The CACNews

News of the California Association of Criminalists · Winter 2023 Issue II

Jonathan Charron

CAC Editorial Secretary

"While in the 'New Year' we may tend to push for resolutions and restart good habits, I feel it is in reflection that we truly prepare for what lies ahead."

New Directions in the New Year?

As this is the last issue for the year, it seems appropriate to talk about the value in reflection and meditation about the past. While in the "New Year" we may tend to push for resolutions and restart good habits, I feel it is in reflection that we truly prepare for what lies ahead. Reflection comes in many forms in our lives. One can reflect on a specific, finite event and pour over the outcomes on the decisions made during that blip in our lives. Or, for those that are more "big picture" thinkers, one can meditate about the entire road that has led to the current milestone on the journey through life. But what does a concept like reflection have to do with forensics? I think our Quality Assurance colleagues might say quite a bit.

January 1st brings with it a barrage of new to-do list items in the microcosms that are our various laboratories. These tasks often include an annual review and update of the laboratory SOP's and manuals. I have always found it fascinating that despite these reviews being completed annually, there always seems to be a large list of proposed changes to the manuals. While many of these changes are simple formatting and punctuation edits, there are some manual change suggestions that change the way things are reported or analyzed. What changed within a year that warrants a change in our technical manuals? New laws or criticisms related to forensic science? Reflection after an internal or external audit? New leadership? Or is the answer some influence from all of the above?

Prior to exploring these ideas further, I'll give you a little insight on how this topic came to my mind in the first place. In May of 2023, I attended the annual AFTE conference in Austin, Texas. As I was on a bus to tour a couple firearm and ammunition manufacturers, I struck up a conversation with a Texas firearms examiner. Through this conversation, I learned that Texas had adopted a law that requires all "Forensic Analysts" to have a license that they must acquire from the state Commission. This requirement went into effect on January 1st, 2023 and in order to obtain this license, every applicant must pass a multiple-choice test containing 110 questions that cover 7 different topics. The seven topics included in this exam are evidence handling, Brady/Michael Morton Act, basic statistics for forensic application, expert testimony, professional responsibility, human factors, and root cause analysis. This test must be passed with a score of 70% and has a minimum number of questions within each topic that must be correct regardless of your overall score.

Above: *Jonathan Charron (center) with fellow CAC members Connor Sichler (left) and Catherine Currier (right) at the 2023 AFTE conference.*

continued on page 4

WINTER 2023 ISSUE II

The CACNews

www.cacnews.org

On the cover:

Close-up images of Edwin L. Jones, Jr.'s newest slide for the Microscopical Society of Southern California exhibition meeting in November 2023. Read more on page 12.

The *CACNews, ISSN 1525-3090,* is published quarterly (January, April, July, and October) by the California Association of Criminalists (CAC).

The CAC is a private foundation dedicated to the furtherance of forensic science in both the public and private sectors.

Please direct editorial correspondence and requests for reprints to the editorial secretary.

Notice to Contributors: We publish material of interest to our readers and are pleased to receive manuscripts from potential authors. Meetings and course announcements, employment opportunities, etc. are also solicited. Advertisements are also accepted, although a fee is charged for their inclusion in *The CACNews*. Please contact the advertising editor for further information.

The deadlines for submissions are: December 1, March 1, June 1 and September 1.

INSIDE

The Editor's Desk

"At what point does the concept of certification become more of an unnecessary burden versus truly ensuring the capability of the practitioner performing the work?"

As the bus continued through the flat and brushy outskirts of Austin, my thoughts turned to the complexity of certifying all forensic scientists across the United States. A testing requirement like this would certainly address some of the criticisms over the past couple of decades. The most prominent criticisms recently came from the President's Council of Advisors on Science and Technology (PCAST, 2016) and National Academy of Sciences (NAS, 2009) reports, both of which called for a standardized certification requirement for forensic scientists. Where do we go from here?

Part of this challenge lies in the fact that we, as forensic scientists, have such diversity in the work that we perform dependent on which section you call home. Would a universally applied test that looks at the core of the Scientific Theory be sufficient for all forensic science disciplines? Or perhaps a test that looks more closely at forensics specifically, like the Foundational Knowledge Examination (FKE) offered by the American Board of Criminalistics, would be more appropriate? I think it depends on the nature of the question being asked by critics. If the purpose of licensing scientists is to confirm they understand general knowledge of the scientific process, then tests like these could potentially be good evaluations. However, if the purpose of certification is to ensure a forensic scientist can accurately represent and analyze firearms evidence or calculate the probability a DNA sample came from a suspect, then this sort of testing would fall short of that goal.

To answer that question, one would need to take an approach to testing and certification similar to what many agencies do with latent print examiners. Having looked through many job postings for latent print positions, over half state that the candidate must possess certification within a year of their employment. While applicable for prints, what would one do for a discipline that takes longer than a year to become proficient in? Would a system need to be created for every discipline? Every subdiscipline? At what point does the concept of certification become more of an unnecessary burden versus truly ensuring the capability of the practitioner performing the work? This, my colleagues, is a question we should be asking every time the topic comes up. Especially from those organizations outside of forensic practitioners.

Don't take that last statement as a pass to dismiss criticism as valueless from anyone but forensic scientists. There is always some sort of value in understanding what portions of your work are being challenged to allow you the chance to address said challenge or change the way you present your data to make it more difficult to misinterpret by the general population. Do, however, take it as a warning to not let these decisions, policies, and programs be created without having a seat at the table. Laws, policies, and restrictions involving forensic science should never be created without the input of the forensic scientists themselves.

And with that statement, I come to a final point that my reflection ended with on the dusty roads of Texas: If certification and licensing is something that is in our foreseeable future, we need to take action now. By taking the driver's seat, we get to be the ones to create policy, instead of fighting to change something that has been written for us. We would get to set the timelines, parameters, and content that would help ensure the quality of the work that is done, instead of jumping over a meaningless hurdle because a pointless policy says we must do so. We would have the power to continue to strengthen the high standards we as forensic scientists hold in a proactive and pertinent program.

