

The Floyd Landis Sports Doping Case as Evaluated by a Forensic Analytical Chemist

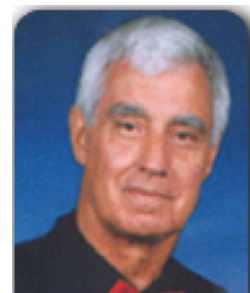
Robert D. Blackledge
Forensic Chemist Consultant, USA

DATE: Wednesday, January 18, 2017

TIME: 6:00 PM Social Hour, Light Meal
7:00 PM Lecture

PLACE: Knobbe Martens Olson & Bear LLP
12790 El Camino Real, San Diego, CA 92130

RSVP: <https://blackledge.eventbrite.com>



ABOUT THE SPEAKER:

Robert D. Blackledge received a BS (Chem.) from The Citadel, Charleston, South Carolina, in 1960 and MS (chem.) from the University of Georgia, Athens, Georgia, in 1962. Starting with the Florida Department of Law Enforcements Tallahassee Crime Lab in 1971, he worked in forensic science for over thirty years. Breaks included eleven years with the U.S. Army Criminal Investigation Laboratory-Europe, and with "Abby's" NCIS Lab from 1989 to 2006. The author or co-author of over sixty journal articles and book chapters, he is the editor of, [Forensic Analysis](#) on the Cutting Edge: New Methods for Trace Evidence Analysis, Wiley-Interscience, 2007.

ABOUT THE PRESENTATION:

Floyd Landis, a professional bicycle racer from Murrieta, California, won the 2006 Tour de France. However, not many days after the race's conclusion, the Laboratoire National de Dépistage du Dopage (LNDD) "announced" (actually the information was leaked to the press) that a urine sample obtained from Floyd after stage 17 had been found to be positive for a form of synthetic testosterone. If this finding were to be upheld, Landis would be stripped of his title and also banned from participation in the sport. Landis denied any sports doping and his strategy in fighting these charges has been to try to generate public support and to make all of the documentation of the LNDD tests available to the public. GC/MS is used by LNDD for preliminary sample screening, and carbon stable isotope ratio mass spectrometry is used for final confirmation. From the standpoint of a forensic analytical chemist with experience in forensic laboratory accreditation standards, this presentation will examine the analytical data and correspondence from the Landis case in terms of: chain of custody requirements; World Anti-Doping Association (WADA) guidelines and LNDD SOP; and reasonable standards of good laboratory practice.

SPONSOR:

CHAIR NOTES

Dear ACS Members,

I am excited to spend 2017 as Chair of the San Diego Section of the American Chemical Society. We have much to be proud of as a Local Section, and I hope to grow our Section's impact during the coming year. I wish to start by thanking our 2016 Chair, **Graeme Freestone**, for his hard work and dedication. It was a privilege for me to watch as he carried the torch for our Section and left us with so much to celebrate at our year-end Holiday Party.

The 2017 executive team includes **Jennifer Barber-Singh** (Chair-Elect), **Bill Tolley** (Secretary), and **Graeme Freestone** (Treasurer). The efforts of these individuals, as well as the efforts of various committee chairs, councilors, alternate councilors, and members-at-large, translate into what will prove to be an eventful year for our membership and for the San Diego community.

Our next Executive Committee Meeting will take place on Tuesday, January 3rd. All members are welcome to attend. This is a perfect place to start if you have ideas for events, interest in volunteering, or just want to pitch in and help our vibrant Local Section. Volunteers are the lifeblood of our Local Section. I thank them in advance for the time and energy they will dedicate during the upcoming year.

The theme for 2017 is Chemistry Everywhere. I hope to emphasize this theme by promoting a variety of monthly meeting topics – forensics, water purification, pharmaceuticals, novel chemical biological techniques, cosmetics, studying ancient artifacts, and so on. Everywhere we look, we see chemistry in action!

