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PRESIDENT'S MESSAGE



Dear SOFT Colleagues and Friends,

In my incoming Presidents' remarks I mentioned that the focus this year will be on four main initiatives. Online education, mentoring program, promoting a culture of inclusion and mutual respect, and documenting the processes that have changed over the last few years due to the inception of several new committees. This is the time to do a fact check and see if we have delivered on our promises.

SOFT held its first online workshop this year on Oral Fluids as a direct result of this deliberate focus. Cancellation of the in-person 2020 meeting injected further urgency to move forward this initiative and SOFTember was born. We had over 1,000 registered attendees for the main event and over 1,000 workshop registrations. A huge thanks to the forward thinking officers,

INSIDE THIS ISSUE

directors and counselors of the SOFT Board, to the planning committee of SOFTember, our vendors, and to you. I can say with confidence that we are well positioned to continue to provide on-line and virtual content to our members in between the in-person meetings in future and we will continue to focus on improving this experience for you. We hosted an additional SOFTopics discussion session on November 10th focused on "A Deeper Dive into Validations" that attracted over 100 attendees.

The survey conducted after SOFTember speaks volumes to the success of our first big virtual event. Key highlights from the survey are:

- Over 90% of the respondents were very satisfied or satisfied with the SOFTember experience.
- Over 25% of the respondents had participated in a SOFT event for the first time. Very encouraging to see that we engaged new audience with the virtual platform.
- Over 85% of the respondents

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PAGE 1

PRESIDENT'S MESSAGE CONTINUED

were very satisfied or satisfied with the virtual platform used for SOFTember. Considering the fact that we had only two months to plan the entire event, no prior experience in virtual meetings and not many options to choose from, we did great!

 Over 60% of the respondents planned to view on-demand sessions after close of SOFTember. Flexibility to view sessions on demand was very positively received.

We appreciate all the comments submitted by the respondents as your feedback is critical to improving future events.

2020 was the inaugural year for our mentorship program and the program was met with great enthusiasm and engagement. Thanks to the Professional Mentoring Program Committee for the tremendous efforts in building a bridge to a better and stronger future. A commencement ceremony for the 2020 cohort is planned for this month and applications for enrollment to the program for 2021 are now open.

We created SOFT Meeting Attendee Code of Conduct Policy to relay clear expectations to our members and to the attendees of SOFT sanctioned events of our responsibility to maintain a culture and professional conduct that is inclusive, respectful and equitable to all. The Cultures, Values, and Diversity committee (CVD) was instrumental in this effort. It is paramount that we continue to move forward with creating awareness and education about matters of diversity and inclusion and stay committed to nurturing an environment that demonstrates equity and justice among our members.

I noted in my opening message that SOFT as an organization has undergone a tremendous amount of change in the last few years leading to several new processes and procedures that were not well documented. Several actions were taken to that effect. The Policy and Procedure (P&P) manual was extensively revised, the Meeting Resource committee (MRC) completed a comprehensive Meeting Planning Guide to serve as a resource for future meeting hosts, and the SOFT committees have updated their committee handbooks. Having committee handbooks that are reviewed and revised on an annual basis will provide the much needed guidance and transparency to new committee chairs and members. I want to take this opportunity to thank all the committee chairs and members for their commitment and diligence in creating robust documents for future leaders and members to rely on.

None of the above would be possible without the tremendous efforts from the SOFT office in moving forward each one of the above initiatives so please join me in thanking Beth and CC for all their hard work in helping deliver upon our promises.

New SOFT Committee

For decades, forensic toxicology laboratories have received a disproportionate amount of funding relative to the testing needs for both postmortem and driving under the influence of drugs (DUID) casework. The SOFT Board discussed the need for assessing this gap and providing guidance to membership regarding existing resources that can be leveraged. As a result a new ad hoc SOFT Committee was formed last month named Toxicology Resource Committee (TRC).

The purpose of the TRC will be to identify gaps in publicly funded forensic toxicology labs and to target resources to assist in furthering the science of forensic toxicology. This committee will provide guidance

regarding available funding sources, compile information about existing grant opportunities, provide direction and assistance in filing grants for first time applicants, facilitate mutually beneficial partnerships with stakeholders to advocate for forensic laboratories and foster innovative ideas to further forensic toxicology.

Amy Miles has been appointed to chair this committee. The incoming Presidents' direct leadership for this committee will provide the necessary focus to hit the ground running and Amy is committed to ensuring this committee's success in providing real value to the SOFT members. Please reach out to Amy or myself if you are interested in serving on this committee.