I hope that you all have a chance to reflect on the previous year and enter the new year ready for the new challenges and changes that are bound to show up. If you have an opinion on the direction certification or licensing should go, I'd love to hear from you. Email me at editor@cacnews.org or find me at the upcoming conference down in Los Angeles! Lastly, as a parting gift, take a look back at an old "Newsletter" from the CAC published back in October of 1954 on page 5. We have certainly come a long way from 70 years ago. Stay safe out there and let me know your thoughts!

"NEWSLETTER"

of the

CALIFORNIA ASSOCIATION OF CRIMINALISTS

Vol. 1, No. 1 | Edited By The Executive-Secretary
P. O. Box 1148 - San Jose, California | October 4, 1954

MEETING NOTICE

1954 Fall Seminar Chairman Jack Cadman has announced that the next meeting will be November 5 and 6 in Santa Ana.

Place of meeting will be Board of Supervisors', County of Orange, meeting room which is located across the street from the Sheriff's Office.

Official Guest will be Ralph Turner, who is teaching at University of Southern California this semester.

Jack will send out formal meeting invitations on October 15.

Topics for discussion will be along the line of current problems that anyone may be having. If you have such a problem that you would like to have discussed, write to Jack immediately.

CONSTITUTION:

A copy of the proposed constitution is enclosed herewith. The committee, headed by Roger Greene, who worked on it, deserve many thanks.

Please study this document and be prepared to propose changes if any and prepare for ratification at the coming meeting.

BREATH ALCOHOL ARTICLE:

The article which began as a treatise on breath alcohol finally turned out to include a broader scope than was first contemplated because of introductory problems.

In order to satisfy all members, there were several rewrites which expanded the article considerably. The net result was an excellent paper.

The paper was rejected by Journal of Criminal Law, Criminology and Police Science and is now in the hands of the California Peace Officer Journal. Advance copies have been sent to Commissioner Caldwell, C.H.P., and to several District Attorneys who are contemplating breath methods.

Encls: -- Provisional Constitution
-- S.A.C. Bulletin

FINANCES:

We now have fourteen paid members and one delinquent.

Assessments Received.	$70.00
Expended for Office Supplies.	37.74
Balance on Hand.	$32.26

Vouchers are on hand for all expenditures.

CIVIL SERVICE SPECIFICATIONS:

Latest requirements for the position of Associate Criminalist, County of Santa Clara read as follows: (Excerpt from "Position Classification and Pay Plan") -- "Regular membership in the California Association of Criminalists shall be prima facie evidence of qualification for this position."

SOCIETY FOR ADVANCEMENT OF CRIMINOLOGY:

Enclosed is a copy of the S.A.C. Bulletin which indicates an interesting program in Berkeley in December.

Education in Forensics

An Interview with Dr. Mark Barash, Associate Professor of Forensic Science at San Jose State University

In a continuation of my series on education in forensics, I was fortunate enough to speak with Associate Professor Dr. Mark Barash. In this interview, Dr. Barash highlights the exceptional program that San Jose State University offers future forensic scientists.

Jonathan Charron (JC): *I want to start by saying thank you for agreeing to this interview in my series related to education in forensic science. I want to start by learning a little about the program at San Jose State University. Can you tell me what sort of degree options are available within your program? Can you include some highlights of some of the different classes that you offer?*

Mark Barash (MB): Thank you for this opportunity!

The Forensic Science program is a part of the Justice Studies Department at San Jose State University. Our department structures its curriculum around five key academic pillars: criminal justice studies, criminology, forensic science, legal studies, and human rights. Throughout their studies, students gain crucial analytical, communication, practical, and critical thinking skills that are vital in navigating complex and multicultural societies.

The Forensic Science program offers Bachelor of Science degrees with Concentrations in Forensic Chemistry, Forensic Biology, Digital Evidence and Crime Scene Investigation. Each concentration is designed to prepare students for specialized and professional roles within the field of forensic science and beyond. The program has been designed in line with the rigorous standards set by Forensic Science Education Programs Accreditation Commission (FEPAC) ensuring specific curriculum requirements for each concentration. All concentrations, particularly the Biology and Chemistry tracks, include a mandatory core curriculum in foundational scientific disciplines such as Mathematics, Physics, Chemistry, and Biology. Additionally, students delve deeper into various forensic disciplines and acquire essential practical skills through 27 specialized courses. Examples include forensic molecular biology (FS 167), forensic chemistry (FS 166), arson and explosives analysis (FS 176), forensic entomology (FS 106), fingerprint analysis (FS 163), forensic photography (FS 164), digital forensic analysis (FS 130), forensic psychology (FS 171), death investigation (FS 173), crime scene investigation (FS 161), firearms and toolmarks analysis (FS 175), forensic genotyping technologies (FS 177), biological criminalistics (FS 57), expert witness testimony (FS 101), and more.

Our program was established by Professor Emeritus Dr. Steve Lee back in 2003. Since, it has grown to over 600 Majors and Minors, which I believe, makes it one of the largest FS programs in the United States. Notably, our program is celebrating its 20-year anniversary this year!

JC: *Can you give me some insight on the day-to-day life of the forensic students at SJSU? Is this program comprised of full-time students or criminalists currently working in the field?*

MB: The program primarily consists of full-time students with a keen interest in pursuing careers in forensic science or law enforcement. Occasionally, we also welcome students already working in the field who seek to further their education. The Bachelor of Forensic Science at SJSU offers a comprehensive education,

equipping students with a deep understanding of how forensic science contributes to solving and preventing crimes, ultimately preparing them for successful careers in the discipline.

As mentioned earlier, our program offers concentrations in biology, chemistry, digital evidence, and crime scene investigation. These concentrations enable students to establish a robust foundation of knowledge and skills in applied sciences. This foundation is complemented by essential coursework in specialized forensic disciplines, allowing students to develop a profound understanding of forensic science within the broader context of criminal justice.