In January, we will have Robert Blackledge, forensic chemist consultant, deliver a seminar on the use of forensic analysis to investigate doping in competitive cycling. Later that month, we will embark on a tour of the Carlsbad Desalination Plant. In February, we will host Jie Jack Li, currently a professor at University of San Francisco. He will regale us with the saga of the statin class of cholesterol-lowering agents.

Aside from these and other special events planned throughout 2017, I look forward to our perennial favorites. These include the medicinal chemistry seminars "Academics to Industry", Earth Fair, Mad Science, Seniors Breakfasts, Education Awards Banquet, Family Picnic, 50-/60-Year Member Luncheon, Med Chem Symposium, Chem Expo, Distinguished Scientist Award Banquet, and Holiday Party. I also anticipate events brought to us from the Law, Professional Development, Women Chemists, and Younger Chemists Committees, to name a few.

Finally, on behalf of the Executive Committee of the San Diego Section of the ACS, I wish you a deeply fulfilling holiday season and a happy new year!

Jonathan W. Lockner, Ph.D.
2017 Chair, San Diego Section
American Chemical Society
E-mail: jlockner@sandiegoacs.org
Web: www.sandiegoacs.org

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 2017 Chair, Jonathan Lockner at jlockner@sandiegoacs.org. Once approved, Jonathan will see that your announcement is published on our website (www.sandiegoacs.org) and, if received by the 20th 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 **2,500 members** of the ACS-San Diego Section, each potential customers for your products and services! **Quick turnaround:** Ad copy submitted by the 20th 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 2017

6:00 – 8:00 pm

Tuesday	January	3
Tuesday	February	7
Tuesday	March	7
Tuesday	April	4
Tuesday	May	2
Tuesday	June	6
Thursday	July	6
Tuesday	August	1
Tuesday	September	5
Tuesday	October	3
Tuesday	November	7

Meetings will be held at:

9381 Judicial Drive, Suite 160
San Diego, CA 92121



SCHRÖDINGER.

W&R Wilson Sonsini Goodrich & Rosati
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!

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 Jonathan Lockner at**

jlockner@sandiegoacs.org

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:

Jonathan Lockner, 2017 Chair
San Diego Section of the American Chemical Society
jlockner@sandiegoacs.org

SHARE SCIENCE AS A CHEMISTRY AMBASSADOR

You can help kids learn to understand and love science as a Chemistry Ambassador, and ACS is ready to help you do it. Volunteer with youth groups, summer camps, and scouts in your community. The Chemistry Ambassadors program has tips and resources to support your outreach to your neighbors or students in your area. The Chemistry Ambassadors program makes it easy to stay involved, whether you have a lot of time or just a little. See www.acs.org/chemistryambassadors for more details.

VOLUNTEER WITH KIDS & CHEMISTRY

Kids & Chemistry is a community-based program that brings together scientists and children to do hands-on science activities. Volunteers include ACS members, ACS Student Chapters, and corporate groups. Volunteer efforts can be implemented as a full program administered by an ACS local section or by an individual as a one-time classroom visit. For more information please see:

<http://www.acs.org/content/acs/en/education/outreach/kidschemistry.html>

APPLY NOW TO HOST A PROJECT SEED PROGRAM

The Project SEED Program places economically disadvantaged high school students in academic, industrial, and governmental research laboratories during the summer. Qualified students work with volunteer scientists on supervised chemistry-related science research projects. For additional information on how to participate and host a Project SEED program, visit the Project SEED website at www.acs.org/projectseed, or contact the Project SEED office with e-mail at projectseed@acs.org or by phone at (202) 872-4380. The application deadline is January 31, 2017.

CHEMISTRY JUDGES NEEDED

Judging by professional societies at the Annual Greater San Diego Science & Engineering Fair will take place on Wednesday, March 15th at 12:15 pm in Balboa Park. If anyone is able to help choose exhibits for our Section's chemistry awards or wants more information, please contact Ken Poggenburg at jkp135@att.net.

