

Identifying Gemstones Are They Real?

Dr. James Shigley

GIA Research
Gemological Institute of America (GIA), Carlsbad, California

DATE: Thursday November 19, 2015

TIME: 6:00 PM Social hour, light appetizers
7:00 PM Presentation

PLACE: Takeda California
10275 Science Center Drive
San Diego, CA 92121

RESERVATIONS: Tuesday, November 17, 2015
www.jamesshigley.eventbrite.com



ABOUT THE SPEAKER:

Dr. James Shigley is a distinguished research fellow at the Gemological Institute of America in Carlsbad, California. Prior to joining GIA in 1982, he studied geology as an undergraduate at the University of California Berkeley, and later received his doctorate in geology from Stanford University. He helps direct GIA's research activities on the identification of diamonds and colored gemstones, and has ongoing research interests in the natural geological environments of gem mineral formation as well as the characterization of gem materials. Dr. Shigley is the author of more than 180 published articles on diamonds and other gemstones in various journals, and has been a well-known speaker on gemological topics to both professional and general audiences on nearly 250 occasions.

ABOUT THE PRESENTATION:

A wide variety of natural, synthetic, treated, and imitation gem materials are available and have a proper place in today's jewelry market. To maintain consumer confidence and fulfill ethical practices, jewelers must correctly identify, appropriately price, and fully disclose information about gemstones to consumers. While many gem materials can be recognized by a trained gemologist, others can present difficulties for detection especially when the synthesis or treatment processes used simulate conditions to which natural gemstones could be exposed in the earth. This presentation will highlight some current gem identification challenges, and will discuss the forensic methods used at GIA to document the properties of gem materials as the basis of their recognition.

CHAIR NOTES

Dear ACS Members:

With fall here, the San Diego Local ACS Section hosted several of its annual events. The Distinguished Scientist Award Banquet took place on October 22nd at the UC San Diego Faculty Club. The Award Committee, chaired by **Tom Beattie**, selected **Dr. Rick Anderson** as the 2015 Distinguished Scientist. His lecture titled, "Development of *in vitro* Diagnostics for Point of Care Applications", chronicled the development of three different medical devices that utilize antibody technology to provide a clinical diagnosis within a few minutes at the point of care. We also honored our ACS Local Section volunteers: **Bill Szabo** earned the Tony Bottone Award for Outstanding Service, **Ryan Smith** earned the Outstanding Committee Chair Award, and **Linda Woods** has earned the Outstanding Chemistry Educator Award. **Tom Beattie** was honored with the ACS Outreach Volunteer of the Year Award - San Diego Local Section.

ChemExpo 2015, our 28th year, was held at Miramar College on October 24th. The event caters to high school students and showcases a wide variety of science being performed in the San Diego community. It is a great forum for sparking enthusiasm in the potential scientists of the future. If you would like to be involved, please contact the organizer, **Paul Bruinsma** (paulb@sandiegoacs.org), to volunteer for next year.

Mark your calendars for these upcoming events:

The November monthly meeting will feature a lecture from **Dr. James Shigley** from the Gemological Institute of America (GIA). His title "Identifying Gemstones: Are They Real?" will address the increasing complexity of artificial gemstones and the forensic methods used to detect them. The event will be held at Takeda San Diego on Thursday, November 19th. Please register at www.jamesshigley.eventbrite.com

The year-end wrap up and holiday party will again be at the Butcher Shop Steakhouse on Thursday, December 3rd. I will summarize the Local Section's activities in 2015, and **Graeme Freestone** will give an introduction for his plans for the San Diego Section of the ACS in 2016. Please register at www.sandiegoacsdec2015.eventbrite.com

Be sure to vote in the ACS Local Section elections for Executive Committee Officers, polls close November 25th. Our last Executive Committee Meeting will be on November 5th. Please join us and share your ideas for what you would like to see from the ACS in 2016.

On behalf of the San Diego ACS Executive Committee, I would like to extend our thanks to the event sponsors, general sponsors, the volunteers and the membership. See the rest of this newsletter for additional information regarding upcoming ACS and other events in the San Diego area.

Best,

Ben Pratt

2015 Chair

American Chemical Society – San Diego Section

E-mail: bpratt@sandiegoacs.org

Web: www.sandiegoacs.org

FREE EVENT ANNOUNCEMENTS FOR NON-PROFIT ORGANIZATIONS!

Does your non-profit organization have an upcoming event that might be of interest to members of the ACS – San Diego Section? If so, please send your announcement to our 2015 Chair, Ben Pratt, at bpratt@sandiegoacs.org. Once approved, Ben will see that your announcement is published on our website (www.sandiegoacs.org) and, if received by the 23rd of the month before the event, in *The San Diego Chemist* newsletter. This is a free service of the ACS – San Diego Section. Take advantage of it!

ATTENTION ADVERTISERS

Did you know that *The San Diego Chemist* is the only monthly e-newsletter that targets chemists and chemical engineers in San Diego and Imperial Counties? As soon as our newsletter is uploaded on www.sandiegoacs.org a separate notification is sent to the **2,400 members** of the ACS-San Diego Section, each potential customers for your products and services! **Quick turnaround:** Ad copy submitted by the 23rd of each month will be published by the end of that month. For more information, please contact: Renate Valois, renate@sandiegoacs.org.

