

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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March Dinner Meeting Human Embryonic Stem Cells Progress and Promise

– Dr. Thomas B. Okarma –

Abstract

Human embryonic stem cells offer the potential to serve as starting material for the manufacturing of limitless quantities of virtually every cell and tissue of the human body. Such tissue can be used to (1) study early human developmental biology, (2) unravel the genetic control of differentiation, (3) provide human cells for drug screens and disease models, and (4) generate cells and tissues for transplantation to humans. In order to achieve these potentials, much fundamental biology unique to human



embryonic stem cells must be defined. This talk will summarize Geron Corporation's program to date on unlocking the therapeutic promise of human embryonic stem cells.

Biography

Thomas B. Okarma, Ph.D., M.D. was appointed President and Chief Executive Officer of Geron Corporation in July, 1999. Dr. Okarma served as Geron's Vice President of Research and Development from May 1998. From December 1997 until May 1998, Dr. Okarma was Vice President

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February Dinner Reminder

Join Juanita Ryan as she presents her meteorite research experience in the Antarctica (tea.rice.edu/tea_ryanfrontpage.html). Her presentation will be held at the Biltmore Hotel and Suites in Santa Clara on Thursday, February 20th. The evening will start with social hour at 6:00 pm, dinner at 7:00 pm, and the presentation at 8:00 pm. Dinner selections include Chicken Monterey or Penne Pasta. Please make your reservations by February 17th, online (www.scvacs.org) or by contacting Shirley Radding (408-246-2564, 408-296-8625 FAX). Please include your name, company affiliation, number of people in your party, and dinner selection when you make your reservation.

If you are unable to honor your reservation, you will be invoiced following the dinner meeting. To attend the lecture only, no reservations are needed.

See you there!

March Dinner Meeting

Date: March 13, 2003

Time: 6:00 Social hour
7:00 Dinner
8:00 Lecture

Location: Biltmore Hotel & Suites
2151 Laurelwood Road
Santa Clara, CA 95054
408-988-8411

Speaker: Dr. Thomas Okarma
Geron Corporation
Human Stem Cell

Cost: \$27.00
Choice of Chicken Romano (grilled chicken breast with pasta primavera) or Cheese Tortellini

Reservations: www.scvacs.org
Shirley Radding
408-246-2564
408-296-8625 Fax

Reservations should be made by March 10th, stating attendee names, company affiliation, address, number in party, and menu selection.

If you are unable to honor your reservation, you will be invoiced following the dinner meeting. To attend the lecture only, no reservations are needed.

Human Stem Cell, continued from front page
of Cell Therapies at Geron. Prior to joining the Geron Corporation in 1997, Dr. Okarma was a senior Vice President at Rhone-Poulenc Rorer. In 1995, Rhone-Poulenc Rorer acquired Applied Immune Sciences, Inc. (AIS) which was founded by Dr. Okarma in 1985. By the time of its acquisition by Rhone-Poulenc Rorer, AIS was in advanced cell therapy human clinical trials in cancer and bone marrow transplantation and in early gene therapy human trials in breast cancer. Dr. Okarma was Chairman and Chief Executive Officer of AIS from 1991 until its acquisition. Prior to founding AIS, Dr. Okarma was a member of the faculty of the Stanford University School of Medicine where he also received both his Ph.D. and M.D. degrees. He is the author of over 50 peer-reviewed publications on cell and gene therapy and is an inventor on numerous patents in the field.



Chair's Message

At the request of one of my SJSU colleagues, I accepted an invitation to assist 48 fifth grade students at Carden El Encanto Day School in Santa Clara in investigating the intensities of glow sticks at different water temperatures. What a rewarding experience! These students were so excited and engaged as they observed their glow sticks' intensities change in hot water, room temperature water, and ice water. Afterwards, the students asked a lot of "how" and "why" questions regarding chemluminescence. We even discussed



bioluminescence reactions in certain types of jellyfishes. The students were also curious about careers in chemistry and asked about the types of college degrees and experiences required to be a chemist. My colleague called me the next day and told me that these students had already asked her when the "chemistry professor" would return for more investigations!

For many complicated and convoluted reasons, there is far too little chemistry taught at the elementary and middle school levels. To observe these enthusiastic fifth grade students, you would think otherwise. An outreach investigation such as the glow sticks in different water temperatures is one simple activity that begins to bridge this gap. And, it only takes one hour of your time (with two parent assistants).

If you are interested in conducting this glow stick investigation with fourth through eighth grade students at your neighborhood elementary and/or middle school, ACS-SCV will provide you with the glow sticks, demonstration instructions, and student worksheets. You will need to provide the cups, thermometers (non-Hg), water and ice. If you are interested, please e-mail me (scharbrg@pacbell.net).

Here are some other notes of interest for February 2003. If you are planning to attend the Spring 2003 National ACS Meeting in New Orleans, now is the time to register and to make your travel arrangements. This meeting will begin on Sunday, March 23 and end on Thursday, March 27. If you have any questions or concerns regarding ACS business, please contact one of your ACS-SCV Councilors. Their phone numbers and e-mail addresses are listed on the back page of this newsletter and on our web site.