THE CLAUDE "BUD" LEWIS CARLSBAD DESALINATION PLANT

(Poseidon Water)

DATE: **Wednesday, January 25, 2017**

TIME: **4:00 PM**

PLACE: **4600 Carlsbad Blvd
Carlsbad, CA 92008**



RSVP: <https://desalination.eventbrite.com/>

ABOUT THE FACILITY:

San Diego County is a semiarid region with limited local water resources, relatively small aquifers and no major rivers. In recent decades, the County has relied on imported water from Northern California and the Colorado River to meet more than 80 percent of its water needs. The Claude "Bud" Lewis Carlsbad Desalination Plant is an important component of the San Diego County Water Authority's long-term strategy to improve the region's water supply reliability by diversifying its supply resources. This strategy has allowed the region to reduce its dependence on imported water sources that are vulnerable to droughts, natural disasters and regulatory restrictions. Today, the plant accounts for about one-third of all water generated in the County. Each day, the plant delivers nearly 50 million gallons of fresh, desalinated water to San Diego County – enough to serve approximately 400,000 people.

ABOUT THE TOUR:

We invite you to visit the largest, most technically advanced and environmentally sound desalination plant in the western hemisphere! You will have the opportunity to observe the state-of-the-art process of turning water from the Pacific Ocean into high quality drinking water that is now serving nearly a half a million San Diegans. You will also be one of the first individuals to sample this new water supply right from source. Our tour accommodates 15 guests. To reserve your spot, please RSVP at the Eventbrite page shown above. All tour participants must be 18 years of age or older. Tours may be cancelled at any time due to weather or safety conditions. All tour participants need to have a photo ID with them and need to be wearing long pants and closed-toed shoes with no high heels.

SCIENCE CAFÉ PRESENTATION ON THE HUMAN MICROBIOME

The Science Café event “The Secret World Inside You” on the human microbiome was held on November 16th at The Timken Amphitheater - Scripps Green Hospital in San Diego. The goal was to reach a broad audience with a very popular research topic, the human microbiome. Three speakers were invited to present their latest studies regarding the human microbiota, their role in human health and disease, and how external factors influence their growth.

Rob Knight, Professor of Pediatrics and Computer Science & Engineering at the UCSD, and co-founder of the American Gut Project, presented data about how personal care products affect the skin microbiome.

Nick Gorgani, founder and CEO of OzStar Therapeutics and GlyConMedics LLC, presented his latest discovery regarding a simple, natural, cost effective and sustainable solution for Type 2 diabetes treatment. This is based on the association of a prebiotic with the commonly used drug sulfonylurea, resulting in a new potent treatment which is able to abrogate the clinically significant side effects of the drug.

Mark Wilson, president and CEO of Matrysis Bioscience, presented data from Professor Richard Gallo’s lab at UCSD, a world leader in the use of microbes as novel medicines. They have identified specific strains of commensal *Staphylococcus* species that kill pathogenic bacteria and enhance skin innate immune defense. This resulted in a clinical 2 stage product for the treatment of skin-related diseases.

The Science Café event was well attended – approximately 100 attendees joined us to hear the exciting research on the human microbiome that is happening here in San Diego. The audience had a good cross-section, coming from both a scientific (30% chemistry, 30% biology) and non-scientific background (30%). Approximately 30% of attendees were ACS members. The audience looked enthusiastic about the presentations and asked a lot of good questions following each presentation.



Rob Knight



Nick Gorgani



Mark Wilson



Nick Gorgani, Jennifer Barber-Singh (Co-organizer), Graeme Freestone (SD-ACS Chair), Rob Knight, Mark Wilson and Patti Iavicoli (Co-organizer)

ANNUAL MEETING AND HOLIDAY PARTY

Our last big event of 2016, the annual Holiday Party on December 1st, was held at Sufi Mediterranean Cuisine on Balboa Avenue. This was a new venue which was perfect for our needs and providing an incredible buffet of inspired Middle Eastern cuisine.