A key focus of our program is to foster critical thinking and problem-solving skills, emphasizing their practical application in real-life scenarios. We believe that these skills are fundamental for our students to excel in the dynamic and challenging field of forensic science. Moreover, for those interested in a more foundational understanding of forensic science without delving into the intensive chemistry and biology courses of the major, we offer a Minor in forensic studies.

The overarching goal of the FS program is to cultivate the next generation of highly qualified forensic professionals. We aim to instill in our students a commitment to applying their skills in accordance with the highest scientific and ethical standards. In addition to our current program, we are actively developing a Master's program in forensic science and a Professional Certificate program, further expanding opportunities for advanced education and specialization in the field.

JC: *How about the instructional staff? Are your instructors comprised of academics, current criminalists, or a combination of both?*

MB: Our exceptional instructional staff is comprised of both academics and current/past criminalists. For example, my fellow co-Director of the program, Dr. Shawna Bolton specializes is forensic anthropology, forensic taphonomy and proteomics; Dr. Jodie Warren, specializes in forensic entomology, forensic taphonomy, bloodstain analysis, and death investigation. She's also done casework includes homicides, serial killers, elder abuse and animal abuse; Dr. Bryce Westlake specializes in research concerning cybercrime, digital evidence, and child sexual exploitation; Mary Juno - our senior lecturer, worked as a CSI in Oakland Police for over 10 years and now leads the Forensic Science minor.

In addition, numerous specialized courses are taught by our amazing casual lecturers with extensive operational experience: Jeremiah Garrido, a full-time forensic DNA expert in the Santa Clara County DA Crime Lab; Rosa Vega, a Coroner in Sacramento Coroner's Office; Samantha Peek, Fire Investigator with extensive experience and the Director of Research in her company, Fire Investigation Industries; and Eric Kwong,

an established lecturer and forensic photographer. Altogether, the tenure-track faculty and lecturers are dedicated to offer an exciting undergraduate program for a very diverse student community in the Bay Area and beyond.

JC: *Now on to some questions about you! Tell us about your journey in the world of academics and forensics that led you here to SJSU.*

MB: As a child (growing up in the Soviet Union), my love for reading Arthur Conan Doyle's and Agatha Christie's books planted the seeds of curiosity, though I never initially considered a career in forensic science or law enforcement. The turning point came in 2000 when, after obtaining a Master's degree in Human Genetics and Microbiology at the Hebrew University of Jerusalem, I fulfilled my compulsory military service in the IDF. Serving as a QA officer in the newly established DNA ID Military Database, I recognized the need for expertise in forensic DNA profiling.

During this time, I took the initiative to collaborate with the Division of Identification and Forensic Science (DIFS) in the Israeli Police, drawing on a connection with a friend working there. This decision led me to spend the majority of my military service working in the crime lab, fulfilling my military duties and supporting experts with their casework. Following my retirement from the IDF, I joined the Israeli Police as a Forensic DNA Reporting Officer in the rank of a Captain, dedicating almost a decade to analyzing biological evidence in hundreds of criminal cases, from robberies and sexual assaults to homicides and terrorist attacks.

Despite my love for research and a desire to pursue a PhD, the constraints of a full-time lab position prevented me from doing so. Consequently, in 2010, I made the decision to leave my position and embark on a PhD journey at Bond University in Australia. My research focused on craniofacial genetics, specifically identifying single nucleotide polymorphisms (SNPs) influencing facial appearance. Pioneering the use of Next Generation Sequencing technology (Ion Torrent platform) for forensic purposes in Australia, I identified over 30 SNPs potentially impacting normal human craniofacial variation under the supervision of my mentors Dr. Angela van Daal and Dr. Bruce Budowle.

After completing my PhD, I undertook a post-doctoral fellowship at the Centre for Forensic Science at the University of Technology Sydney, further expanding my research and teaching forensic DNA classes. In the fall of 2019, I assumed my current position at San Jose State University, where I teach various forensic science courses, maintain an active research agenda, and coordinate the forensic science program. Earlier this year, I received tenure and was promoted to Associate Professor.

My research spans diverse multidisciplinary areas, including forensic molecular phenotyping, craniofacial genetics, anthropology, biometrics, bioinformatics, machine learning, forensic genealogy, indirect DNA transfer, and the implementation of massively parallel sequencing in operational casework. In my spare time, I provide consulting services, mostly pro-bono, in criminal and civil cases for private and law enforcement clients through my company "GATACA."

JC: *What are your thoughts about the current state of education in forensic science?*

MB: Forensic science education has been experiencing significant advancements and transformations, reflecting the dynamic and ever-evolving nature of the field. The continuous evolution of technology and the growing demand for specialized skills have driven commendable progress in forensic science education. However, the field faces a constant need for adaptation to stay abreast of emerging trends and developments, particularly in response to the PCAST report.

The PCAST report raised substantial concerns about the scientific validity and reliability of specific forensic techniques, prompting a call for improvements in both forensic science education and practice. In light of these concerns, educational curricula must align with the scientific rigor advocated by the PCAST recommendations. This alignment necessitates a focus on scientific scrutiny, research, the integration of interdisciplinary approaches, and practical experiences. These elements are pivotal in adequately preparing students to meet the challenges they may encounter in their professional careers.

As forensic science continues to evolve, educational programs play a crucial role in ensuring that students are not only equipped with foundational knowledge but are also trained to critically assess, adapt to, and contribute to advancements in the field. By incorporating the principles emphasized in the PCAST report, forensic science education can maintain its relevance and effectively prepare the next generation of professionals to navigate the complexities of forensic analysis and investigation.