Looking ahead to March 2003 dinner meeting, please mark your calendar now to attend our dinner meeting on Thursday, March 13, at the Biltmore Hotel in Santa Clara. Dr. Okarma's presentation on stem cell research will be very interesting and informative. I hope to see you there!

Biological Chemistry Division

Vern L. Schramm, Chair

The Division of Biological Chemistry has its research and scientific interests at the border of chemistry and biology. Our size is approximately 6,400 members, and continues to grow each year because of broad interests overlapping into biotechnology and medicinal chemistry.

The Division meets with National ACS meetings once a year, at the Fall National Meeting. Our next meeting will be in New York, September 2003. The ACS publication most closely aligned with the research interests of the Division is BIOCHEMISTRY, but our members publish regularly in the Journal of the American Chemical Society, the Journal of Organic Chemistry, and the Journal of Medicinal Chemistry.

The Secretary of our Division is Professor John Richard, Professor of Chemistry, SUNY Buffalo. The Past President is Professor Richard Wolfenden, Dept. of Biochemistry, University of North Carolina, Chapel Hill and our President Elect is Professor Richard Armstrong, Professor of Biochemistry, Vanderbilt University School of Medicine.

The Division publishes two newsletters each year, and can be found on the Divisional web site (lysine.pharm.utah.edu/acsbio/acsbio.html) together with other useful links to ACS sites, recent issues of the newsletter in pdf format, and various national biological chemistry graduate programs. Many of the members in the Division of Biological Chemistry are also members of other Divisions of the ACS. Our annual dues are among the lowest of the Divisions at \$6 per year. We welcome members from all Divisions with an interest in biological chemistry and related disciplines. Application forms are found on the web site, and are also available to ACS members at the time of annual membership renewals.



CALL FOR NOMINATIONS Shirley B. Radding Award

The Santa Clara Valley Section of the American Chemical Society (ACS) announces the call for nominations for the 2003 Shirley B. Radding Award.

First awarded in 1994 to its namesake, the Shirley B. Radding Award annually honors someone who has been a member of the ACS for at least 20 years. Nominees must have demonstrated dedicated, unselfish leadership with service and significant contributions over a sustained period of time to industrial, applied or academic chemistry and to the American Chemical Society through elected or appointed positions at local, regional and national levels.

The award consists of an honorarium of \$1,000 and a suitably inscribed memento. Nominations should consist of at least one letter of nomination stating how the nominee's work relates to all aspects of the award. It is recommended that seconding letters accompany the nomination.

Nominations are due on or before April 1, 2003, and must be mailed to:

Radding Award Committee

Santa Clara Valley Section, ACS
Post Office Box 395
Palo Alto, California 94302

Editor's Corner

Did you know that the Santa Clara Local Section is over 3,000 strong? Considering its strength, I am sure a few might be interested in the Golden Gate Polymer Forum (GGPF) and the Thermal Society (NATAS) 2003 Symposium and Short Course Series. From March 3-5, the event will be held locally in Mountain View with analytical topics for polymers and pharmaceutical applications. The invited list of speakers is impressive! Space is limited and early registration is recommended (prior to Feb 10th). For

more information and to register, visit the GGPF website at www.ggpf.org.

Also, are you interested in seeing what the ACS is doing in the governmental realm? Check out the ACS Legislative Action Center at <http://capwiz.com/chemical/home/>. This site will identify your elected officials, provide information on key issues, and allow you to send a letter or e-mail message to your legislators with a few clicks of your mouse.

Thanks again for reading the newsletter. Any comments or submissions are encouraged.

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ACS History Book Published

The American Chemical Society at 125: A Recent History 1976-2001, was published in August 2002 as an addendum to the centennial history of 1976. The book was distributed at no cost to members of the ACS Council, chairs of local sections and divisions, and other interested members. A substantial portion of the book will be posted on the ACS web site (chemistry.org), where it is hoped the site will eventually become an expanded repository for the histories of local sections and other ACS bodies.

Featuring the work of 45 member and staff contributors, the publication brings to completion the observance of the ACS 125th anniversary. To request a free copy of the book, contact the ACS Office of Society Services, 1-800-227-5558. For more information, please contact Frank Walworth in the ACS Secretary's Office, 202-872-6070; e-mail f_walworth@acs.org.

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PATENT TRUTHS Kid Stuff

1. MONOPOLY®, the classic board game, was copyrighted in 1934 and patented on December 31, 1935 by Charles B. Darrow of Germantown, Pennsylvania (U.S. patent No. 2,026,082). Parker Brothers had already turned him down.

The street names and other places are taken from sites in Atlanta City, New Jersey – the familiar, popular family beach resort. So in the middle of the Great Depression, he had 5,000 games assembled – by hand. They sold out quickly at Wanamaker's Department Store in Philadelphia. Darrow couldn't keep up with the demand, so he went back to Parker Brothers – and the rest is history. Over 200 million games have been sold worldwide.