Graeme Freestone, the outgoing 2016 Chair, gave a year-end wrap-up presentation describing some of the highlights of the San Diego Section from 2016. Monthly meetings, annually occurring events and various accolades and awards were highlighted. **Jonathan Lockner**, the incoming 2017 Chair, discussed his goals for the Local Section for the upcoming year and his strategies to achieve these, as well as a sneak peek at some of the events already confirmed.

We are looking forward to an exciting year ahead.



2016 Chair Graeme Freestone

2017 Chair Jonathan Lockner

Jonathan "pinning" Graeme

Text: Graeme Freestone
Photo credits: Jim Shih

**AMERICAN CHEMICAL SOCIETY
SAN DIEGO SECTION
EDUCATION COMMITTEE**

December 10, 2016

Dear Colleague,

The Education Committee of the San Diego Section of the American Chemical Society (ACS) is pleased to announce that we will be participating in the 2017 U.S. National Chemistry Olympiad (USNCO). The primary goals of this program are to stimulate interest and achievement in chemistry among high school students throughout the United States and to provide recognition of outstanding young chemistry students, teachers, and schools.

Students competing in the USNCO are eligible to be selected as national team members to represent the United States in the International Chemistry Olympiad (IChO). For the past thirty three years, the United States has sent a team of four students to the IChO to compete with nations around the world in both theoretical and laboratory examinations over several days with gold, silver, and bronze medals being awarded to the best performers. The IChO also provides students the opportunity to interact with their peers from other countries. This year the international event will be held in Nakhom Pathon, Thailand, July 6-15, 2017.

We encourage your school to participate in this academic Olympiad. All students who participate will be recognized and presented with a certificate; top 150 students receive recognition for outstanding performance at the national level. We hope this recognition will serve to stimulate interest in chemistry and to promote a positive attitude toward chemistry.

A preliminary screening round will occur through the administration of a standardized ACS examination. Students can register (see link below) themselves or via their teachers, to take the exam on either **Saturday, March 18, 2017 at 9 am** or **Sunday, March 19, 2017 at 9 am** at the University of San Diego in **The Shiley Center for Science and Technology – Rooms 129, 130 and 133**. The exam lasts approximately 2 hours. **Please send students with a pencil and calculator (non-programmable only).**

A campus map and driving directions can be found at: http://www.sandiego.edu/about/visit_campus.php. Please direct students and parents to that site.

Registration Information:

To enter students from your school in this competition, please complete and submit an online registration using the link provided below by the **due date of February 27, 2017**:

https://sandiego.secure.force.com/events/targetx_eventsb_eventsplus_search?type=DEPT-CHEM

Please type all student information. Please remind students that by registering, they are expected to attend as the rooms, proctors, # of exams purchased, etc. is all based on registration information.

Thank you for helping us to promote chemical education in this country. If you have any questions, feel free to contact me (jschellinger@sandiego.edu). You may also get further information by joining our Facebook page (<https://www.facebook.com/USNCO-San-Diego-Section-1807164522906083/> or search for USNCO San Diego Section).

***Note: Any student may take this preliminary screening exam but students must be citizens or permanent residents (green card holders) to be invited back to take the U.S. National Exam.*

Sincerely,

Joan Schellinger
Chemistry Olympiad Coordinator
San Diego Section, American Chemical Society
Department of Chemistry and Biochemistry
University of San Diego
5998 Alcalá Park
San Diego, CA 92110

STEM Career Conference:

Discover your SuperHEROINE Roadmap to Success

February 4, 2017 from 8:00 am to 5:00 pm at San Diego State University

[Main page and links to register](#)



Recruiting STUDENTS and STEM ENTHUSIASTS for a one-day event for high school and college level young women on February 4th at SDSU. This conference-style event will inspire, connect and guide those interested in STEM careers through speed mentoring with local women in STEM fields, workshops on STEM careers and tips to navigating a successful pathway as well as a poster session showcasing current research!