JC: *Why is specific Forensic Science training so important?*

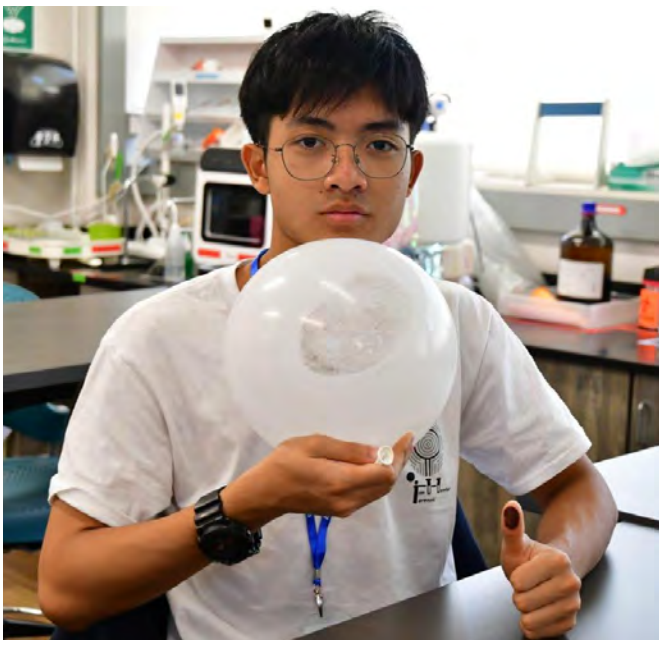
MB: Specific forensic science training is essential due to the unique nature of the field. Forensic investigations require a combination of highly specialized scientific knowledge, analytical and critical-thinking skills, and a deep understanding of legal procedures. Specialized training ensures that professionals are well-versed in the methodologies, techniques, and ethical considerations specific to forensic science. It not only ensures the accuracy of analyses but also equips individuals to navigate the complexities of legal proceedings, maintaining the integrity of the criminal justice system.

JC: *Do you feel that there is an adequate number of programs available?*

MB: While there has been a noticeable increase in the number of forensic science programs, the demand for qualified professionals continues to grow. Adequacy depends on various factors, including geographical location and the specific subfields within forensic science. In some regions or specialized areas, there may be a need for more programs to cater to the increasing demand. Additionally, ensuring that these programs maintain high standards, offer practical experiences, and stay updated with industry advancements is crucial for the overall effectiveness of forensic science education.

JC: *Forensic Scientists face a set of unique challenges in that the skills needed to be a competent examiner often reach beyond the science. What do you feel is the role of a university-based forensics program in the overall preparation for the real world?*

MB: Forensic Science is a highly dynamic and multidisciplinary discipline that assists law enforcement by providing analysis and interpretation of the physical evidence in medico-legal questions. Scientific analysis of forensic evidence and expert witness testimony play a critical role in the criminal justice system. Therefore, it is essential that the next generation of forensic practitioners acquire cutting-edge knowledge and practical skills, while maintaining the highest standards of professional integrity and ethics. At the same time, the students must appreciate an integrative relation between various forensic domains in the process of extracting forensically relevant information from the physical evidence and articulating it to the court of justice. This goal requires an interdisciplinary approach, incorporating essential empirical knowledge with hands-on experience, subsequently transforming into professional expertise. Therefore, a properly designed university-based forensics programs plays a critical role in preparing aspiring forensic scientists for the real world by addressing not only the scientific aspects but also the broader skill set needed to navigate the complexities of the profession.



JC: *Do you feel that other key components to a criminalists job, (such as photography, public speaking/testifying, understanding general judicial proceedings, and ethics to name a few) is the responsibility of the student to supplement in their university experience, or do you feel that these types of auxiliary components should be included into the core forensic education programs?*

MB: The inclusion of key components such as photography, public speaking/testifying, understanding general judicial proceedings, and ethics in forensic education programs is essential. While a core forensic education should provide a strong foundation in scientific principles and methodologies, these auxiliary components play a crucial role in shaping a well-rounded and effective criminalist. These are by the way, the reasons for including all these topics in our program's curriculum.

JC: *What do you see as being one of the biggest challenges for students in your programs when it comes to acquiring a position at a laboratory as a criminalist? What are some steps your program takes to make your graduates more competitive?*

MB: One of the significant challenges for students in our program when seeking positions as criminalists in a laboratory is the competitive nature of the field. The demand for skilled forensic scientists often exceeds the number of available positions, requiring graduates to distinguish themselves in a highly competitive job market. A notable challenge stems from the essential hands-on experience required by most employers in the field. To address this challenge, our program takes several proactive steps to enhance the competitiveness of our graduates:

- We strive to provide our students with extensive hands-on training through educational laboratories and activities to ensure that students gain practical experience with the latest instrumentation and technologies used in forensic science.
- As a part of their studies, the students required to complete a minimum of one semester internship in either external agency or conducting research with the faculty, which in turn provides students with essential practical skills and the chance to apply their knowledge in a professional setting.
- Recognizing the interdisciplinary nature of forensic science, our program integrates aspects of law, criminal justice, and technology into the curriculum, producing well-rounded professionals capable of collaborating across various disciplines.

- Our students engage in collaborative projects that simulate real-world scenarios, fostering teamwork and adaptability.
- Every semester, we organize guest lectures and seminars by industry professionals, allowing students to informally interact with and learn from experienced criminalists. So far, we have organized tens of such events as a part of the "Tips from the Experts" series, inviting forensic and law enforcement professionals from local crime labs, FBI, USSS, Police Departments and biotech industry. Furthermore, our program actively cultivates relationships with forensic laboratories, biotech and law enforcement

agencies, ensuring students have opportunities to network with professionals, potentially leading to job opportunities.

- Our program conducts workshops on effective resume building, cover letter writing, and interview skills to prepare students for the job application process.
- We provide support for students interested in conducting research projects, giving them opportunities to contribute to the field and build a strong academic portfolio. Furthermore, the SJSU Career Center and the JS Department offers ongoing support in job placement, including job fairs, connections with industry recruiters, and guidance on navigating the application process.

By combining these elements, our program aims to produce graduates who are not only well-versed in forensic science but also equipped with the essential hands-on experience, skills, and professional attributes that make them highly competitive in securing positions as criminalists in forensic laboratories.

