Negotiate with Health Authorities (HA) worldwide regarding safety issues, scientific interpretation and acceptability of the sponsor's data.*Assure support to all assigned projects is optimal in terms of quality, timing and cost; negotiates effectively as necessary. Monitor deliverables

Career Opportunity

including timelines, objectives and budgets and ensure their alignment with development team goals. * Ensures the successful preparation and presentation of all internal and external documentation relating to nonclinical safety (e.g. Investigator's Brochure, IND, CTD, IMPD, Health Authority briefing books) documentation. * Manage communications and relationship-building with regulatory authorities worldwide in collaboration with Drug Regulatory Affairs (DRA) and the Head of Safety Assessment.* Maintain scientific and regulatory expertise in the fields of drug development and safety assessment.* Advises and mentors staff.

- Requirements: Candidate should have a Ph.D. DVM or an equivalent degree in life sciences with a minimum of 10-15 years of experience in toxicology experience, preferably in a small molecule environment. Proven leadership strength and potential is important. A solid track record in successful scientific publications. Candidate should have experience in managing IND-enabling pharm/tox program and regulatory submissions. In depth understanding of the drug development process and regulatory experience. This person should have very strong verbal communication skills accompanied by writing skills. Ability to relate, interact with senior leaders in the Discovery and Clinical development environment is critical for success. Candidate should enjoy and work well in a fast-paced, multi-tasked, and hands-on environment.

2) Staff / Senior Scientist – Toxicologist

The Safety Assessment department of Genentech is seeking a Senior Toxicologist with a proven record of drug development and leadership in the area of small molecule pharmaceuticals. As Safety Assessment Group Leader for Small Molecule Therapeutics you will lead a highly talented team of toxicologists in a fast-paced environment to create and execute highly integrated drug development strategies in support of new molecular entities from late-stage research through licensure and life-cycle management. The successful candidate will be a recognized leader and contributor to the small molecule safety assessment field, with a passion for bringing new medicines to patients with unmet medical needs, and dedication to teamwork, collaboration, innovation and staff development. Toxicologists at Genentech provide scientific leadership and play an active role in the process of drug development. Working in an integrated and collaborative team environment, we lead the safety assessment of Genentech therapeutics by creating a best-evidence synthesis of existing knowledge and comprehensive characterization of toxicologic activity. In addition to providing strategic vision for the development of our rapidly expanding small molecule drug development portfolio, position responsibilities include: staffing, mentoring, and career development of toxicologists and research associates, scientific leadership in the design and implementation of safety assessment strategies for Genentech's small molecule portfolio, and leading or providing support to inter- and intra-departmental initiatives. This is an excellent opportunity for a senior level toxicologist, with strong scientific, communication, and teamwork skills, who is committed to bringing innovative therapies to patients. This position will report to the Associate Director of Toxicology in the department of Safety Assessment.

- Requirements: Dynamic, creative individual with an established record of experience and accomplishment in driving drug development and safety assessment for small molecule pharmaceuticals, particularly in the area of oncology. Excellent interpersonal, written and verbal communication skills and very strong management experience. Evidence of significant contribution to the field, and direct interaction with regulatory authorities. Proven ability to build and sustain productive internal and external cross-functional collaborations.
- Education: PhD or equivalent experience in toxicology with 12+ years professional experience in the pharmaceutical industry. Board certification in toxicology highly desirable.

3) Toxicology Scientists, Small Molecule & Antibody Drug Conjugate (ADC)

- Responsibilities: The Safety Assessment division of Genentech is seeking a toxicology scientist. Toxicologists at Genentech provide scientific leadership and play an active role in the process of drug development from late-stage discovery through marketed products. Working in a collaborative team environment, we lead the safety assessment of Genentech therapeutics by creating a best-evidence synthesis of existing knowledge and comprehensive investigations of toxicologic activity. The successful candidate will design and supervise in vitro and in vivo toxicology studies to support the goals of small molecule project teams, work closely with Study Monitors, Pathologists and Pharmacokineticists to deliver high quality GLP and non-GLP in vivo study reports and, as needed, represent Genentech in meetings with regulatory authorities. Responsibilities include interdisciplinary project team membership, preparation and review of regulatory documentation, study reports and manuscripts, participation in toxicology and pharmacology initiatives, and other active cross-functional collaborations.
- Requirements: Excellent written and verbal communication skills. Experience with cross functional teams and capability to build productive cross-functional collaborations both within and external to Genentech.
- Eduction: PhD or equivalent experience in toxicology with at least 4+ years experience in the pharmaceutical/biotechnology/CRO industry. Board certification in toxicology desirable.

Berkeley
University of California

- ***Does your organization sponsor interns in toxicology field?***
- ***Are you interested in speaking with our students about careers in toxicology?***

Dear Colleague,

The Molecular Toxicology program at UCB is interdisciplinary program hosted in the Dept of Nutritional Sciences and Toxicology, which is training undergraduate students in Toxicology with an emphasis on molecular approaches (see http://nst.berkeley.edu/content/view/51/139/). Students take lower division courses to provide fundamental background in biologic sciences including genetics and molecular biology. Core upper division courses classes cover key topics in toxicology including ADME, statistics in biology, food toxicology, computational toxicology, molecular toxicology, toxicology laboratory technique and environmental health. Our students are highly motivated, hard working, and bright. They are looking for volunteer and internship positions in toxicology related fields in industry, regulatory agencies, and non-profit agencies. They are also able to work for course credit. We currently have sixty junior and senior students and our program is expanding. Our students have taken positions in companies and organizations around the bay area, the state and the country and it is great way to find future employees. The MT program is establishing a contact list of potential volunteer and internship opportunities and we would like to include your company or organization. We are also interested in establishing contacts with individuals working in this field to speak with our students about careers in toxicology. I would be indebted if you could fill out the enclosed form or forward this letter to the relevant individual in your organization (next page).

Sincerely,

Chris Vulpe

UNIVERSITY OF CALIFORNIA, BERKELEY

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

TA BARBARA • SANTA CRUZ

BERKELEY, CALIFORNIA 94720-1100

University of California, Berkeley

Volunteer and Internship Program

Please return this form to Chris Vulpe at vulpe@berkeley.edu
or by FAX to 510-642-0535

Your name:

Your email:

Name of Organization:

Address of Organization:

Web page of Organization:

Contact person for Volunteer opportunities:

Email for Volunteer opportunities:

Contact person for Internship opportunities:

Email for Internship opportunities:

Are you willing to come to UCB to talk about your current job?