See [here](#) for more information and to register to be a part of this fantastic event!

We are looking for the following volunteers and attendees:

- Mentor-for-a-day: women in STEM to talk about their career path, register [here](#)
- STEM Workshop hosts: hands-on, 45 min demonstrations for small groups in each STEM field, register [here](#)
- Career Roadmap Workshop hosts: speakers to provide career advice in a panel setting (topics: admissions, funding, LinkedIn/resume, and internship/research experiences), register [here](#)
- Volunteers: various roles on the day of the event and opportunities to network (with lunch provided!), register [here](#).
- Student attendees: young women in high school, community college or 4-year college can register [here](#)
- Poster presenters: young researchers to present a poster for a prize can register [here](#).
- Parents/educators: a parallel set of parent/educator sessions will be available, register [here](#).

POSITION TITLE:

QC Chemistry Specialist

POSITION SUMMARY:

As QC Chemistry Specialist, 2nd Shift (3:00 pm to 11:30 pm, M-F), you will utilize your chemistry/QC talents and outstanding attention to detail to conduct analysis of raw materials, in-process and final product (adhering to cGMP requirements and SOPs) under moderate supervision. This is your opportunity to join a talented QC chemistry team and learn from their expertise, while partnering with them to develop and augment your skills. May work on other projects, as necessary.

As part of our training process, we need you to be flexible to work 1st shift (days) for the first 6 months.

Responsibilities:

- Conduct analysis and sample testing, while having the opportunity to be able to focus in a more specialized QC area.
- Perform varied and multiple assays. Release testing assays for in-process, final product, raw materials and other sampling.
- Compile data for documentation of test procedures.
- Responsible for standardization and maintenance of laboratory equipment.
- Responsible for data and accurate documentation within compliance specifications and reporting on abnormalities discovered. Review batch records and product specifications as required.
- Maintain lab area including routine cleaning of benches, biosafety cabinets, shelving and floors. Collect and dispose of lab wastes.
- Assist in the transfer, qualification and validation of new testing methods, along with IQ/OQ/PQ of new instruments, with guidance from supervisor.
- Participate in revising and writing of SOPs and qualification protocols.
- Responsible for exhibiting professional behavior with both internal and external business associates that reflects positively on the company and is consistent with the company's policies and practices.
- Embodies Althea's cultural values and aligns daily actions with department goals and company culture.

QUALIFICATIONS DESIRED:

Education

- High School Diploma or equivalent required. Bachelor's degree preferred in a Life Sciences discipline or equivalent.

Experience

- Minimum of two (2) years of relevant experience in a laboratory or quality control.
- Ability to perform testing in a highly accurate and reproducible manner.
- Familiarity with cGMP, manufacturing, machine operations, troubleshooting, and data entry.
- Detail-oriented with strong written and verbal communication skills.
- Ability to work independently, within prescribed guidelines, or as a team member.
- Demonstrated ability to follow detailed directions in a laboratory environment.
- Must be familiar with Microsoft Office applications.

COMPANY DESCRIPTION:

Ajinomoto Althea, Inc. is a fully integrated contract development and manufacturing organization providing clinical drug process development and manufacturing services to global biotechnology and pharmaceutical companies. In conjunction with drug product manufacturing operations, Althea offers comprehensive development services including: upstream and downstream process development, complex formulations, lyophilization cycle, analytical development, product release and ICH-compliant stability testing.

Now is an exciting time to join Althea. We have talented people working together to help our clients advance their innovative product pipelines. We believe that people are our greatest asset and we are committed to providing our employees with an environment that fosters personal and professional growth.

Our work atmosphere is fast paced, stimulating and customer focused. Employees take pride in knowing our efforts are helping countless patients for years to come.

