GETA NEWSLETTER

Vol. 28, No. 2 April 2007

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

SPRING SYMPOSIUM

Co-sponsored by GETA and the Northern California Chapter of the Society for Risk Analysis (NCCSRA)

"Genetics and Environmental Risk Factors for Autistic Spectral Disorders"

Thursday, May 10, 2007

Alumni House at UC Berkeley
Berkeley, California, 94720-7520

Registration 8:30 am to 9:00 am

Symposium 9:00 am - 1:30 pm (Box Lunch Included)

GETA and the Northern California Chapter of the Society for Risk Analysis (NCCSRA) are pleased to co-sponsor a Spring Symposium at UC Berkeley's Alumni House. Four experts will provide different perspectives on the issue of autism, ranging from epidemiological, clinical, and research on causes and treatments, to personal and societal impacts of these diseases.

Distinguished speakers include:

Dr. Kathryn Stewart, Executive Director, Orion Academy
Dr. Antonio Hardan, Psychiatry and Behavioral Sciences, Stanford University
Dr. Irva Hertz-Picciotto, M.I.N.D. Institute, University of California, Davis
Dr. Joachim Hallmayer, Psychiatry and Behavioral Sciences, Stanford University

(see next page for agenda -- abstracts and speaker biographies on page 4)

Registration Deadline March 8, 2007!

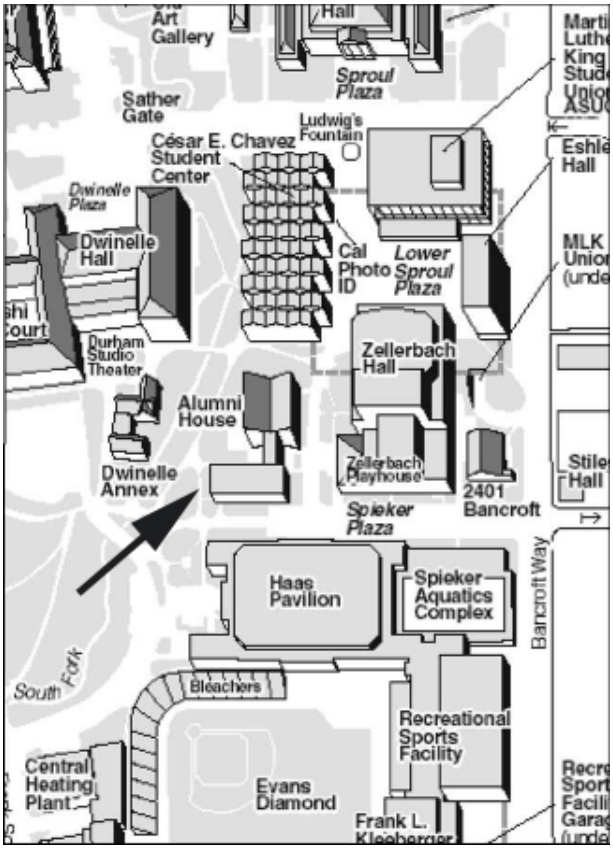
GETA and NCCSRA
SYMPOSIUM PROGRAM

8:30 - 9:00	Registration
8:50 - 9:00	*Opening Remarks* GETA Officers
9:00 - 9:45	*Education for Students on the Neurocognitive Spectrum - Using Theory to Inform Program Development: A Look at the Orion Academy* Kathryn Stewart, PhD, Executive Director, Orion Academy
10:00 - 10:45	*Developmental Abnormalities in Brain Structures in Autism Spectrum Disorders* Antonio Hardan, MD, Psychiatry and Behavioral Sciences, Stanford University
11:00 - 11:45	*Environmental Risk Factors and Epidemiology of Autistic Spectral Disorders* Irva Hertz-Picciotto, PhD, MPH, M.I.N.D. Institute, UC Davis
12:00 - 12:30	Lunch (box lunch provided)
12:30 - 1:15	*Autism is a Complex Genetic Disorder* Joachim Hallmayer, MD, Psychiatry and Behavioral Sciences, Stanford University
1:30 - 1:50	Panel Discussion

Directions to Alumni House:

Alumni House is located on the south side of the UC Berkeley Campus; east of the Haas Pavilion, north of Zellerbach Hall, and southwest of Dwinelle Hall. The nearest off-campus intersection is Bancroft Way and Dana, which is just downhill from the intersection of Telegraph Ave and Bancroft Way. For more details go to the UC Berkeley Alumni House webpage at

http://www.alumni.berkeley.edu/About_CAA/Directions_to_the_Alumni_House.asp



Directions from BART

From Downtown Berkeley BART station
1. Exit Bart Station onto Shattuck Ave
2. Walk South on Shattuck three blocks to Bancroft Way
3. Turn left on Bancroft and go up the hill along the south edge of campus--passing by the following streets on the right: Fulton and Ellsworth
4. Arrive at Bancroft and Dana St and turn left onto the campus
5. You'll see Haas Pavilion (basketball) on your left
6. Alumni House is across from Haas Pavilion

From I-80 East or West

1. Exit University Ave.
2. Continue east on University Ave for approximately 1.5 miles to Oxford St.
3. Continue on Oxford St. for three blocks to Allston Way and make a U-turn. Make an immediately right turn onto Frank Schlessinger Way (going East) into the campus.
4. Continue on Frank Schlessinger Way and you will see the tan, cement and glass one-story building that is Alumni House. The main entrance of the large Haas Pavilion faces the Alumni House.

Parking Options

Public parking near Alumni House at the following lots:

1. MLK Student Union Garage
2. Sather Gate Garage
3. Oxford Street Lot

President's Comments

.... *by Amy Arcus*

Our first scientific meeting of the year highlighted research and thoughts of Professor Bruce Ames, UC Berkeley. Dr. Ames discussed research that his group and others have conducted that provides support for the formation of peroxides and free radicals when particular micronutrients are not at optimal levels. These highly reactive compounds damage proteins, DNA and lipids in cells. Dr. Ames suggests that the recommended daily intakes of micronutrients be reevaluated.

The second scientific meeting of the year will be held Thursday May 10, 2007 and will focus on autistic spectrum disorder (ASD). See announcement information in this newsletter for further details.

The third meeting is planned as a half-day session in the fall.

The Board recently voted to change the date when member ship dues are due to January 1st of each year. This will greatly simplify our Treasurer's and Membership Officer's work. Dues may be pro-rated initially for current members, until all members are on a Jan to Dec membership year. Memberships will still be in 1, 2, or 3-year increments, depending on just how much money you want to save!

Because facility and food costs have increased dramatically in the past few years, the Board will soon address GETA's process of setting up and coordinating scientific meetings. Several people need to work together to attend to the many details involved in meeting preparations.

There are many exciting topics for future GETA scientific meetings, due in part to the tremendous amount of research currently underway, addressing the effects of genetics and the environment on health. If you would like to be involved in making GETA scientific meetings a success, feel free to contact me (aarcus@oehha.ca.gov).

Happy spring! I hope you can join us for our spring 2007 meeting on May 10th.

Amy Arcus, President 2007

Dinner Meeting Review

...*by Lida Antionian*

The GETA dinner meeting was held at the Hyatt San Francisco Airport on March 1, 2007. The topic was "Delaying (or accelerating) degenerative diseases: DNA Damage." The meeting was well attended by scientists from industry, government, and academic laboratories.

Dr. Bruce Ames of Children's Hospital Oakland Research Institute (CHORI) talked about his current research. His current research relates micronutrient deficiency to DNA breakage and mitrochondrial damage. Dr. Ames discussed how deficiencies of certain micronutrients such as B12, B6, folate and minerals iron and zinc cause DNA damage. Dr. Ames' research has shown that mitochondrial oxidative stress in degenerative diseases of aging, like certain cancers, may be due to oxidants produced during mitochondrial metabolism of acetyl carnitine and lipoic acid. His research in rats has clearly demonstrated that normal mitochondrial function can be restored by feeding rats mitochondrial metabolites, acetyl carnitine and lipoic acid.

Dr. Ames put forward a thought provoking hypothesis that micronutrient deficiency triggers a triage response in the organism in favor of short-term survival and at the cost of accelerating degenerative diseases[1]. He believes that an optimum intake of micronutrients and metabolites, which varies with age and genetics, should tune up metabolism and improve health, particularly for the poor, obese, and elderly.

1. Ames, B.N. Low micronutrient intake may accelerate the degenerative diseases of aging through allocation of scarce micronutrients by triage. Proc. Natl. Acad. Sci. USA 2006;103: 17589-17594.

Abstracts and Speaker Bios

Kathyrn Stewart, PhD

Clinical Psychologist, Founder and Director of the Orion Academy in Moraga, CA

Education of Students on the Neurocognitive Spectrum – Using Theory to Inform Program Development A Look at the Orion Academy – an Innovative High School Now in its 7th Year, Designed for Asperger's and Nonverbal Learning Disorder Teens.