THE SAN DIEGO CHEMIST, the official newsletter of the San Diego Section of the American Chemical Society, published on a monthly basis, can be viewed at <http://www.sandiegoacs.org/newsletter/>.

All contents are published at the discretion of the Section's Executive Committee. Events of interest to chemistry professionals in the community may be included in the events calendar as space permits and are subject to editing for brevity. Advertisements and announcements from the chemistry community are accepted at published rates. The deadline for items submitted is **the 23rd of the month** for publication by the end of that month.

Advertisers: Ad prices as of January 1, 2015:
Size (w x h) Number of Issues & Price/Issue

	1	3	6
2" x 3"	\$ 75	\$ 68	\$ 58
4.5" x 1.5"	\$ 80	\$ 74	\$ 67
4.5" x 4.75"	\$200	\$184	\$163
8.5" x 5.5"	\$400	\$360	\$310
full page	\$655	\$590	\$510

Discounts will be available for issues not shown
Please send your jpg to:

Renate Valois at renate@sandiegoacs.org.

Make checks payable to:

American Chemical Society and mail to:

Bill Szabo, Treasurer
3950 Mahaila Avenue, B-36
San Diego, CA 92122

SECTION E-MAIL LISTSERVER!

Get up-to-the-minute reminders of local events and develop dialogs with your fellow members!

To subscribe to our moderated listserver:

1. Send an e-mail with SUBSCRIBE TO LISTSERVER in the subject line, and your name and e-mail in the body of the message to Ken Poggenburg at jkp135@att.net.
2. If you receive a message from the postman, reply to confirm that you wish to be added to the list, otherwise it will not take effect.
3. You will receive reminders approx. 5-7 days prior to upcoming events and messages of general interest to members.
4. To post topics for discussion, or informational items to the listserver members, send the message to sandiego-chemist-l@ucsd.edu.
5. If the moderator approves the post, it will be sent to the members.

NOTE: That is the letter "l", not the number "one" following the word "chemist".

Executive Committee Meeting Date 2015

6:00 – 8:00 pm

Thursday, November 5

Meeting will be held at:

9381 Judicial Drive, Suite 160
San Diego, CA 92121



SCHRÖDINGER

W&R

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PROFESSIONAL CORPORATION



The San Diego Section of the American Chemical Society would like to thank our Corporate Sponsors. Here are a few examples of our annual outreach programs that are made possible by their generous donations:

Mad Science - Stage demonstrations for 4th and 5th graders which make science fun for kids! Last year the program was viewed by over 8000 students in low-income areas and from military families.

ChemExpo - A science event for middle and high school students held annually for the past 28 years. It features live stage demonstrations and interactive booths that teach kids about applied science. Last year over 1000 local students participated!

Monarch Elementary School Program - This unique school accommodates children who are impacted by homelessness, and who would otherwise have little or no exposure to hands-on science.

EarthFair - We participate in the world's largest free annual environmental fair, held in Balboa Park.

CONSIDER SPONSORSHIP OF THE ACS SAN DIEGO SECTION

The San Diego Section of the ACS is looking for organizations that are committed to advancing science and education in the greater San Diego area by providing financial support. There are several ways to get involved and each one comes with its own benefits and privileges.

For further information please contact: **Gulin Erdogan**, Chair, Fundraising Committee, gerdogan@sandiegoacs.org

VOLUNTEER OPPORTUNITIES

MAKE A DIFFERENCE!

Share your passion for chemistry with others. We've organized many ways for you to promote chemistry to children within your community, and to lawmakers. Explore to find opportunities that fit your interests and schedule!

BE A CHEMISTRY AMBASSADOR - <http://www.acs.org/content/acs/en/volunteer/chemambassadors.html>

VOLUNTEER WITH KIDS & CHEMISTRY - <http://www.acs.org/content/acs/en/education/outreach/kidschemistry.html>

ORGANIZERS NEEDED!

The San Diego Section of the American Chemical Society is looking for volunteers to organize an **ACS Western Regional Meeting**. Exact dates are flexible and yet to be determined, but it will be held between 2018 and 2020. We are currently looking to fill the positions of General Meeting Chair and Program Chair(s). If you are organized, work well with others and want to expand your professional network to a national scale, you may be a great fit for either of these positions. The **General Meeting Chair** will be responsible for overseeing the planning of the meeting venue and logistics while the **Program Chair(s)** will fill events and speaker lists. Location, duration and desired attendance are based on the vision of the organizers. If you have an idea for a large meeting held here in San Diego, this is your way to make it happen.

For more information please contact:

Ben Pratt, 2015 Chair
San Diego Section of the American Chemical Society
bpratt@sandiegoacs.org

ACS PUBLICATIONS LAUNCHES MOBILE-OPTIMIZED WEB PLATFORM

ACS Publications has introduced **ACS2Go**, pubs.acs.org/acs2go, a new, mobile-optimized website that enriches the reading and browsing experience for readers of ACS content.

Mobile pairing technology provides authorized users from subscribing institutions with on-the-go access to the entire content of the ACS Publications web platform. That includes more than 1 million scientific journal articles, the full collection of ACS eBooks, C&EN Archives, and the ACS Style Guide, all via a mobile-optimized interface. ACS members can also access their personal subscriptions on this platform.