APPLICATION INSTRUCTIONS:

Apply directly to this link:

<http://chj.tbe.taleo.net/chj04/ats/careers/requisition.jsp?org=ALTHEATECH&cws=1&rid=483>

Or visit our website at www.altheacmo.com and click on the "Careers" section. Please be sure to note where you saw our ad posting.

POSITION TITLE:

Sr. Process Development Engineer

JOB DESCRIPTION

At Synthetic Genomics, Inc., we are dedicated to developing and commercializing genomic-driven solutions to address global challenges. We are currently seeking a Senior Process Engineer to join our fast-growing, dynamic and collaborative team in La Jolla, CA.

Required Skills

- This position will be a key team member for transitioning the Light Directed Array Synthesis (LiDAS DNA) platform from R&D into production. Subsequent to establishing the initial operational aspects of the LiDAS synthesizer, the position will transition into development of process and procedures to operate the machines and incorporate them into standard manufacturing operations.
- Provide instrument related development and optimization support for the LiDAS synthesis platform.
- Performs various chemical related experiments, electro-mechanical, electrical and software troubleshooting and translation of LiDAS setup documentation into workable SGI procedures.
- Provide input and design solutions to improve instrument usage and solve problematic areas of the instrument.
- Refine software scripting routines to improve system performance.
- Recommend and implement solutions.
- Perform periodic reports and reviews of projects as needed.
- Liaison with internal resources in the area of chemistry to co-develop solutions related to instrumentation functionality.
- Oversee the testing of assembled instruments and analyze test results and develop strategies to improve performance, reliability and reduce cost. Develop and produce logs, procedures and reports on operational techniques and testing methods and results.
- Interface with outside vendors and material suppliers as well as other consultants and contacts as required to resolve issues.
- Actively participate on project teams to develop Engineering plans and objectives and to carry out the necessary effort.
- May directly supervise or indirectly guide technicians and customer service personnel.
- May perform other related duties as required and/or assigned.

QUALIFICATIONS DESIRED

Education:

Bachelors or Master's degree in Mechanical/Bio-Medical or Chemical Engineering, Biology or related field, or the equivalent knowledge and experience required.

Required Experience:

- Requires a minimum of five years relevant engineering experience with an M.S. degree; at least 8 years experience with a B.S. degree.
- Background in development of chemistry -related instrumentation is preferred, familiarity with fluidics and optimizing processes relating to Oligonucleotide synthesis and assembly, modification or detection is highly desirable.
- In-depth knowledge of general chemistry, fluidics, data analysis and documentation required.
- Experience with Solidworks 3D modeling preferred.
- Excellent communications and analytical skills necessary.

DESCRIPTION OF COMPANY

At Synthetic Genomics, Inc., we are dedicated to developing and commercializing genomic-driven solutions to address global challenges. We are currently seeking a Senior Process Engineer to join our fast-growing, dynamic and collaborative team in La Jolla, CA.

This position will be a key team member for transitioning the Light Directed Array Synthesis (LiDAS DNA) platform from R&D into production. Subsequent to establishing the initial operational aspects of the LiDAS synthesizer, the position will transition into development of process and procedures to operate the machines and incorporate them into standard manufacturing operations.

APPLICATION INSTRUCTIONS

Please apply directly online at

https://rew21.ultipro.com/SYN1007/jobboard/NewCandidateExt.aspx?_JobID=484

CHEMPLOYMENT 785

POSITION TITLE

I am looking for a chemist to analyze 5 samples of nutritional Vanadium supplements. All samples are pharmaceutical preparations except for one which is a Vanadium yeast product. This is a one-time project, which depending on the results, may develop into something larger.

JOB DESCRIPTION

The purpose of this analysis is to help determine why some dietary vanadium supplements are able to reverse diabetes symptoms, while others are not.

Vanadium is known as a "transition metal" which can exist in multiple oxidation states. The chemist will analyze the 5 samples to determine the oxidation state of each sample, if possible. The purpose is to see if we can make a connection between the oxidation state (or some other marker) and the therapeutic effect.