Sayonara 2020 and Welcome 2021!

As 2020 comes to an end, I look forward to a brighter and better 2021 and wish all of you happy holidays and a great start to the New Year! I look forward to seeing everyone in person at the Nashville meeting to continue our 50th anniversary celebrations that could not be held this year. While the San Diego meeting was cancelled, let us not forget the tremendous hard work put in by Denice and Dani and their team in planning for the meeting. Their resilience in the face of adversity was exemplary and I thank them from the bottom of my heart.

And finally, I thank you for allowing me to serve as your President in this historical year. This has been a very enriching experience, one that I will remember and cherish forever.

SUMANDEEP RANA, PH.D.
SOFT PRESIDENT

FROM THE EXECUTIVE DIRECTOR'S DESK

Submitted by: Beth Olson, SOFT Executive Director beth@soft-tox.org



Lessons I have Learned in 2020

This year has certainly given us all many things to reflect on. As we come to the close of 2020, I thought that I'd like to use this opportunity to evaluate what this year has taught me, and how these lessons relate to the work I do for SOFT.

Lesson 1: Cherish my family and friends

Friends and family are first because I hope to never again take this for granted, especially once the pandemic is in the back mirror. It is hard to believe some of the family and friends who I haven't seen since the pandemic began - our usual Thanksgiving of 25 was whittled down to nine, masked, distanced and outdoors. There are new babies and new partners I have not met. Trips to visit loved ones have been canceled indefinitely. While I am missing all the normalcy, I know these occasions will be that much more special when we are able to see each other again.

Of course, included in this are all my SOFT friends. I cannot wait for September and warm greetings and hugs and to raise a glass to being together again in person!

We have started planning for SOFT 2021 in Nashville at the Gaylord Opryland with Meeting Hosts Jen Colby and Erin Karschner. I have met with our team at the hotel, and they've shared that they have already hosted groups of up to 500 people with masks, social distancing, health screenings and other safety precautions.

In addition, I participate in a weekly roundtable of association executives and professional meeting planners. This group has been a wonderful resource for SOFT through the planning of a virtual event, as well as sharing ideas for how we can safely meet in person in the Fall of 2021.

Of course, we don't know now what September of next year will look like, but I'd like to assure everyone that we will be meeting in person with whatever protocols are necessary to keep everyone safe and healthy.

Lesson 2: Life is constantly evolving

As I look around the grocery store at masks and plexiglass and disinfected surfaces, it strikes me how we have taken this all in stride. The old ways of doing things are gone – maybe just for a time and maybe some changes will last awhile.

One of my favorite changes is that everyone has learned to Zoom! Just in the past six months, Zoom has already changed the way we are doing business at SOFT. Holding our committee meetings over Zoom during SOFTember allowed for dozens of SOFT members to sit in and hear about the work committees are doing, and even volunteer for some committee projects. This year, I look forward to incorporating more of these types of meetings so we can further engage the membership in the work that SOFT does.

Zoom also allowed us to incorporate our SOFTopics program that we developed for SOFTember into a regularly occurring program for our members. Please keep an eye on your email and the website for more opportunities to participate in 2021!

In a year that felt like it was constantly changing, we also launched a new mentoring program. I feel that the pandemic taught us all to be more open to change and new ideas, including with the implementation of this program. We had a hugely successful Year 1, and whether or not you participated in Year 1, I highly recommend participating in Year 2 as a mentee, a mentor, or both. Registration forms for 2021 are due by December 15.

Lesson 3: There are always reasons to be grateful

Each day I jot down three things for which I am grateful. It has been a great practice for me during the pandemic to help keep things in perspective. I thought today I would share three things about SOFT for which I am grateful.

I am grateful we were able to meet many needs through SOFTember despite the pandemic. The best part about the entire SOFTember program being virtual? If you missed it, you can still register! The content will be available through March 31, 2021, and you can still register for SOFTember or any of the workshops and receive continuing education credit through AACC.

I am grateful for all of our dedicated volunteers. Just this year, CC and I have worked with the Board of Directors, committee chairs and committee members, the San Diego and Nashville Planning Committees, the SOFTember Planning Committee, and all of those who presented, moderated and participated in our SOFTember program. SOFT would not be what it is without all of you.

Most of all, I am grateful to work for an organization in which I feel valued. SOFT did great work for decades before I arrived, and I feel honored that my new ideas are considered and respected. It brings me great pleasure to spend each day helping to further an organization that shares my values.