JC: *I want to thank you for taking the time to talk with me about your program at SJSU and some of your thoughts about the role education plays in training a new wave of criminalists. Do you have any final thoughts or advice for any students that are pursuing a career in forensic science?*

MB: My advice for the students pursuing a career in forensic science is the following:

- While a strong foundation in forensic science is crucial, consider diversifying your skill set. Develop proficiency in related areas such as digital forensics, data analysis, bioinformatics or specialized laboratory techniques to make yourself more versatile and more competitive on the job market.
- Further on the same point: Be open to interdisciplinary learning, as understanding legal procedures, criminal justice systems, and technological advancements complements your scientific knowledge.
- Actively pursue internships or research opportunities to gain hands-on experience early in your studies. Practical skills significantly enhance your marketability and readiness for the workforce. The more experience you have, the better!
- Forensic science is a rapidly evolving field. Stay informed about the latest advancements, attend conferences, and engage with professional organizations to remain current with industry trends.
- Establish connections with professionals, mentors, and peers in the field. Networking can provide insights, mentorship, and potential job opportunities.
- The ethical implications of forensic science are substantial. Prioritize ethical conduct, adhere to professional standards, and approach your work with integrity.
- The field of forensic science can present unexpected challenges. Cultivate adaptability and resilience to navigate unforeseen circumstances and continue to excel in your career.

Remember, a career in forensic science is not just about 'solving cases'; it's about contributing to justice while upholding the highest standards of professionalism and ethics. Embrace the journey, stay curious, and never underestimate the impact your work can have on individuals and society as a whole.

Thank you so much for this opportunity!

Photos courtesy of Mark Barash

Arranged Microstuff

by Edwin L. Jones, Jr.

I have been arranging microstuff on microscope slides since the late 1980's. In the past, all I had to do was send my images and key to John Houde and he would make it happen. Now I am submitting a manuscript with images to the CACNews. If you are unfamiliar with my work, a lot of it can be found in the CACNews archives starting with the 1993 Winter edition where my arrangement of microfossils from Rincon Hill in Santa Barbara county actually spelled out "The CACNews" in the mixed font that was being used on the cover at that time.

In the winter 1994 edition, John featured my arrangement of 60 gunpowder samples on both the cover and page 16. In the 2nd Quarter 2007 edition, a portion of the letter "A" from my slide spelling "HAWAII; 2006" in sand grains from Hawaii was featured on the cover and explained on page 3. In the 1st quarter 2010 on page 31, a slide showing sand grains from the beaches in Ventura County spelled out: "VENTURA; COUNTY; 2009" in 12 point Times New Roman font. In the 2nd quarter 2011 on page 16 you can see the "2" and "F" from the "FLORIDA; 2011" slide spelled out in sand grains from beaches in Florida. In the 4th quarter 2012 on page 11 is an image of my slide spelling out SANTA BARBARA; COUNTY 2011" using 955 sand grains from 21 different beaches in Santa Barbara County. This page actually has the key showing the beach names and how I put them together with forceps and double sided sticky tape.

I am a member of the Microscopical Society of Southern California (prior to 1996 this group was named the Los Angeles Microscopical Society) who put on an exhibition meeting in November at the Wildwood School in Santa Monica. In 2014 I made a slide with seeds, gunpowder, micro electronics, glitter, microspheres, colored printing, watch parts and cross sections spelling out: "MSSC; 2014". An image of this slide and a key appears on page 38 of the 3rd Quarter 2015. On page 9, 2nd Quarter 2017 is an image of a slide that I made for the 2016 Exhibition Meeting of the MSSC. This slide is made with a central sapphire surrounded by 8 emeralds, surrounded by 15 diamonds, surrounded by 18 ruby spheres…

A total of 9 concentric circles using 445 objects. This slide is pretty.

The cover on the 4th Quarter 2020 has an image of an arrangement that I prepared in the early 1990s. It is explained on pages 3 and 5.