ACS2Go can be accessed at pubs.acs.org on a tablet or smartphone. A brief video, a highlight of features and functionality, and frequently asked questions are available at: pubs.acs.org/acs2go.

ACS ELECTIONS ARE HERE!

Voting will be done electronically using your e-mail address on record with the ACS. If you wish to receive a paper ballot instead, please call or email **Jackie Trischman**, Election Coordinator, at **858-414-3323** or trischma@csusm.edu, by **Monday, November 2nd**, and leave your name and mailing address. You will be mailed a paper ballot.

If you do not request a paper ballot, you will receive instructions on how to vote via e-mail. Please be sure your e-mail address on file with the ACS is current! To update your e-mail address with the ACS, use www.chemistry.org

EXECUTIVE COMMITTEE CANDIDATES FOR 2016
ACS SAN DIEGO SECTION
CANDIDATE BACKGROUNDS

CHAIR-ELECT OPEN

SECRETARY

WILLIAM TOLLEY

Bill earned a B.S. and M.S. in Metallurgical Engineering from the University of Utah and a Ph.D. in Inorganic Chemistry from the Brigham Young University. His research focused on the interactions of inorganic compounds with supercritical fluids. This work led to a patent describing novel processing to purify metals using vapor-phase chemistry. He worked for seven years as Production Manager, and then promoted to Director of Quality Assurance at Quantum Group Inc. in San Diego.

In 2008, he joined Seacoast Science, Inc., located in Carlsbad, CA. He led development of the Mini-GC, which was successfully launched in August 2009. His responsibilities include sensor design and testing, and proposal development. In 2007, he chaired the subgroup to write new alarm certification protocols under UL 2035 - Single Station Gas Detectors. He is a member of the American Chemical Society, where he is a member of the San Diego Section executive committee and in his twelfth year as Secretary to the Section. He is a lifetime member of Sigma Xi (The Scientific Research Society). He has authored or co-authored 26 U.S. patents and over 75 journal articles and presentations in chemical sensing, process control and materials production.

TREASURER

BILL SZABO

Bill received his undergraduate degree in chemistry from Lehigh University, worked for two years as an R&D chemist at Johnson & Johnson's McNeil Laboratories near Philadelphia, and earned his Ph.D. degree in heterocyclic and medicinal chemistry from the University of Florida. He held a two-year postdoctoral fellowship in natural product synthesis at Wesleyan University with Professor Max Tishler, former President of Merck Research Laboratories and a past ACS President.

Next, Bill was recruited by Alfred Bader, co-founder of the Aldrich Chemical Company, and worked for 18 years at Aldrich in Milwaukee in various management positions in R&D, production and advertising. He then relocated to the Sigma-Aldrich corporate headquarters in St. Louis and spent four years in the sales and marketing of bulk pharmaceutical intermediates, positions which included Sales Director for North America and Vice President of International Sales.

In 1998 he took an early retirement, moved to San Diego, and consulted for the next 14 years in drug and business development. In 2012 he co-authored a chapter in a book on transition metal-catalyzed asymmetric cross-coupling reactions. He is a 38-year member of the AAAS and a lifetime member of the Japan Society of San Diego & Tijuana.

Bill is a 47-year member of the ACS. He served on the Organizing Committee of the 2007 ACS Western Regional Meeting, was Chair of the San Diego Section's Public Relations and Fundraising Committees, and organized the Section's 2009 and 2010 San Diego Science Festival exhibits. Bill was Chair of the ACS-San Diego Section in 2011, for which year the Section received the ChemLuminary Award for Outstanding Performance by a Local Section (Large Size Category). He received the Section's Outstanding Committee Chair Award in 2014 and the Tony Bottone Award for Outstanding Service in 2015. Bill has served as the Section's Treasurer since 2012.

COUNCILOR

TOM BEATTIE

Tom has served as a Councilor in the San Diego ACS Section for the last 12 years and prior (2001-3) was an Alternate Councilor. In 1999, a year for which the Section received the ACS Outstanding Large Section Award, he was Section Chairman.

Currently he is vice chair of the National Senior Chemists Committee and formerly was a member of the National Senior Chemists Task Force (2009- 12) and chair of the ACS National Silver Circle (seniors) Working Group (2005-9). From 2004 to 2012 he was a member of the National Local Section Activities Committee and served as chair of its LSAD subcommittee.

In the San Diego ACS Section he chairs the annual Distinguished Scientist Award Selection Committee (18 years) and was the organizer of the annual San Diego Medchem Symposium (16 years). In 2008 he initiated and continues to manage the Section's quarterly seniors/retirees/consultants/ part-timers breakfasts.

Since 2001 he has managed the Section's educational programs in the schools. Since 2005 the programs have focused on science shows for 4th/5th graders in which >58,000 school children have viewed >300 Mad Science shows. In 2012 this program received a San Diego Science Alliance award.

Tom was the Program Chair of the San Diego ACS Section-sponsored 1995 ACS Western Regional Meeting (WRM), which still holds the record as the largest ACS regional meeting. For the 2007 WRM he was Technical Program Advisor and a session chair.

He received the Section's Outstanding Service Award in 1996, 2005 and 2013 and the 2011 E. Ann Nalley ACS Western Region Service Award. In 2011 he was named an ACS Fellow.