As we close the door on 2020, I look forward to opening the door for 2021 and seeing you all behind that open door!

BETH OLSON, MBA SOFT EXECUTIVE DIRECTOR



Thank you for joining us for SOFTember!

We would like to extend a HUGE THANK YOU to everyone that participated in SOFT's first virtual event, SOFTember! We are grateful to each one of you for your willingness to brave this new world of virtual

meetings with us and for your ability to continue to grow professionally during these unprecedented times.

We enjoyed seeing your wonderful and unique WFH (Work From Home)

set ups during SOFTember and are thrilled to share them below. We hope you enjoyed this opportunity to learn and network with your colleagues. See you next year in Nashville!

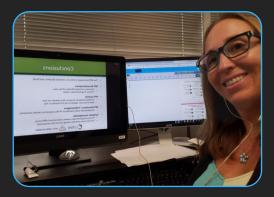




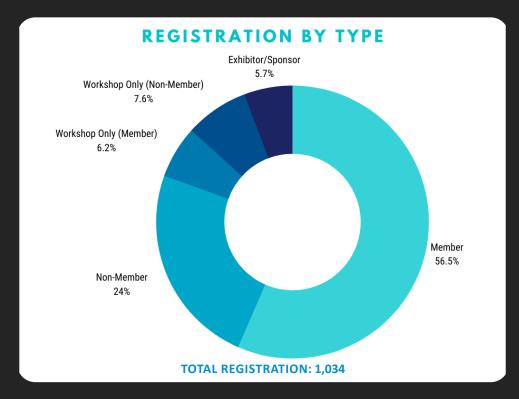


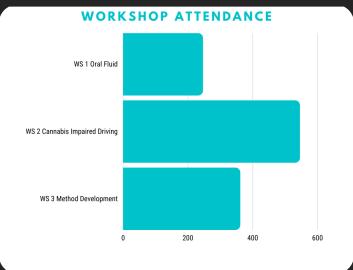


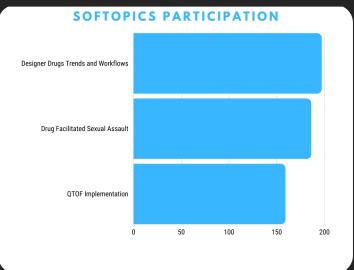




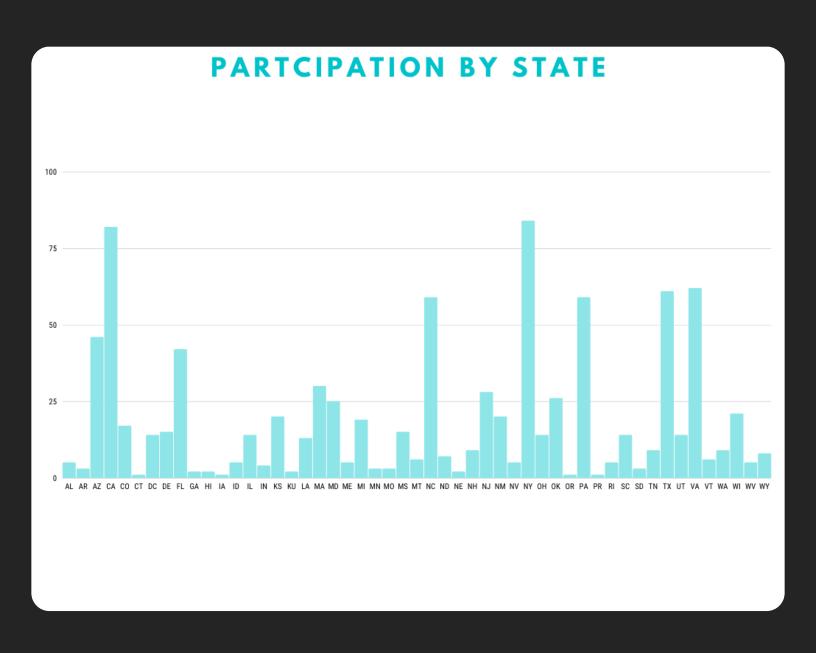






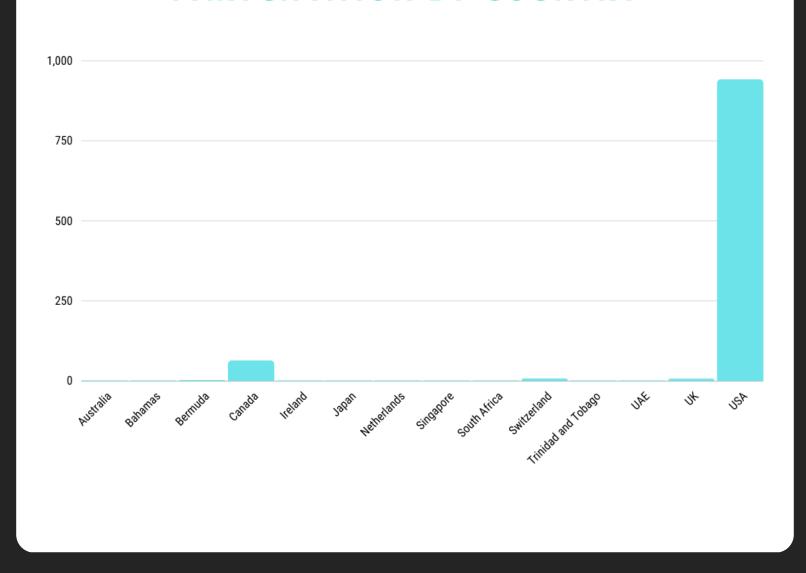




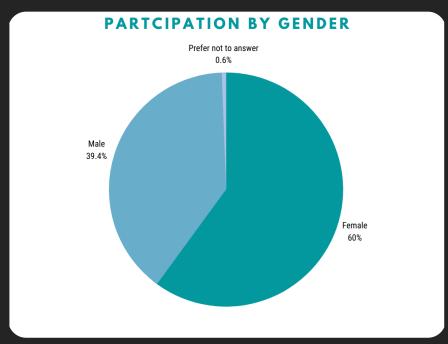


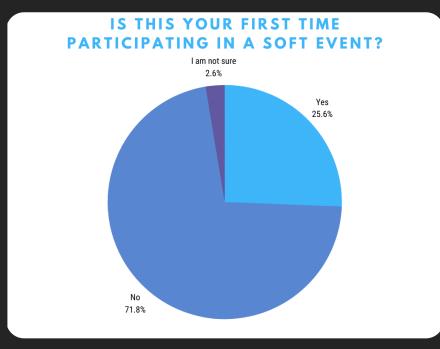














Thank you to our SOFTember Sponsors and Exhibitors!
We are incredibly grateful to you and we appreciate your willingness to dive into the virtual deep end with us!

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PROGRAM SPONSOR \$10,000











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VIRTUAL BOOTH

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ANNUAL MEETING UPDATE - NASHVILLE, TN



The 2021 annual meeting of the Society of Forensic Toxicologists will be held September 26 to October 1 at the Gaylord Opryland Resort & Convention Center in Nashville, Tennessee.