***Above**: The many features of Edwin L. Jones Jr.'s work in The CACNews, from 1993 to 2020.*

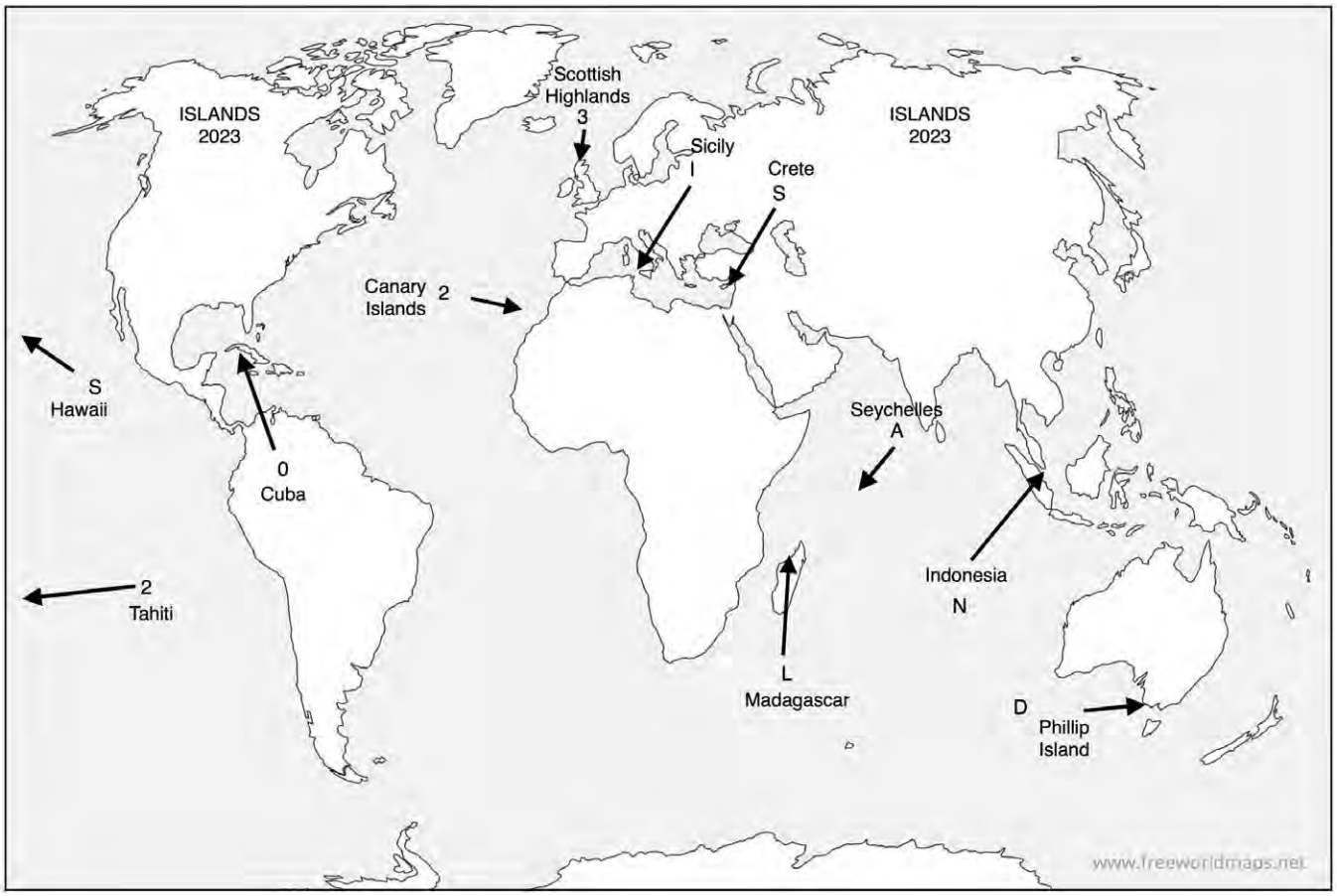
Back in November of 2013, I did a work shop for 24 forensic scientists at Cal State LA forensic lab which involved making your own micro arrangements as a CAC trace evidence workshop. Everybody brought their best forceps and I supplied gunpowder and a whole bunch of microstuff for everyone to make their own slides. All participants left with a gunpowder slide with 60 different gunpowders, a fiber slide with polyester, nylon, olefin, rayon, acrylic and acetate standards and two fun slides with microstuff. That was the 4th workshop involving stereo microscopes, forceps, double stick tape and microstuff. I did prior workshops for the Los Angeles Microscopical Society and the San Francisco Microscopical Society.

I made a new slide for the Microscopical Society of Southern California exhibition meeting in November 2023. It was my first new slide since 2016. I had to give up TV for a month to make that new slide. TV is an addiction for me and I have gotten into the habit of watching TV in the evenings.

The images and key are self explanatory. The font is 12 point Times New Roman. I used my scanner at 1200 dpi to take the image of the whole slide with label. All the other images were taken with my iPhone and a trimmed cardboard toilet paper roll through the eyepiece of my stereo microscope.

ISLANDS 2023; MSSC EXHIBITION; 11-15-23
by Edwin L. Jones, Jr.

I Trapani, Motya Island, Sicily, Italy.
S Elafonisi, Crete, Greece.
L Madirokely, Madagascar
A Lazare Beach, Mahe Island, Seychelles Islands
N Laguna Bintan Resort, Angsana Bintan, Bintan Island, Indonesia
D Newhaven, Phillip Island,Victoria, Australia
S Kalapaki beach, Kauai, Hawaii
2 Musee Gauguin, Tahiti
0 Varadero, Cuba
2 Pasito Blanco, Gran Canaria Island, Canary Islands
3 Achmelvich, Scotland



It is easier than free handing the phone above the eyepiece. The SMSI (State Microscopical Society of Illinois) Zoom meeting with Sebastian Sparenga (McCrone Research Institute) as the speaker on 11-10-23 was the source of this technique.

Interesting story, when I was making this slide, a grey/black roundish foram escaped my grip with forceps and went airborne. I tape lifted the area around my microscope and could not find it. I tape lifted the floor and still could not find it. I gave up after 30 minutes of searching. After completing the slide and taking my pictures, I was counting the number of sand grains in each letter and number from the photos so that I would know how many sand grains were used. I got to the letter "N" and found my escapee. If you look at the "N" in the images of "ISLANDS 2023" you will see him hiding inside of the first leg of the letter N. I immediately put the slide back under the scope and took a second picture of the individual letter "N" without the escapee. I also took a picture of the entire arrangement without the escapee but decided that the story was too good to replace that image. If you look at that image of the individual letter "N" you can see where the surface of the double stick tape is disturbed where I removed the escapee. My favorite sand grain is the echinoid spine at the top of the number "3". It has its root, natural distal end and a color change. The escapee and favorite sand grain stories came from questions asked at the MSSC meeting. If you use your imagination you can see a Dodo bird at the top half of the number "3". The fancy echinoid spine is the beak.

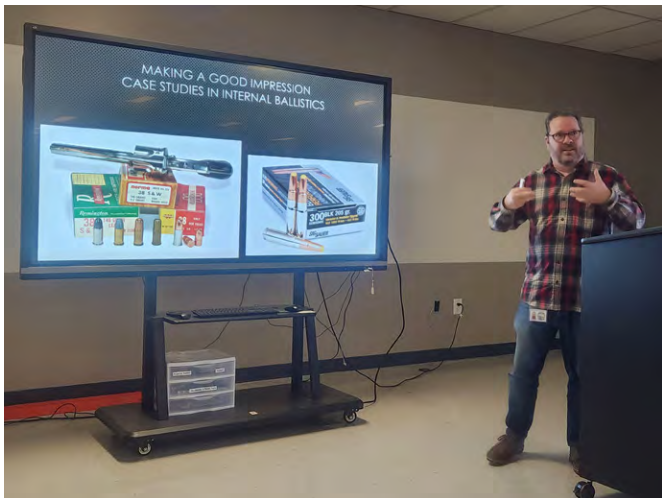
Several of those islands are from the 2018 and 2022 SandFest events where I obtained hundreds of sand samples from all over the world. The only sample that I personally collected was the one from Hawaii on our 25th wedding anniversary.