Apart from ACS, Tom spent a 27-year career at the Merck Research Labs in Rahway, NJ working as a medicinal chemist in early stage drug discovery. After retiring from Merck in 1993, he came to San Diego and worked at Amylin Pharmaceuticals and IRORI/ChemRx/Discovery Partners. Since 2001 he has been consulting for many organizations within and outside of San Diego, has taught at UCSD and U. Kansas, and served on several advisory boards. He has a B.S. (U. Pennsylvania), Ph.D. (U. Wisconsin) and was a postdoctoral fellow at M.I.T.

COUNCILOR**DESIREE GRUBISHA**

Desiree is currently an adjunct faculty member in the Department of Chemistry and Biochemistry at California State University, San Marcos. She has worked in Lab QA in Commercial Quality Control at AstraZeneca/Amylin Pharmaceuticals supporting diabetes medicines in the worldwide market. Prior to this, she worked at Amylin Pharmaceuticals in Analytical R&D supporting clinical trial programs for diabetes and severe lipodystrophy. Desiree has been an active volunteer with the San Diego ACS Section since 2004. She has been involved with ChemExpo, YCC and WCC activities, planning committee for the 41st Western Regional Meeting in 2007, and has served on the Public Relations committee. She is currently serving the San Diego Section in the Communications Committee and as a Councilor. Desiree earned a PhD in inorganic chemistry from the University of Wisconsin, Milwaukee, and did postdoctoral research toward novel detection platforms for molecular diagnostics in the Microanalytical Instrumentation Center at Iowa State University.

COUNCILOR**DAVID WALLACE**

David is an experienced medicinal chemist and registered patent agent with over 23 years experience in the pharmaceutical industry. He is founder and president of Wallace Scientific Consulting. WSC provides services to early and clinical stage biotech companies, providing prior art/FTO searches and patent application drafting as well as synthetic and medicinal chemistry expertise in the area of small molecule drug discovery. Current and past companies include Samumed, CyanoTech, AnhWalker Therapeutics, Kemin Pharma, EyeCyte, Rempex Pharmaceuticals, Allylix and Mirable. David was also a Scientific Advisory board member and co-founder of Amalyte, Inc., a Bay area biotech company focusing on the treatment of immune and inflammatory diseases. Amalyte was acquired by Kemin Pharma in 2009. He was previously Principal Scientist at Senomyx, Inc., where he served as chemistry group leader of a team focused on the discovery of agonists to G-protein coupled taste receptors. Prior to Senomyx, David held senior scientific and leadership positions at Chugai Pharma, USA, where he contributed to several multidisciplinary research programs directed toward discovery of novel therapies for cancer, cardiovascular, inflammatory, and metabolic diseases. He is an inventor or co-inventor on numerous issued or pending patents. David holds a Ph.D. in Organic Chemistry from the University of California, Davis. He has been a member of the ACS for 30 years and is currently a councilor of the San Diego Section and member of the ACS National Committee on Economic and Professional Affairs (CEPA).

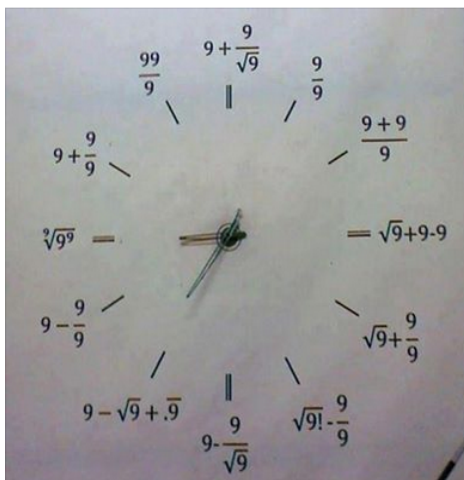
MEMBER-AT-LARGE**OPEN – WRITE IN****MEMBER-AT-LARGE****OPEN – WRITE IN****MEMBER-AT-LARGE****OPEN – WRITE IN**

**VOTE
BY
NOVEMBER 25TH**

Dear Editor,

There was an error in the clock that was posted on page 7 of the October 2015 issue of *The San Diego Chemist*. Can any of your readers find and correct it?

-Bill Szabo



Editor's note: The same clock appears above.

BIOSIMILARS

The San Diego ACS Law Section presented a seminar on Biosimilars on September 17th at the Scintillon Institute. It was great to hear from both an in-house perspective (Diane Retallack, of Pfenex) and an experienced attorney in the field (Vicki Norton, of the law firm Duane Morris).

Dr. Retallack discussed the regulatory issues and commercial processes regarding bringing a biosimilar product to market when a branded product exists. Dr. Norton discussed the legal requirements to meeting the FDA's requirements for bringing a generic biosimilar to market and recent caselaw impacting the requirements.

The attendees ranged from scientists, regulatory affairs specialists, contract manufacturer representatives, patent agents, patent attorneys, and those just interested in the topic. There were about 34 attendees, which was high considering there were competing events to a similar audience at that time. The high interest level could be measured in the number of questions to the presenters following their talks.