Nashville has long been known as Music City, a term that captures the vibrant live music scene as well as the rich musical history found here. Fans of country music can catch a show or tour the Ryman Auditorium, the original home of the Grand Ole Opry, or visit the Country Music Hall of Fame. Not a country fan? Don't worry, Nashville musicians are a diverse group; you're sure to find something you like – from bluegrass to rock played live at venues small and large throughout the city. Thanks in part to its musical heritage, Nashville has a vibrant night life. No trip is complete without a stop at a honky tonk on Broadway with the neon lighting up our own little "sin city".

While music is a central theme in Nashville, the city has much more to offer. The greater Nashville area has several points of interest for the history buff, including civil war battle sites and Andrew Jackson's famous home, the Hermitage.

Sports lovers can be entertained by the Predators, Titans, and the Nashville Soccer Club. For the foodie, Nashville has an ever-growing list of award winning and critically acclaimed restaurants, as well as a number of breweries, distilleries, and cocktail bars.

The Gaylord Opryland Resort & Convention Center is located approximately 10 miles from the Nashville International Airport. The resort features nine acres of indoor gardens, waterfalls, and an indoor river with a Delta flatboat. Amenities include 15 restaurants, four bars, a spa, and multiple retail stores. If you are looking for a family-friendly activity, SoundWaves, is a four acre indoor/outdoor water park that the whole family will enjoy. Nashville weather at the end of September is typically in the mid-70s to 80s.

We are excited to welcome SOFT to Nashville, and we look forward to hosting you!