Photos courtesy of Edwin L. Jones, Jr.

CAC Study Group Meetings

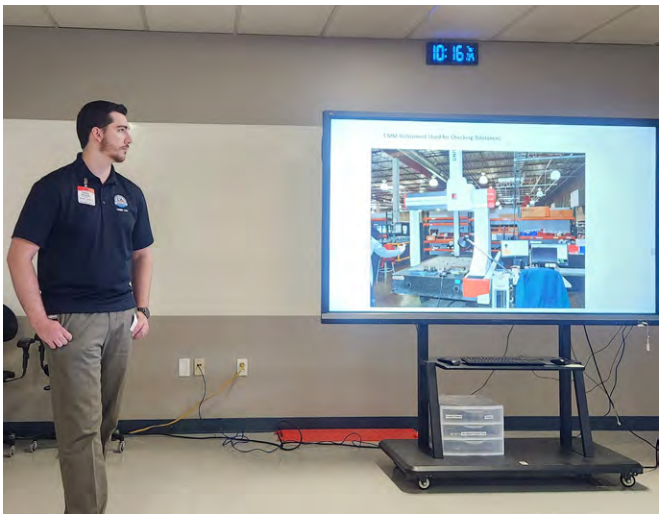
Tis' the season for Study Group Meetings! The CAC Northern California Firearms Study Group met on November 7th in person at BFS Sacramento. There was a wide array of topics and research presented at this study group including a presentation by Samantha Houle on her National Firearms Examiner Academy research involving the "Identification of Resizing Die Marks from a Carbide Die" and a series a case studies from Ron Welsh regarding internal ballistics. At the end of the study group presentations, we said a fond retirement farewell to Nancy McCombs! In the next issue of the CACNews, I am planning some interviews with some newly retired powerhouses in the field of forensics, so fair warning to you Nancy, look for my email requesting an interview about the next adventure your career takes you on! But in the meantime, please enjoy some of the photos from the retirement party and the presentations.

The Northern Firearms group wasn't the only group that met recently. On December 12th, three groups met virtually. The Alcohol and Toxicology group met with 30 members in attendance, Arson with 5, and the CSI group met with a total of 33 registered attendees! The CAC will continue to host these groups to help you stay in touch with new research and trends in the various disciplines while allowing members to earn points for ABC certification renewals and for CAC Membership upgrades. These study groups are also a great venue to practice a presentation for an upcoming conference, to share ideas about research, and to discuss casework challenges. Best yet, they are free to attend for all CAC members! We are still looking for a chair to start the Southern Firearms group back up, so reach out if you, or someone you know, may be interested! We hope to see you at the next study group meeting!


MAKING A GOOD IMPRESSION
CASE STUDIES IN INTERNAL BALLISTICS


happy RETIREMENT


fiesta



Photos courtesy of Catherine Currier

SWGDRUG Bulletin

December 2023

The Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG) proudly supports the forensic seized drug community by providing guidance and resources for a broad breadth of analytical and quality management challenges. The pace of change within our discipline has never been faster, and laboratories require steadfast improvement and adaptation to successfully address these dynamic issues.

One strength of SWGDRUG is the mix of long term members who provide vast institutional knowledge and context to modern issues serving alongside newer members who bring a fresh perspective to the challenges faced by seized drug chemists around the world. This year we said goodbye to our longest serving member, Mr. Richard Laing, who has been a committee member of SWGDRUG for 25 years. We wish Mr. Laing a very happy retirement and thank him for his many years of dedicated service!

In 2023, SWGDRUG met in Chicago to work on updating numerous sections of the Core Recommendations as well as the Supplemental Documents.

We encourage all members of the seized drug community to review and comment on the changes via the links below.

2023 SWGDRUG Meeting

Documents out for public comment (comments due 7 February 2024)

- Revisions to the Core Recommendations v.8.2.
  - Part II—Education, Training, and Continuing Professional Development
  - Part IIIA—Sampling Seized Drugs for Qualitative Analysis
  - Part IIIB—Analytical Scheme for Identification of Drugs or Chemicals
  - Part IVB—Validation of Analytical Methods
  - Annex A—SWGDRUG Glossary of Terms and Definitions
- Revisions to Supplemental Document, SD-7, Construction of an Analytical Scheme

Archived Documents

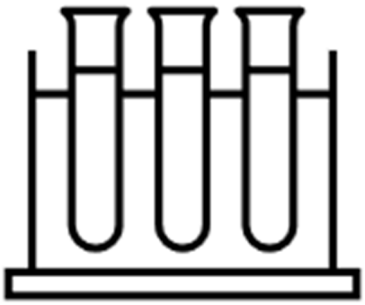
- Archived Supplemental Document SD-2, for Part IVB—Validation of Analytical Methods **archived due to draft changes in Part IVB**

SWGDRUG Bulletin

December 2023

SWGDRUG Position Regarding Field-Portable and Miniaturized Instrumentation

With the rapid development of new field-portable and miniaturized instrumentation, SWGDRUG is working to address the incorporation of these instruments in analytical schemes. It is the position of SWGDRUG that, as with any analytical method, the use of field-portable and miniaturized instruments in analytical schemes must meet the SWGDRUG recommendations for training, quality control, method validation, documentation, and reporting. In addition, the data (e.g., chromatogram or spectrum) from the field-portable or miniaturized instrumentation must be included in the case file in a format that is reviewable to allow independent interpretation of the results by an expert without access to the instrument software. To this point, if the field-portable or miniaturized instrument does not provide the requisite selectivity as an analogous laboratory instrument that would otherwise be fit-for-purpose, it cannot be included in the same category within the analytical scheme as an analogous laboratory instrument, but may be included in the analytical scheme as a lesser category.