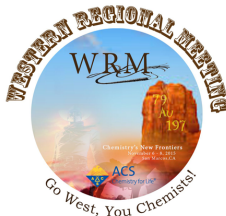
The week after the presentation, an article in *Forbes* was published titled "Biosimilars" and described it as a new buzzword that many will soon be talking about. So the ACS Law Committee is at the forefront of organizing relevant and exciting topics for the local chemistry and legal community.

Many attendees complimented the (1) subject matter presented, and (2) the food. There were many follow up requests for the caterer's contact info (Wild Thyme Catering). The event was sponsored by Harbor Consulting, Inc., a well-known preparer of Sequence ID Listings, which is important to many biotech patent attorneys. The sponsor also sent over several cases of "Wicked Whoopies" (highly caloric cookie-things).



Ryan Smith, Chair, Law Committee

AMERICAN CHEMICAL SOCIETY 45TH WESTERN REGIONAL MEETING (WRM 2015) NOVEMBER 6-8, 2015 SAN MARCOS, CA



For more information, please visit <http://wrm2015.sites.acs.org/>

AN EVENING WITH DR. RICK ANDERSON

Our San Diego ACS Section's Annual Distinguished Scientist Award Banquet was held on October 22nd at the UCSD Faculty Club.

Section Chair **Ben Pratt** gave a brief introduction and overview of Local Section activities and presented awards to: **Bill Szabo**, 2015 Tony Bottone Award for Outstanding Service to the ACS San Diego Section; **Ryan Smith**, Outstanding Committee Chair Award; and **Linda Woods**, Outstanding Chemistry Educator Award. **Tom Beattie** was honored with the ACS Outreach Volunteer of the Year Award - San Diego Local Section. Congratulations to all!

Award Committee Chair, **Tom Beattie**, introduced the 2015 Distinguished Scientist Awardee, **Dr. Rick Anderson**, R&D Director, BD Diagnostics POC, who presented the award lecture "Development of in vitro Diagnostics for Point of Care Applications".



Ben Pratt, Rick Anderson, Tom Beattie



Ben Pratt, Tom Beattie



Ben Pratt, Bill Szabo



Ben Pratt, Linda Woods



Preprandial gathering

**SUMMARY OF SAN DIEGO SECTION
EXECUTIVE COMMITTEE MEETING MINUTES
OCTOBER 1, 2015**

Treasurer's Report – Since last: no revenue added; expenditures: Year-End Wrap-Up - \$1K for deposit; \$21K for sending all 6 councilors to both National Meetings: Awards - \$1450 for cash awards; YTD - \$5400 surplus; total assets \$312K, down ~\$2K from 2014; time to consider budget needs for 2016; Ken Ajayi has volunteered to serve as backup treasurer

Year-End Wrap-Up – Possible menu selections: two hot selections, continue carving station; price \$25 for members, \$15 for students; room reserved beginning at 5:30 p.m.

Law Committee – Sept. 17, speakers: Dr. Vicki Norton, Dr. Diane Retallack, ~30 attendees, good catering, held at Scintillon Institute

Awards Banquet – Event published on Website, Eventbrite is set up to accept registration; BD Diagnostics has reserved two tables for employees

ChemExpo – Event coming together; needing more volunteers; Science Alliance has been advertising this event; ACS Store lean on items appropriate as raffle give-aways; Girl Scouts planning to attend; Miramar College may be able to provide some shade

Nov. Monthly Meeting – Panel discussion has not materialized; working toward Gemological Society on Nov. 19, holding meeting at the facility requires hiring docents; looking for alternate venue

ACS Project SEED – Awardees presented posters at their institutions; suggestion to invite students to present posters during networking portion of Awards Banquet

Local Section Advancement – Letter from National asking for suggestions to reduce administrative requirements and guidelines to reduce legal risks

Long-Term Planning – Alt. Councilor Ruo Steensma will remain to Dec. 31 and replacement can be appointed for 2016

Elections – Still needing nominee for chair-elect, but election will go forward with chair-elect as a write-in

SLAS – Sponsoring mentoring program as part of Jan. 2016 meeting in San Diego; seeking mentors from ACS

Western Regional Meeting 2015 – Little information currently available; call for papers open currently

Next meeting: Nov. 5

ACS-HACH PROGRAMS

ACS-Hach Land Grant Teacher Scholarship

Provides financial support to obtain a chemistry undergraduate degree and chemistry teaching credentials at one of our 72 partner institutions.

Application Period: [Contact participating universities directly for application details](#)

ACS-Hach Post-Baccalaureate Teacher Scholarship

Provides financial support for chemistry graduates with limited work experience to obtain a masters degree in education or teacher certification in chemistry.

Application Period: **February 1st – April 1st**

ACS-Hach Second Career Teacher Scholarship

Provides financial support for chemistry professionals to obtain a masters degree in education or teacher certification in chemistry.

Application Period: **February 1st – April 1st**

About ACS-Hach Programs

[Learn more.](#) Contact us: Email: hach@acs.org

Phone: (800) 227-5558 ext. 8178

**ACS Webinars™
Featured Events**

ACS Webinars® is a free, weekly online event serving to connect ACS members and scientific professionals with subject matter experts and global thought leaders in the chemical sciences. Each session is about 60 minutes, comprised of a short presentation followed by Q&A with the speaker. Live presentations are held on **Thursdays from 2-3pm ET**. Recordings of the webinars are available online to ACS members at <http://acswebinars.org/>.