Erin and Jen

2021 HOSTS





JEN COLBY

DLBY ERIN KARSCHNER

SCIENTIFIC PROGRAM COORDINATOR KEN FERSLEW REBECCA HARTMAN

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SEPTEMBER 26-OCTOBER 1, 2021 GAYLORD OPRYLAND



2021 JOURNAL OF ANALYTICAL TOXICOLOGY SPECIAL ISSUE



SUBMITTED BY: ALEX J. KROTULSKI PH.D.
RESEARCH SCIENTIST, CENTER FOR FORENSIC SCIENCE RESEARCH AND EDUCATION
2021 JAT SPECIAL ISSUE EDITOR

alex.krotulski@cfsre.org

Attention toxicologists! Each year, the Journal of Analytical Toxicology (JAT) proudly dedicates a Special Issue to the Society of Forensic Toxicologists (SOFT). The incoming SOFT President has the privilege of selecting a Guest Editor for this issue, and I am honored that Amy Miles selected me for this role. As Guest Editor, I intend to uphold the long-standing traditions and quality of JAT by compiling the great work from our submitting scientists to create an outstanding 2021 SOFT Special Issue.

Dissemination and information sharing are critical endeavors in forensic toxicology and its related disciplines. Publication of analytical methods, case reports, research findings, and more are necessary for both the advancement of our field and the understanding or interpretation of toxicological findings. The SOFT Special Issue provides a unique platform for publication of these important data, as this issue coincides with our Annual Meeting

to be held in Nashville, Tennessee, in September 2021.

For many of us, so much has changed in 2020, from online conferences to limited travel and personal interactions. Fortunately for some, this adjustment may have led to more time for writing papers or completing previously drafted manuscripts (and even time to serve as a peer-reviewer!). Over the next few months, I encourage you to complete and submit your highly important toxicology manuscripts for publication in the Special Issue (or accept my kind request to review the manuscripts received:). Important dates for submission are listed below.

An additional perk of submitting your paper for the Special Issue is consideration for the 2021 Experimental Design and Impact on Toxicology (EDIT) Award. The EDIT Award recognizes scientific design and impact on the field of forensic toxicology. All first authors of accepted manuscripts who

are also SOFT members will be eligible for this prestigious award.

SUBMISSION:

Completed manuscripts must be submitted through the JAT Scholar One portal: https://mc.manuscriptcentral.com/jat. During submission, please be sure to designate your manuscript for the 2021 SOFT Special Issue via the appropriate dropdown menu.

DEADLINES:

March 5, 2021 – Tentative manuscript titles and abstracts should be submitted to Alex Krotulski: alex.krotulski@cfsre.org

March 19, 2021 – Completed manuscripts must be submitted to JAT through Scholar One.

I am excited to receive your exceptional manuscripts, and I look forward to seeing y'all in Nashville!

DON'T MISS AN ISSUE OF JAT!

Recently moved? Changed jobs? New last name?

Be sure to send your updated contact information to the SOFT office so your account with JAT can be updated.

Send your updates to cc@soft-tox.org

Submitted by: Dani Mata, SOFT Designer Drugs Committee Chair and Simon Elliot, TIAFT NPS Committee Chair

Short Communication for the Analysis of N-ethylpentylone

Date: May 2020

Synonyms: 1-(1,3-benzodiox-ol-5-yl)-2-(ethylamino)-1-pentanone

2'- N-ethylnorpentylone

Ephylone

Structure:



Molecular Weight (nominal mass): 249.31

Theoretical M+H accurate mass: 250.1438

Pharmacological Drug Class: Central Nervous System Stimulant

Suggested LOD: 5 ng/mL

Suggested LOQ: 10 ng/mL

N-ethylpentylone is a synthetic cathinone and is primarily a mixed norepinephrine reuptake inhibitor and dopamine reuptake inhibitor. N-ethylpentylone was first identified in the United States of America at the end of 2016 and is a Schedule I substance in the country. It has since been encountered in New Zealand, Australia, Europe and South America. Case reports indicate that it may be sold as a white powder or pressed into pills similar to 'Ecstasy' tablets.

In 2018, the 41st meeting of the World Health Organization Expert Committee on Drug Dependence critically reviewed N-ethylpentylone (https://www.who.int/medicines/access/controlled-substances/N-Ethylnorpentylone.pdf). At its meeting in March 2019, the Commission for Narcotic Drugs voted to place N-ethylpentylone

under international control as a Schedule II substance in the 1971 Convention on Psychotropic Substances.