<http://www.monopoly.com/pl/page.history/dn/default.cfm>

2. Barbie® was created by Ruth Handler in 1957. She and her husband Elliott, a Stanford MBA, had founded Mattel Toy Company in El Segundo, California. In 1959, the first year of sale, almost 400,000 Barbie® dolls were sold for \$3.00 each.

Mattel almost went bankrupt in 1974. Ruth and Elliott Handler were fired when she was indicated for securities fraud (deja vu – all over again). Yet, Barbie® has prospered. Unfortunately, the Barbie® Doll Hall of Fame in Palo Alto is now closed for lack of space.

<http://www.barbie.com>

3. LEGO® was created by Ole Kirk Christiansen and his son Godtfred (age 12) in 1932 in Bellund, Denmark. The original LEGO's were wooden. The LEGO® company in 1947 was the first company in Denmark to use a plastic injection-molding machine. LEGOLAND® opened in 1968 in Bellund, Denmark. Billions of the interlocking toys have been produced over the past 70 years. The Christiansen family has become one of the wealthiest in Denmark.

<http://www.lego.com/eng/info/history/1932.asp>

4. The ERECTOR SET was created by A. E. Gilbert in 1913. Gilbert was born in Salem, Oregon in 1884. He had a gift for magic and was a brilliant student, eventually graduating from the Yale Medical School. He never practiced medicine. Gilbert also had a talent for athletics; he competed in the 1908 Olympics in London and won a gold medal in the pole vault.

Inspired by the construction next to the railroad going into New York City, he created the ERECTOR SET. By the time of his death in 1963, he had issued over 150 U.S. patents. Gilbert was also the creator of the classic Gilbert Chemistry Set.

<http://web.mit.edu/invent/iow/gilbert.html>

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Helen M. Free Award for Public Outreach

The time has arrived to submit nominations for the Helen M. Free Award for Public Outreach. Any ACS member whose efforts have increased the public's awareness and understanding of the importance of chemistry or chemical engineering is eligible for the award. Go to the Committee of Public Relations and Communications web page for all of the details:

<http://chemistry.org/committees/cprc.html>

Nominations are due March 1, 2003 and should be mailed to:

Office of Communications/CPRC Liaison
AMERICAN CHEMICAL SOCIETY

1155 Sixteenth Street, NW

Washington, DC 20036

Tel: (800) 227-5558 ext. 4400

Fax: (202) 872-4370

If you have any questions or concerns please feel free to call or email Allison Byrum at (800) 227-5558 ext. 4400 or a_byrum@acs.org.

Chemjobs Launches

– Feb. 10, 2003 –

Chemical & Engineering News Classifieds & Careers Online (Chemjobs) will launch on February 10, 2003.

This new “one-stop career shop” combines the features of **Jobspectrum.org** — for example, resume posting — with the C&EN online classified ads to provide career resources for both job-seekers and employers. ACS members will be able to view the most recent C&EN classified ads that appeared in the print version of the magazine; non-members will be able to view them after two weeks. Chemjobs will be the prime site for “quality jobs and quality chemists” to find each other. Chemjobs will also have an archive of useful career resource information and articles from C&EN and a direct link to ACS Department of Career Services. Stay tuned and log on Feb. 10: <http://www.cen-chemjobs.org>

Thoughts to Ponder...

When you counsel someone, you should appear to be reminding him of something he had forgotten, not of the light he was unable to see.

—Baltasar Gracian



The best leaders are those most interested in surrounding themselves with assistants and associates smarter than they are.

—Amos Parrish



Facts do not cease to exist because they are ignored.

—Aldous Huxley



All who have accomplished great things have had a great aim, have fixed their gaze on a goal which was high, one which sometimes seemed impossible.

—Orison Swett Marden



I don't measure a man's success by how high he climbs but how high he bounces when he hits bottom.

—Gen. George S. Patton

► *The World Famous Chemistry Demonstration gets going at Santa Clara University*

▼ *Dr. Lang and Dr. Showalter's Saturday Chemistry Demonstration audience – standing room only!*



▲ *A typical SCV monthly dinner meeting crowd*



► *Dr. Lang (center) with his 2002 Moshier Award along with Maureen, Jamil, Carol, and Dr. Showalter (left to right)*



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FUTURE MEETINGS

Feb 20	SCV Dinner Meeting <i>Juanita Ryan</i> Experiencing Antarctica
Feb 23-26	Polymorphism in Crystals Tampa, FL ACS Prospectives
Mar 3-5	GGPF/NATAS 2003 Spring Symposium and Short Course Series Mountain View, CA
Mar 9-13	Pittcon 2003 Orlando, FL
Mar 13	SCV Dinner Meeting <i>Dr. Thomas Okarma</i> Stem Cell Research
Mar 23-27	ACS Spring National Meeting New Orleans, LA
Apr (TBD)	SCV Dinner Meeting with Stanford Student Affiliates

For the latest information, please visit
SCV/ACS web site: www.scvacs.org



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