The presentation will discuss the very specific and unique program at the Orion Academy and the development of these ideas. This includes the three key areas of intervention for students with neurocognitive disorders and how these areas of intervention are woven into a college preparatory high school curriculum. Some possible reasons this approach is working and areas that need improvement will be reviewed. The school is in its 7th year and over that time there have been successes and failures, areas to be improved and areas to be let go; these aspects will be discussed. The needs for future research will be reviewed.

Dr. Stewart is a clinical psychologists specializing in child and adolescent psychology. She has been practicing in the Bay Area for over 20 years as the founder and Clinical Director of the Amador Family Center and currently as the founder and Director of the Orion Academy. She completed her undergraduate degree in psychology at UC Davis, Master's in Special Education at SR State, and her PhD at the Wright Institute in Berkeley. Dr. Stewart's background in special education includes having worked as both a special education teacher and administraor. Currently, she Is the Executive Director of the Orion Academy in Moraga, CA. She has been on the faculty of UC Berkeley Extension, Education Therapy Program and JFK University Graduate program in psychology. Dr. Stewart is a frequent presenter at local and national seminars and has appeared on both radio and television programs on the subject of neurocognitive disroders. Dr. Stewart's first book, with Harginger Press, *A parent's Guide: Helping a Child with Nonverbal Learning Disability or Asperger's Syndorme*, was released in 2002. The second edition will be released in August 2007.

Antonio Hardan, MD

Assistant Professor, Department of Psychiatry and Behavioral Sciences, Stanford University

Developmental Abnormalities in Brain Structures in Autism Spectrum Disorders

Structural imaging studies in autism spectrum disorders have found a variety of morphometric alterations involving several brain structures including brain size, cerebellum, hippocampus, amygdala, and corpus callosum. The most replicated finding is related to increased cerebral volume which is consistent with head circumference studies observing increased head size and macrocephaly in autism. These findings are the most consistent neurobiologic abnormalities in autism and suggest that brain enlargement may be a biologic marker for this disorder. Brain size alterations appear to be the consequence of grey and white matter enlargement and seem to be more evident in children than in adults. This age-related observation has emphasized the developmental abnormalities of brain structures in autism and has highlighted its complexity. However, these challenges appear to offer a unique opportunity to examine the neurobiologic underpinnings of structural abnormalities in autism spectrum disorders with the hope of shedding more light on their pathophysiology and consequently the development of effective treatment strategies.

Dr. Hardan is an Assistant Professor of Psychiatry in the Department of Psychiatry and Behavioral Sciences at Stanford University. He is also Director of the Autism and Developmental Disabilities clinic at Stanford University. Prior to his move to Stanford University, Dr. Hardan was an Assistant Professor of Psychiatry at the Western Psychiatric Institute and Clinic at the University of Pittsburgh School of Medicine where he also completed his fellowship in Child and Adolescent Psychiatry. He earned his medical degree from St Joseph University, Beirut, Lebanon where he also did his internship in psychiatry. He has been practicing psychiatry since 1988.

He is the recipient of numerous awards including The John Romano Award, University of Rochester in 1993; The Marie H. Eldredge Award, American Psychiatric Association in 1996; and the Henderson prize, Western Psychiatric Institute and Clinic, University of Pittsburgh.

Dr. Hardan has authored over 30 clinical papers in ASD. He is principal investigator in several clinical trials involving the developmental neurobiology of autism. Dr. Hardan is a co-principal investigator in several clinical trials examining the efficacy and safety of the atypical antipsychotic Aripiprazole and Donepezil in the treatment of children and adolescents with autism.

Irva Hertz-Picciotto, PhD, MPH

Medical Investigation of Neurodevelopmental Disorders (M.I.N.D.) Institute, UC Davis

Environmental Risk Factors and Genetics of Autistic Spectral Disorders

This presentation will be in two parts. In the first part of her presentation Dr. Hertz-Picciotto will address if the prevalence of autism truly is rising or have we simply become more aware of and better able to diagnose this developmental disorder? Data from the California Department of Developmental Services system of Regional Centers will be used to address time trends since the early 1990s. Results from various epidemiologic approaches, including cumulative incidence and age-specific incidence, will be presented, and comparisons to certain published claims about recent trends will be made. In the second half, she will talk about some of the findings from the CHARGE (Childhood Autism Risks from Genetics and the Environment) Study. She will report on differences among children with autism, children with developmental delay, and children with typical development in relation to immune system dysregulation, environmental chemicals, and genomic analyses of RNA, and outline areas of need for future research.