QUALIFICATIONS DESIRED

Minimum BA in Chemistry.

Experience with the following would be helpful but is not essential: Vanadium and its multiple oxidation states; various forms of nutraceutical chelates (organic acids such as citrates and Krebs, various amino acid chelates), and common filler ingredients such as di-calcium phosphate.

DESCRIPTION OF COMPANY

My name is Henry Bernstein. I am a certified nutritionist living in Oceanside, California.

APPLICATION INSTRUCTIONS

To start with, compensation will be on an hourly basis, which is negotiable. If you are interested, please contact me at zekeyb@cox.net

CHEMISTRY FOR YOU AND YOUR KIDS

HARD WATER – BUBBLE TROUBLE?

Sometimes, when water flows over limestone or other material with a lot of calcium in it, the calcium gets into the water. Water that contains a lot of calcium or other mineral is called *hard water*. In characteristic of hard water is that it makes a soap film or soap scum when mixed with soap. It can also make it more difficult for the soap and water solution to bubble.

You will need

Eye protection - Warm water - Measuring spoons - plaster of Paris - 3 clear 8 plastic cups - Masking tape - Ball-point pen - Bar soap - Grater - Sheet of paper - Plastic straws

1. Cover your work area with paper towels or newspaper. Use your masking tape and pen to label your cups **water**, **water and plaster**, and **soapy water**. Pour 1/2 cup of warm water into each of your plastic cups.
2. To the cup labeled water and plaster, add about 1/4 tablespoon of plaster of paris powder. Stir with a straw until the plaster of paris powder is thoroughly mixed with the water.
3. Ask your adult partner to help you use your grater to grate 1-2 teaspoons of soap from you bar of soap to a soapy water cup. Stir with a new straw until no more soap will dissolve.
4. Add 1 tablespoon of soapy water from you soapy water cup to each of your other two cups. Do not stir right away. Observe the solutions closely. Do you see a difference between them? What do you see happening in one of the cups? Stir each cup with a separate straw. Do they still look different?
5. Use a separate straw to blow gently into each cup. Do you notice a difference in the bubbling? What do you think is the reason?

Be sure to blow into the liquid. Do not suck the liquid into the straw.

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2017 ACS REGIONAL MEETINGS

Middle Atlantic (MARM)	June 4 - 6	Hershey, PA
Central (CERM)	June 6 - 10	Detroit, MI
Northwest (NORM)	June 25 - 28	Corvallis, OR
Great Lakes (GLRM)	June 27 - 30	Fargo, ND
Midwest (MWRM)	October 18 - 20	Lawrence, KS
Rocky Mountain (RMRM)	October 25 - 28	Loveland, CO
Southwest (SWRM)	October 29 - November 1	Lubbock, TX
Southeastern (SERMACS)	November 7 - 11	Charlotte, NC



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.

ACS2Go can be accessed at pubs.acs.org on a tablet or smartphone. Please see for more information: pubs.acs.org/acs2go.



ACS INDUSTRY VOICES

ACS Industry Member Programs brings you the ACS Industry Voices blog, with weekly posts that share stories, lessons, advice, and general musings from around the chemical technology field.

ACS Webinars™

For upcoming Webinars in January see:

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

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For information contact: **Renate Valois** - renate@sandiegoacs.org

253rd AMERICAN CHEMICAL SOCIETY - NATIONAL MEETING & EXPOSITION

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Registration and Accommodations open December 19, 2016!
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Chemists do not usually stutter. It would be very awkward if they did, seeing that they have at times to get out such words as methylethylamylophenylium.