[From Truth Serum to Anesthesia: The Discovery and Uses of Sodium Thiopental](#)

Thursday, November 5, 2015

[Chemistry of Addiction](#)

Thursday, November 12, 2015

[2015 Drug Design and Delivery Symposium Symposium Schedule](#)

11/19/2015 Prodrugs in Drug Discovery
Visit the site to register for the monthly series:
<http://www.acs.org/content/acs/en/acs-webinars/drug-discovery.html>

[PACIFICHEM 2015](#)

The [2015 International Chemical Congress of Pacific Basin Societies](#)

December 15-20, 2015, in Honolulu, HI.

The deadline for making [hotel reservations](#) is Friday, November 13, 2015.

For more information visit www.pacificchem.org

251ST AMERICAN CHEMICAL SOCIETY NATIONAL MEETING & EXPOSITION

Convention Center

San Diego, CA

March 13-17, 2016

Registration opens December 14!

For more information, please visit:

<http://www.acs.org/content/acs/en/meetings/spring-2016>

2015 ACS REGIONAL MEETINGS

Southeast (SERMACS)	Nov. 4-7	Memphis, TN
Western (WRM)	Nov. 6-8	San Marcos, CA

2016 ACS REGIONAL MEETINGS

CERM	May 18 – 21	Cincinnati, OH
MARM	June 9 - 12	Riverdale, NY
NORM	June 26 - 29	Anchorage, AK
ICS (Specialty)	July 16 - 19	New Orleans, LA
NERM	October 5 - 8	Binghamton, NY
SERMACS	October 23 – 26	Columbia, SC
MWRM	TBD	Manhattan, KS
SWRM	October 10 - 14	Galveston, TX



LOOKING FOR A CHEMIST?

CHEMPLOYMENT IS THE ANSWER!

THE SAN DIEGO CHEMIST

is read by nearly 3000 chemists and biochemists in San Diego and Imperial counties.

A two-month ad costs only \$80.00!

For information contact:

Renate Valois - renate@sandiegoacs.org

CHEMPLOYMENT 776

Position Title

Process Development Scientist

Job Description

Nucelis LLC, an industrial biotechnology company in San Diego, CA, is looking for a full-time Scientist to join the R&D team in the development of industrial purification processes downstream of microbial fermentation, for the production of high value specialty chemicals for use in the cosmetics, food, flavors & fragrances, and biofuel markets.

Summary

- Design and carry out experiments leading to the development and scale up of isolation and purification processes starting from fermentation broth.
- Perform scale-up, scale-down experiments to gain knowledge of isolation and purification processes at scales up to 200L and then transferring the process to contract manufacturing sites.
- Perform and develop analytical tests to measure fermentation metabolites, biocatalyst products and other process related analytes to support development of fermentation and downstream processes. Typical techniques used include HPLC, GC, wet chemical and spectroscopic methods of analysis.
- Evaluate experimental and production data, prepare written and oral technical reports and represent Nucelis at business and scientific meetings.

Description of Company

Nucelis LLC is a pioneering bio-technology company built on a platform of unique, patented technology for optimizing cell structure and function. For more information, please see <http://nucelis.com/>

Requirements

The ideal candidate will have a Ph.D. or equivalent in, Chemistry, Chemical Engineering Biochemistry, Biotechnology, Biochemical Engineering, Biology, or equivalent, with experience in developing industrial scale isolation and purification processes, lab safety/proficiency, etc. Experience with various analytical techniques and equipment such as HPLC, GC, titrations, UV/Vis spectrophotometry and TLC. Experience with HPLC/MS or GC/MS is a plus.

Application Instructions

Nucelis provides an attractive compensation and benefits package that includes medical/dental, 401(k) plan and generous vacation and sick leave. If you enjoy working as part of a team and want to join our dynamic company, please email your résumé to hr@nucelis.com and reference job code: NC020

CHEMISTRY FOR YOU AND YOUR KIDS

STARCH SEARCH!

A major nutrient in the food we eat is carbohydrates. One of the most popular carbohydrates throughout the world is starch. Starch is the major ingredient in bread, potatoes, rice, and pasta. In the activity below, you can use a simple test to see if a food contains starch.

You will need

Safety glasses - Crackers (light-colored) - Rice - Spaghetti - 5 Paper or plastic cups - Masking tape - Tincture of iodine - Tablespoon - Straws - Sheet of white paper - Ballpoint pen - Wax paper

CAUTION:

BE VERY CAREFUL WHEN USING TINCTURE OF IODINE READ AND FOLLOW ALL DIRECTIONS ON THE LABEL WHEN YOU HAVE FINISHED THE ACTIVITY, RINSE OUT ALL CUPS AND THE STRAW AND THROW THEM AWAY THROW AWAY ALL FOOD ITEMS AND WASH YOUR HANDS.