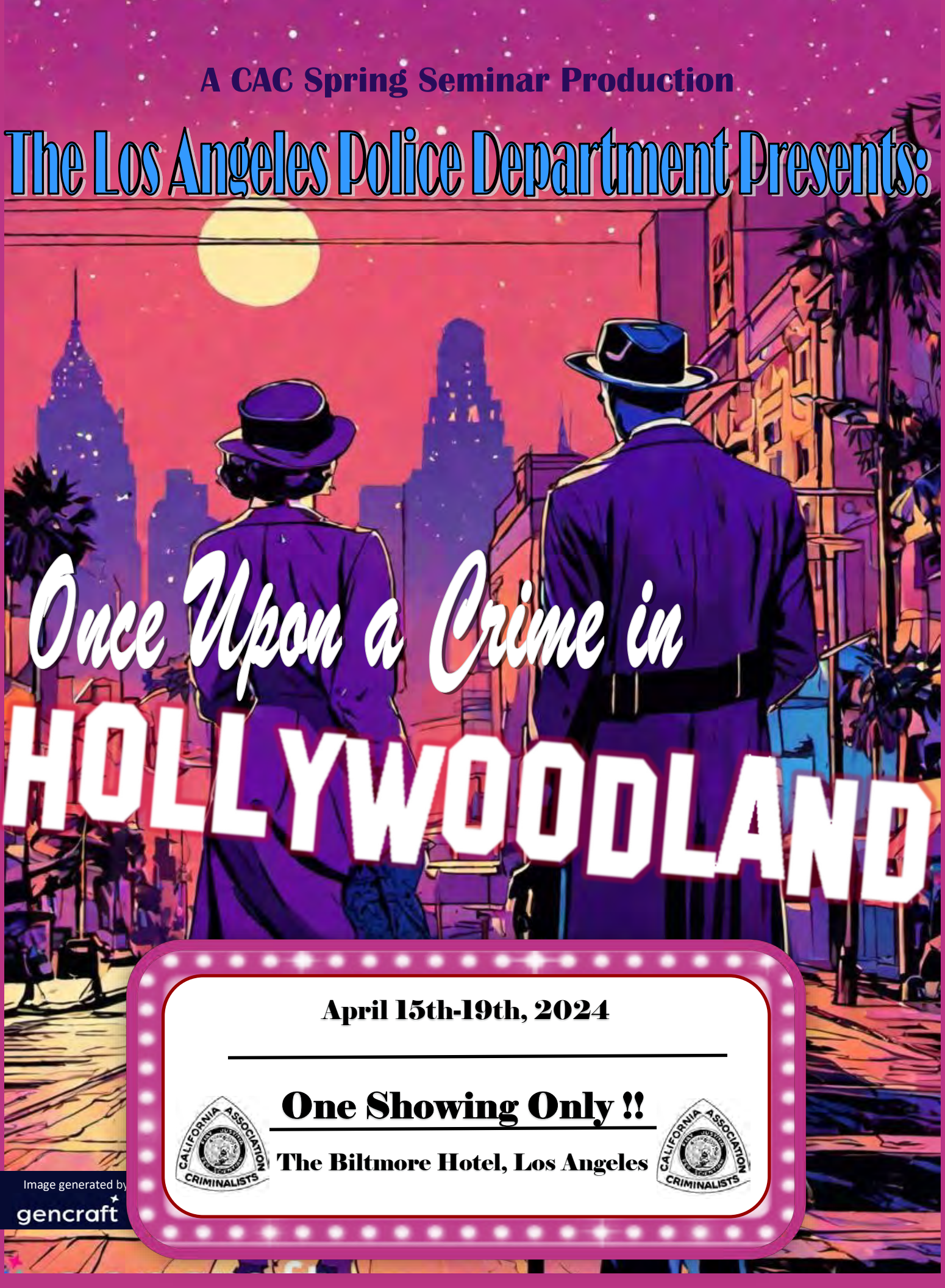
As a result of adjustments made due to the COVID-19 pandemic, many college and university students did not get the hands-on laboratory experience previously expected from higher educational institutions. As such, it may be advisable for laboratories to expand their training programs to incorporate more basic laboratory activities to ensure a safe and productive learning environment for future hires as they graduate and enter the workforce.

Other SWGDRUG Tools

- Drug Monographs (updated 14 November 2023)
- Mass Spectral Library (updated 30 June 2023)
- Infrared Library (updated 27 August 2019)
- Calculator for Extrapolation of Net Weight in Conjunction with a Hypergeometric Sampling Plan
- Question sets to be used as a resource and training tool

A CAC Spring Seminar Production

The Los Angeles Police Department Presents:



Once Upon a Crime in HOLLYWOODLAND

April 15th-19th, 2024

One Showing Only !!

The Biltmore Hotel, Los Angeles

Image generated by gencraft

CALIFORNIA ASSOCIATION OF CRIMINALISTS
BOARD OF DIRECTORS

President:
Sheltri Gresham

president@cacnews.org

President-Elect:
Günther Scharnhorst

president-elect@cacnews.org

Recording Secretary:
Darlene Espejo

recordingsecretary@cacnews.org

Treasurer:
Helena Wong

treasurer@cacnews.org

Regional Director North:
Stephanie James

northregion@cacnews.org

Regional Director South:
Lauren Sautkulis

southregion@cacnews.org

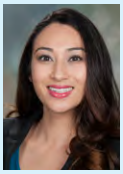
Membership Secretary:
Megan Caulder

membership@cacnews.org

Editorial Secretary:
Jonathan Charron

editor@cacnews.org

Immediate Past President:
Meiling Robinson



past-president@cacnews.org

The "CAC logo" is a registered service mark of the CAC and its use is restricted to official communications and by other authorization of the CAC Board.

Interested in becoming a member?

Visit us online at
www.cacnews.org

CAC QR Codes
Quick Response codes work with your smartphone to save time and typing. Point your phone's camera and visit the CAC!

CACNews.org Website

CAC Store