Irva Hertz-Picciotto, Ph.D., Professor, is an internationally renowned environmental epidemiologist who received her BA in mathematics, MA in biostatistics, and PhD/MPH in epidemiology from the UC Berkeley. During 12 years on the faculty at the University of North Carolina, Chapel Hill, she published widely on environmental exposures, including metals, pesticides, PCBs, and air pollution, and their effects on pregnancy and early child development. She is also a foremost expert in epidemiologic methods. Now in the UC Davis Department of Public Health Sciences, she directs several large studies funded by the NIH (National Institutes of Health) on environmental hazards to immune and neurobehavioral development in young children. One of these is the CHARGE study (Childhood Autism risk from Genetics and the Environment), which is examining the interaction between genetic susceptibility and environmental agents in relation to the development of autism. Dr. Hertz-Picciotto has been elected president of two major epidemiology societies (Society for Epidemiologic Research and International Society for Environmental Epidemiology), currently serves on scientific advisory boards for the U.S. Environmental Protection Agency (EPA) and the National Institute for Occupational Safety and Health (NIOSH), and previously held appointments on the Governor's Carcinogen Identification Committee for the State of California, the Board of Scientific Counselors of the National Toxicology Program and the Scientific Advisory Panel for the Interagency Coordinating Committee on Autism Research. She is author of over 150 papers, and sits on editorial boards for the *American Journal of Epidemiology*, *Environmental Health Perspectives*, and *Epidemiology*. In 2000 and 2002, Dr. Hertz-Picciotto chaired the U.S. Institute of Medicine/National Academy of Sciences Committees on the Health Effects in Vietnam Veterans of Exposure to Agent Orange and other Herbicides. She directed the program in Reproductive Epidemiology at UNC Chapel Hill and is the Deputy Director of the Center for Children's Environmental Health at UC Davis. She won the coveted Abraham Lilienfeld Student Prize award by the Society for Epidemiologic Research for her own dissertation, taught courses on four continents, was awarded the Bernard Greenberg Award for Excellence in Teaching, and has mentored over 50 doctoral students.

Joachim Hallmayer, MD

Psychiatry and Behavioral Sciences, Stanford University

Autism is a Complex Genetic Disorder

An abstract of Dr. Hallmayer's presentation will available at a later date on the GETA Webpage ***www.ems-us.org/GETA****.*

Dr. Hallmayer is an Associate Professor of Psychiatry in the Department of Psychiatry and Behavioral Sciences at Stanford University. Dr. Hallmayer received his medical degree from the University of Cologne, Germany. Dr. Hallmayer's research centers on psychiatric genetics. He is principal investigator on a project which is facilitating the discovery of the genes that contribute to autism by maintaining an infrastructure which research groups studying the genetics of autism can work collaboratively. This is accomplished through workshops, a Virtual Private Network, and access to a database that includes phenotype and genotype data from all participating groups. He is also principal investigator for a California Population-Based Twin Study of Autism. This project addresses several fundamental questions: (1) What is the heritability of autism?, (2) What is the contribution of genetic factors to variation in symptom dimensions? (3) Is there a continuum between the quantitative neurocognitive traits and clinical disorder? (4) What proportion of the variance in the neurocognitive traits is accounted for by genetic and non-genetic factors?

Dr. Hallmayer has published over 100 scientific papers in the genetics of psychiatric disorders and is the recipient of many awards including Young Investor Award from National Alliance for Research on Schizophrenia and Depression in 1991. He is an elected Fellow of the German Research Association Deutsche Forschungsgemeinschaft (German Research Foundation) in 1989.

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	2005	Tom McDonald
1988	Ann Burrell	1997	Rob Scofield	2006	Inge Ivens

GETA WEBPAGE
SOURCE OF INFORMATION FOR MEMBERS!

Be sure to check out the GETA webpage to find information on upcoming meetings, reviews of past meetings, registration and membership forms, pdf copies of past Newsletters, useful links and more! Send suggestions or feedback to GETA Web Officer Pamela Lee at **pamela.lee@sri.com**.

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

www.ems-us.org

then choose **News & Resources** and **Powerpage**, and click on the link for **GETA**. While you're at it, peruse the EMS page and consider attending the next annual meeting in Atlanta, Georgia or better yet, join EMS!

New Schedule for GETA Membership Dues

The GETA Board recently voted to change the date when membership dues are due from the anniversary of the date paid to January 1st of each year, similar to the practices of other societies. This will greatly simplify our Treasurer's and Membership Officer's work. Current members with dues due within the next 3 years may be pro-rated initially, until all members are on a January to December membership year. Memberships will still be available in 1, 2, or 3-year increments, depending upon just how much money you want to save!