1. Cover your work surface with newspaper. On your sheet of white paper, label three areas as follows: **crackers**, **rice**, and **pasta**. Place a small amount of each food on its area of paper.
2. Place 1 drop of iodine on each type of food. What do you observe? A dark color shows you that the iodine has reacted with starch in the food. Do all these foods seem to contain starch?
3. Use your masking tape and pen to label the cups, 1, 2, 3, and 4. Break a cracker into 4 equal-size pieces. Place one piece in each of your four labeled cups. Add 1 tablespoon of water to cup 1, 2 tablespoons of water to cup 2, 3 tablespoons of water to cup 3, and 4 tablespoons of water to cup 4.
4. Use separate straws to stir and mix your crackers with the water in each cup until the cracker has completely fallen apart and is well mixed with the water.
5. Use a straw to take a few drops from the top of each water/cracker solution. Place 3 drops of each solution on a piece of wax paper as shown. Rinse the straw with water between uses.
6. Ask you adult partner to add 1 drop of iodine to the drops of each solution, on the wax paper. Did the color change in any of the solutions? Did all the colors look the same? What explains the difference in color if you saw any?

Excerpt: "The Best of WonderScience," pg. 149, Delmar Publishers, 1997

LINKS TO STEM

Links to STEM provides enrichment for students in grades 4-8 from schools throughout San Diego. *Links to STEM* introduces the students to a broad spectrum of STEM-related topics and emphasizes the skills necessary to participate on a robotics team. *The time commitment is from 9:00 am - 12 noon, 2 times monthly/every other Saturday at Francis Parker School in Linda Vista.*

Volunteers are needed in the following areas:

- Computer programming
- Scientific experiments, practicing
- Elementary & middle school math
- Robotics competition preparation

Volunteer today to work with students in the *Links to STEM* Program August 2015 -April 2016.

If you are interested please contact Kemi Akinlabi at olakemi.akinlabi@hp.com

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Place your ad in the next issue of
The San Diego Chemist

Please contact Renate Valois at
renate@sandiegoacs.org

Attention Companies!

Do you hire student workers?

If you have open positions in chemistry and biochemistry that would be of interest to college students, such as summer internship opportunities, here is a list of contacts you'll want to keep handy. The people listed below are the faculty advisors of the ACS Student Affiliate groups for all chemistry programs in San Diego County. These professors can get the word out to all chemistry and biochemistry majors at their schools about jobs, career fairs, open houses, etc.

California State University, San Marcos

Jacqueline Trischman
trischma@csusm.edu 760-750-4206

Palomar College

Greg Elliott
gelliott@palomar.edu 858-531-1149

Point Loma Nazarene University

Sara Choung
SaraChoung@PointLoma.edu 619-849-2627

San Diego Mesa College

Dwayne Gergens
dgergens@sdccd.edu 619-388-2609

San Diego Miramar College

Fred Garces
fgarces@sdccd.edu 619-388-7493

San Diego State University (SDSU)

Mikael Bergdahl
bergdahl@sciences.sdsu.edu 619-594-5865

Southwestern College, Chula Vista

David Hecht
dhecht@swccd.edu 619-421-6700x5461

University of California, San Diego

Joe Cribari
jcribari@ucsd.edu 858-822-4055
Gourisankar Ghosh
gghosh@ucsd.edu 858-822-0469
Judy Kim
judyk@ucsd.edu 858-534-8080

University of San Diego

Tammy Dwyer
tdwyer@sandiego.edu 619-260-4030

FUN FOR CHEMISTS

Chemistry Jokes and Riddles

Q: What is the show that cesium and iodine love watching together?

A: CSI

Q: What is the chemical formula for "coffee"?

A: CoFe2

Q: What is the chemical formula for "banana"?

A: BaNa2

Q: Anyone know any jokes about sodium?

A: Na

UPCOMING EVENTS

DR. JAMES SHIGLEY
GIA Research
Gemological Institute of America (GIA), Carlsbad, California
Takeda California
10275 Science Center Drive
San Diego, CA 92121
Thursday November 19, 2015

HOLIDAY PARTY
The Butcher Shop
5255 Kearny Villa Road, San Diego, CA 92123
Thursday, December 3, 2015

SENIORS/RETIREES/CONSULTANTS/ETC. BREAKFAST
Coco's Bakery Restaurant
4280 Nobel Drive, San Diego, CA 92122
Thursday, January 7, 2016, at 9:30 AM

SAN DIEGO FESTIVAL OF SCIENCE & ENGINEERING
FESTIVAL WEEK: March 5-13, 2016
EXPO DAY at PETCO Park: Saturday, March 5, 2016
<https://www.lovestemsd.org/>

251st ACS SPRING NATIONAL MEETING & EXPOSITION
San Diego, California
March 13-17, 2016

THE 62nd ANNUAL GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR
March 15 - 20, 2016
Balboa Park Activity Center (2145 Park Blvd.)
For information please see <http://www.gsdsef.org/>

EARTH DAY - EARTHFAIR 2016
Sunday, April 17, 2016
Balboa Park, San Diego, CA
<http://www.earthdayweb.org>

252nd ACS FALL NATIONAL MEETING & EXPOSITION
Philadelphia, Pennsylvania
August 21-25, 2016

**THE SAN DIEGO SECTION OF THE AMERICAN CHEMICAL SOCIETY
WELCOMES ITS NEW MEMBERS**

Joel Arias
Adam Arroyo
Michael Baude
David Brown
Silvia Calderon
Deyin Chen
Michael Cochran
Melodie Dick
Collin Fischer
Tony Gibson
Adam Grosvirt-Dramen
Natalia Harvey
Heather Hayes