From the United Nations Office on Drugs and Crime (UNODC) ToxPortal, 17 cases of clinical admission, drug driving or death have been reported involving N-ethylpentylone. Of the reported fatalities, blood concentrations of N-ethylpentylone ranged from 170 - 1300 ng/mL, similar to other cathinones. The lowest and highest reported concentrations in the literature are 12 ng/mL and 50,000 ng/mL, respectively. No body tissue concentrations have been reported in the literature or the UNODC ToxPortal at the time of this publication. However, there are reported concentrations in oral fluid, ranging from 12.6 – 1377 ng/ mL. Similar to other drugs in this class, N-ethylpentylone can also be detected by GC-MS or GC-NPD.

In vitro metabolite research has suggested four metabolites by the following pathways: hydroxylation, demethylation, N-deethylation and hydrogenation. All four metabolites were confirmed and could be used to identify N-ethylpentylone ingestion in blood and urine samples.

Additional References:

Costa JL, Cunha KF, Lanaro R, Cunha RL, Walther D, Baumann MH. Analytical quantification, intoxication case series, and pharmacological mechanism of action for N-ethylnorpentylone (N-ethylpentylone or ephylone). Drug Test Anal. (2019) 11(3):461-471

Ikeji C, Sittambalam CD, Camire LM, Weisman DS. Fatal intoxication with N-ethylpentylone: a case report. J Community Hosp Intern Med Perspect. (2018) 8(5):307-310

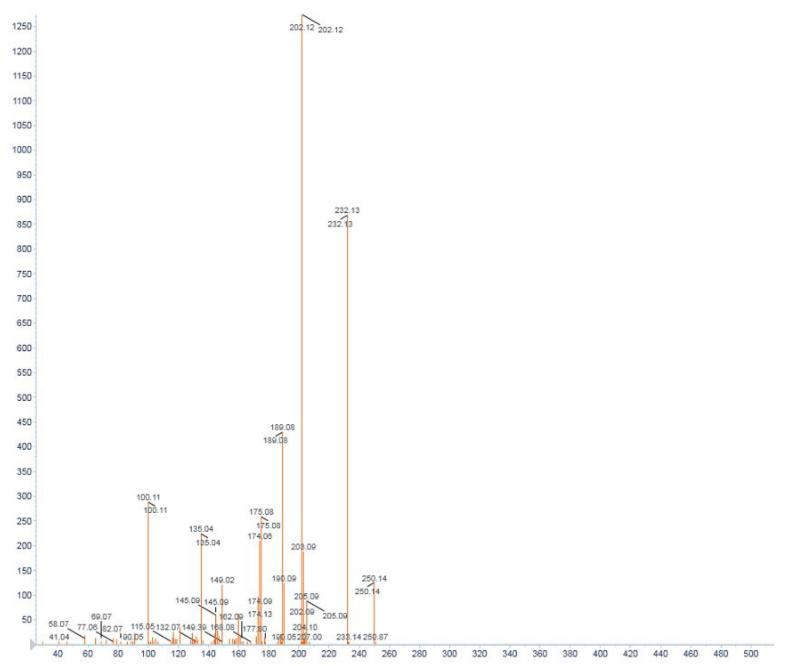
Krotulski AJ, Papsun DM, De Martinis BS, Mohr ALA, Logan BK. N-ethyl pentylone (Ephylone) Intoxications: Quantitative Confirmation and Metabolite Identification in Authentic Human Biological Specimens. J Anal Toxicol.

(2018) 42:467 - 475.

Thirakul P, Hair LS, Bergen KL, Pearson JM. Clinical Presentation, Autopsy Results and Toxicology Findings in Acute N-Ethylpentylone Fatality. J Anal Toxicol. (2017) 41:342 – 346.

Submitted by: Dani Mata, SOFT Designer Drugs Committee Chair and Simon Elliot, TIAFT NPS Committee Chair

LC-MS Spectrum:



[source: Sciex X500R, Orange County Crime Laboratory, California, USA]

Submitted by: Dani Mata, SOFT Designer Drugs Committee Chair and Simon Elliot, TIAFT NPS Committee Chair

Emerging Drug: delta-8-THC

Helen H. Ha, Melanie M. Hernandez

Orange County Crime Lab, Santa Ana, CA 92703

Delta-9-THC, is the major pharmacologically active component in the plant Cannabis Sativa. Over the years, the use of cannabinoids increased due to the legalization of cannabis. Although it is illegal under the US federal law, many states transitioned to legalization of medical marijuana. As of May 2020, California, Oregon, Washington, Nevada, Arizona, Utah, New Mexico, Colorado, Alaska, Montana, Oklahoma, North Dakota, Minnesota, Missouri, Arkansas, Louisiana, Illinois, Michigan, Ohio, West Virginia, Pennsylvania, Delaware, Washington D.C., Maryland, New York, Vermont, Connecticut, New Jersey, Rhode Island, Massachusetts, New Hampshire, and Maine legalized medical marijuana (1).