-Sir William Crookes, 1832 to 1919

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

MiraCosta College

Linda Woods

lwoods@miracosta.edu

760-757-2121 Ext. 6411

Palomar College

Greg Elliot

gelliott@palomar.edu

858-531-1149

Point Loma Nazarene University

Sara Choung

SaraChoung@PointLoma.edu

619-849-2627

San Diego Mesa College

Dwayne Gergens

dgersens@sdccd.edu

619-388-2609

San Diego Miramar College

Fred Garces

fgarces@sdccd.edu

619-388-7493

San Diego State University

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



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Place your ad in the next issue of

THE SAN DIEGO CHEMIST

For information contact:

Renate Valois - renate@sandiegoacs.org

UPCOMING EVENTS

SENIORS/RETIREES/CONSULTANTS/ETC. BREAKFAST

Denny's
4280 Clairemont Mesa Blvd, San Diego
Thursday, January 5, 2017, at 9:30 AM

ROBERT D. BLACKLEDGE
Forensic Chemist Consultant, USA
Knobbe Martens Olson & Bear LLP
12790 El Camino Real, San Diego
Wednesday, January 18, 2017

THE CLAUDE "BUD" LEWIS CARLSBAD DESALINATION PLANT
4600 Carlsbad Blvd, Carlsbad, CA 92008
Wednesday, January 25, 2017

JIE JACK LI, PHD
Associate Professor
University of San Francisco
Time, Venue TBA
Thursday, February 16, 2017

SAN DIEGO FESTIVAL OF SCIENCE & ENGINEERING
EXPO DAY at PETCO Park
Saturday, March 4, 2017
<https://www.lovestemsd.org/>

THE 63RD ANNUAL GREATER SAN DIEGO SCIENCE AND ENGINEERING FAIR
Balboa Park Activity Center (2145 Park Blvd.)
For information please see <http://www.gsdsef.org/>
March 14 - 19, 2017

253RD ACS NATIONAL MEETING & EXPOSITION
San Francisco, California
April 2 - 6, 2017

EARTH DAY - EARTHFAIR 2017
Balboa Park, San Diego, CA
<http://www.earthdayweb.org/>
Sunday, April 23, 2017

SUMMER PICNIC
San Dieguito County Park, Solana Beach
Sunday, June 25, 2017

254th ACS NATIONAL MEETING & EXPOSITION
Washington, DC
August 20-24, 2017

CHEM EXPO
Chemistry Rocks!
San Diego Miramar College, 10440 Black Mountain Road, San Diego
10440 Black Mountain Rd, San Diego
Saturday, October 28, 2017

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

Bryan Andrus
Jean Bernatchez
Alissa Calderon
Joseph Charlonis
Matileen Cranick
Richard Gardner
Hailey Hirata
Jonathan Hollinger
Matthias Jahl
Jesus Jimenez
Mark Juergensen
Daniel Kamkar
Chaitanya Kshirsagar

Christopher Lee
Minhan Lee
Austen Michalak
Karen Montoya
Aubriana Morris
Darlene Nguyen
Miriam O'Duill
Theresa Thomas
Pedro Junior Vicente Valdez
Praveen Wickremasinghe
Yong Yan
Lei Yu

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SAN DIEGO SECTION OF THE AMERICAN CHEMICAL SOCIETY**

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<i>Past-Chair</i>	Graeme Freestone, Dart NeuroScience LLC, gfreestone@sandiegoacs.org	(2017)	858-246-8137
<i>Secretary</i>	William Tolley, Seacoast Science, Inc., b_tolley@juno.com	(2017)	858-780-0978
<i>Treasurer</i>	Graeme Freestone, Dart NeuroScience LLC, gfreestone@sandiegoacs.org	(2017)	858-246-8137
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	Desiree Grubisha, Halozyme Therapeutics	(2018)	858-254-5497
	John Palmer	(2017)	858-265-9198
	Ken Poggenburg	(2019)	760-635-2573
	David Wallace, Wallace Scientific Consulting	(2018)	858-638-1866
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Seniors Breakfasts			
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Women Chemists Committee			
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Younger Chemists Committee			
OPEN			
Voice Mail – San Diego Section			619-687-5570