Xia He
Jeff Hernandez
Zhenmin Hong
Gian Itani
John Jaskowiak
Kelsey Krug
Karrie Kwok
Brian Leon
Hiroko Masamune
Quang Nguyen
Michael Nicholl
Joseph Palomba
Michelle Powelson

Derek Price
Alyssa Robbins
Swagat Sahu
Joshua Savage
Chloe Sells
Cassandra Siler
Myoung Song
Sean Toenjes
Qingzheng Wang
Nicole White
Mathew Yanik
Daniel Yarbrough
Yi Rui Zhu

**2015 EXECUTIVE COMMITTEE & COMMITTEE MEMBERS
SAN DIEGO SECTION OF THE AMERICAN CHEMICAL SOCIETY**

EXECUTIVE COMMITTEE

<i>Chair</i>	Ben Pratt, Akarna Therapeutics, bpratt@sandiegoacs.org	(2015)	858-945-7893
<i>Chair-Elect</i>	Graeme Freestone, Dart NeuroScience LLC, gfreestone@sandiegoacs.org	(2015)	858-246-8137
<i>Past-Chair</i>	Mark Tichenor, Janssen Pharmaceuticals, Inc., mtichenor@sandiegoacs.org	(2015)	858-334-8914
<i>Secretary</i>	William Tolley, Seacoast Science, Inc., w_tolley@juno.com	(2015)	858-780-0978
<i>Treasurer</i>	Bill Szabo, bszabo1@san.rr.com	(2015)	858-550-0306

Councilors

Thomas R. Beattie	(2015)	858-587-1210
Hui Cai, WuXi AppTec	(2016)	858-361-8838
Desiree Grubisha, CSUSM	(2015)	858-254-5497
John Palmer, UCSD	(2017)	858-534-5906
Ken Poggenburg	(2016)	760-635-2573
David Wallace, Wallace Scientific Consulting	(2015)	858-638-1866

Alternate Councilors

Paul Bruinsma, Hewlett-Packard Company	(2017)	858-655-8322
Surya K. De, Sanford-Burnham Medical Research Institute	(2016)	858-337-4961
Julann Miller, Waters Corporation	(2017)	800-252-4752 x6802
John Schindler	(2016)	858-353-3943
Jim Shih, Eli Lilly & Co	(2017)	626-826-3561
Ruo Steensma, Steensma Consulting, Inc.	(2016)	858-205-9371

Members-at-Large

Ryan Clark, Inception Sciences, Inc.	(2017)	858-774-2095
Gulin Erdogan, Avidity NanoMedicines LLC	(2015)	619-540-8321
Mark Rosen, Aetheria Therapeutics	(2017)	858-692-0639
Patrick Andrew Staley	(2015)	858-483-4297
Jean Wang, IriSys Inc.	(2015)	858-623-1520

STANDING & SPECIAL COMMITTEES

Award Nomination Committee

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ChemExpo

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Julann Miller, Waters Corporation	800-252-4752 x6802

Communications Committee

Paul Bruinsma, (Chair), Hewlett-Packard Company	858-655-8322
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Desiree Grubisha, CSUSM	858-254-5497
Ken Poggenburg	760-635-2573
David Wallace, Wallace Scientific Consulting	858-638-1866
Renate Valois (Newsletter Editor)	619-692-0638

Education Committee

Haim Weizman (Chair), UCSD	858-534-2963
Joann Um (Co-Chair), Southwestern College	510-823-8637

EarthFair

Julann Miller, Waters Corporation	800-252-4752 x6802
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Finance Committee

Bill Szabo (Chair)	858-550-0306
Tom Beattie	858-587-1210
Graeme Freestone, Dart NeuroScience LLC	858-246-8137

Fundraising Committee

Gulin Erdogan (Chair), Avidity NanoMedicines LLC	619-540-8321
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Government Affairs Committee

Hui Cai, WuXi AppTec (Chair)	858-361-8838
Ken Poggenburg	760-635-2573

Law Committee

Ryan C. Smith, Duane Morris LLP	619-744-2220
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Mad Science Program

Thomas R. Beattie	858-587-1210
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MedChem Symposium

Mark Tichenor (Co-Chair), Janssen Pharmaceuticals, Inc.	858-334-8914
David Wallace (Co-Chair), Wallace Scientific Consulting	858-638-1866

Membership Committee

Mark Rosen, Aetheria Therapeutics	858-692-0639
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Nominations Committee

Jim Shih, Eli Lilly & Co.	626-826-3561
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Picnic Committee

Jim Shih, Eli Lilly & Co.	626-826-3561
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Public Relations Committee

John Schindler	858-353-3943
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Retired Chemists Committee

Ken Poggenburg (Chair)	760-635-2573
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Seniors Breakfasts

Thomas R. Beattie	858-587-1210
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Women Chemists Committee

Gulin Erdogan (Chair), Avidity NanoMedicines LLC	619-540-8321
Abhi Sharma, Drug Delivery Experts	619-807-9044
Jayashree Srinivasan, Accelerate-Research	619-826-8004

Younger Chemists Committee

Jean-François Brazeau (Co-Chair), Celgene	858-882-5263
Corey Anderson, (Co-Chair), Vertex Pharmaceuticals	858-405-4734

Voice Mail – San Diego Section

619-687-5570