Check your mailing label on this Newsletter for when your dues are due. If it says **"Expired - Renew Now!"**, please consider renewing along with your meeting registration.

Questions? Contact GETA Membership Officer Drew Olaharski at **andrew.olaharski@roche.com.**

UPCOMING NATIONAL MEETINGS

Environmental Mutagen Society (EMS)

38th Annual EMS Meeting
October 20-24, 2007
Atlanta, Georgia
www.ems-us.org

Society for Risk Analysis (SRA)
December 9-12, 2007
San Antonio, Texas
www.sra.org

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 on the left side of the screen, members can post messages, list files, create polls, etc. It's easy and best of all it's free. Using the "Members" link, 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**.

2007 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**	**E-Mail**
President	Amy Arcus-Arth	510-622-3199	aarcus@oehha.ca.gov
President-Elect*	Lida Antonian	925-330-8220	lidaant@comcast.net
Past President	Inge Ivens	510-705-4204	ingeivens@aol.com
Secretary	Linda Rausch	650-859-5008	linda.rausch@sri.com
Treasurer	Bob Baldwin	408-245-6912	DrBob@iname.com
Newsletter Editor	Linda Rausch	650-859-5008	linda.rausch@sri.com
Membership Officer	Drew Olaharski	650-855-6569	andrew.olaharski@roche.com
Web Officer	Pamela Lee	650-859-6739	pamela.lee@sri.com
Steering Committee			
At-Large	Hanna Ng	650-859-3676	hanna.ng@sri.com
Business	Tom McDonald	510-705-5195	mcdonaldpartyof4@yahoo.com
University	Adrian Rodriguiz	408-924-4846	rodriga@email.sjsu.edu
Government	Steve DiZio	916-255-6634	sdizio@dtsc.ca.gov
Student/Postdoc	Rebecca Erickson	650-859-2049	rebecca.erickson@sri.com
Student/Postdoc	Sunoz Soroosh		

Northern California Chapter of the
SOCIETY FOR RISK ANALYSIS NCCSRA

Established 1 May 1986

REGISTRATION FORM
GETA / NCCSRA Spring Symposium
May 10, 2007
Alumni House, UC Berkeley

NAME: _____

Address: _____

_____

City: _____State: _____Zip: _____

Phone: _____ Home Office Mobile (Circle one)[a]

Email: _____

GETA Member? Yes No (circle one)[a]

Do you wish to start or renew a GETA membership? Yes No (Circle one)[a]

Membership dues: 1 yr (through Dec 2007) $15
2 yr (through Dec 2008) $25 (save $ 5!)
3 yr (through Dec 2009) $35 (save $10!)
TOTAL Membership Fee: $_____

Meeting Registration (includes a sandwich and a drink)

Member: $45 (Current GETA or NCCSRA members or those who have signed up or renewed above).
Non-member: $55
Student/Postdoc: $30
TOTAL Registration Fee: $_____

TOTAL FEES (registration +/- membership) included with this form (or to be paid at the door)
$_____

Circle your lunch choices below

- Sandwich choice: artichoke heart, avocado feta, eggplant, grilled chicken, roast beef, baked ham
- Beverage choice: Coke, Diet Coke, 7-Up, bottled water, Hansen's

PLEASE NOTE: If you make a reservation, and do not cancel it by the deadline of 12 noon March 8, 2007, you will be expected to pay the registration fee that you indicated above.

Please complete a separate copy of this form for each registrant. Either attach each to an email, and send to: **rsvp2geta@bigfoot.com**

or you may mail this form accompanied by a check for the total amount indicated above to:

GETA
c/o 991-C La Mesa Terrace
Sunnyvale, CA 94086-2416.

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a. Circle your choices if you are submitting a hard-copy. Delete "non-choices" if returning via email**.**

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	_____

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

GETA Membership
c/o Drew Olaharski
3431 Hillview Ave, A5-2
Palo Alto, CA 94304

Phone: 650-855-6569
E-mail: andrew.olaharski@roche.com

GETA Newsletter
c/o Linda Rausch
SRI International PS-395
333 Ravenswood Ave
Menlo Park, CA 94025

DUES REMINDER

Check the upper right corner of your mailing label for your dues expiration date. If it says

"EXPIRED - RENEW NOW!"

then please take a minute and send in your dues. You will be removed from the mailing list for the next newsletter if your dues is not current. Don't risk losing contact with GETA!