Detection of delta-9-THC in recent cases has been complicated by the presence of unknown interferences. Additional peaks which are co-eluting with Delta-9 THC affect the ion ratios and peak areas during detection of delta-9-THC. A culprit had been confirmed to be delta-8-THC. Delta-8-THC is also found in cannabis plants but at a significantly lower amount than delta-9 THC. Having a similar structure as delta-9-THC, the double bond placement changed from position 9 to 8 (Table 1) (2). Although still active, delta-8-THC has a reported lower psychotropic potency than delta-9-THC. The reported ratio comparatively to delta-9-THC is 2:3 following both oral and intravenous administration (3). It also binds to the cannabinoid G-protein receptor CB1, located in the central nervous system (4). Delta-8-THC provides similar symptomology as delta-9-THC including altered senses, impaired body movement, difficulty in thinking and problem-solving, hallucinations, and

psychosis.

The first instance of peak interference in Orange County, CA was seen in early 2018. By late-2019, multiple antemortem cases with THC had to be reported as indeterminate due to this interfering peak which elutes slightly after Delta-9 THC. The Seized Drugs section of Orange County Crime Lab (OCCL) also reported one case from mid-2019 with brown liquid extracted from a vape pen to contain delta-8-THC. Following extraction of postmortem heart blood in the same case, delta-9-THC and cannabinol were confirmed. The presence of an interfering peak can also be seen for delta-9-carboxy-THC (Figure 2).

Mixing of delta-9-THC and delta-8-THC was performed at different concentration different ratios for a clear view of interference peaks by LCMSMS analysis. The cannabinoids quantitative method at OCCL was validated for blood and urine samples under SWGTOX guidelines (5). The calibration and QC standards were prepared in porcine blood. All samples and standards were sampled at 150 µL into silanized glass tubes. The automated extraction method by Tecan Freedom EVO 200, consisted of adding 0.1% formic acid and deuterated delta-9-THC for internal standard together then mixed thoroughly. After mixing, all samples were added to a 96-well Biotage SLE+ plate and subsequently eluted with 30:70 hexane:ethyl acetate with a vacuum applied. The samples were dried under heated air flow and reconstituted with mobile phase. The LCMSMS method consisted of a 5-minute gradient in MRM mode which scanned for two ion transitions using Waters XeVo-TQS in ESI+ mode. Waters Aguity UPLC utilized an HSS T3 1.8 μm, 2.1 x 50 mm column. The limit of quantitation for delta-9-THC was set administratively at 1 ng/mL. Concentrations of delta-9-THC and delta-8-THC were spiked in different ratios for comparison. Ratios of 1:2, 1:1, 2:1, and 1:5 of delta-8-THC and delta-9-THC, can be observed in Figure 3, respectively.

While the method was not validated for delta-8-THC quantitation, calculated concentrations of each drug were not within 20% of the expected range due to interference from delta-8-THC to delta-9-THC. As shown, interfering peak from delta-8-THC was evident in affecting the identification of delta-9-THC. Even though delta-8-THC makes up a smaller percentage in the cannabis plant itself, the appearance of such a peak can alter the ion ratios of current detection methods. The highlighted peak on Figure 3 represents delta-9-THC, while the peak on the right is delta-8-THC.

Delta-8-THC was tested for cross-reactivity with the Immunalysis® Direct ELISA cannabinoids kit at concentrations of 1-10000 ng/mL spiked in deionized water. Positive readings of cross-reactivity were observed at 100 ng/mL and higher. In-house validated ELISA method used Carboxy-THC at 10 ng/mL as the cutoff. Other synthetic cannabinoids tested were delta-6a(10a)-THC and 11-hydroxy-delta-9-THC. Delta-9-THC was also tested and found positive for detection ranging from 200 ng/mL to 10,000 ng/mL. The detection of delta-8-THC at 100 ng/mL compared with 200 ng/mL of delta-9-THC may explain the positive ELISA reading that was unable to confirm for identification of delta-9-THC. Table 2 displays the lowest concentration with positive detection on the ELISA cannabinoids plate from Immunalysis.

Due to the emergence of this analogue, many laboratories have started developing methods to separate delta-8-THC from delta-9-THC. Further study requires the understanding of metabolism of delta-8-THC and a new extraction method that will isolate both compounds. Additionally, labs should consider separating delta-8-carboxy-THC from delta-9-carboxy THC and be on the lookout for interfering peaks which may represent other pharmacologically active plant

Submitted by: Dani Mata, SOFT Designer Drugs Committee Chair and Simon Elliot, TIAFT NPS Committee Chair

cannabinoids.

- Drugpolicy, Medical Marijuana (2020). https://www.drugpolicy.org/issues/medical-marijuana
- World Health Organization Critical Review, Isomers of THC (2018). https://www.who.int/medicines/access/controlled-substances/IsomersTHC.pdf
- 3. Hollister L.E., Gillespie, H.K., Delta-8- and delta-9-tetrahydrocannabinol; Comparison in man by oral and intravenous administration. Clinical Pharmacology & Therapeutics, 1973, 14,3, 353-357.
- 4. National Cancer Institute (2019).

 https://ncit.nci.nih.gov/ncitbrowser/pages/concept_details.
 jsf?dictionary=NCI_Thesaurus&verion=20.01d&code=C61312&ns=NCI_Thesaurus&type=all&key=null
 &b=1&n=0&vse=null
- Scientific Working Group for Forensic Toxicology (SWGTOX) (2013)
 Standard practices for method validation in forensic toxicology, Journal of Analytical Toxicology, 37, 452–474

Delta-8-Tetrahydrocannabinol	
CAS number	5957-75-5
Chemical Formula	C ₂₁ H ₃₀ O ₂
IUPAC Name	(6aR,10aR)-6a,7,10,10a-tetrahydro-6,6,9- trimethyl-3-pentyl-6Hdibenzo[b,d]pyran-1-ol
Delta 8-THC Chemical Structure (Free Base)	J. OH J. OH
Delta 9-THC Chemical Structure (Free Base)	OH J

Table 1: Delta-8-THC chemical characteristics and delta-8-THC and delta-9-THC structures

Submitted by: Dani Mata, SOFT Designer Drugs Committee Chair and Simon Elliot, TIAFT NPS Committee Chair

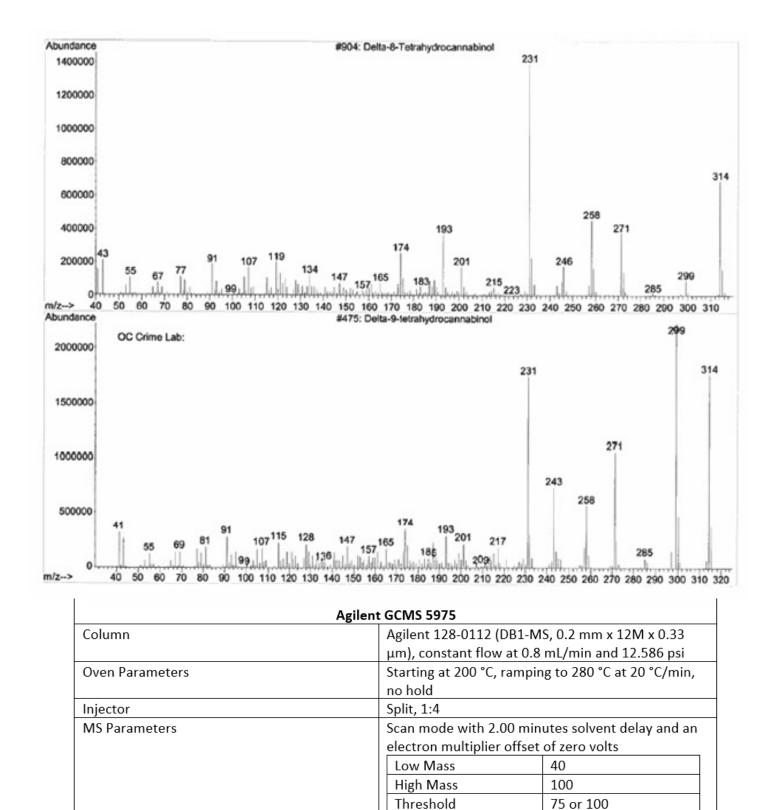


Figure 1: GCMS chromatogram and GCMS parameters of delta-8-THC and delta-9-THC

Submitted by: Dani Mata, SOFT Designer Drugs Committee Chair and Simon Elliot, TIAFT NPS Committee Chair

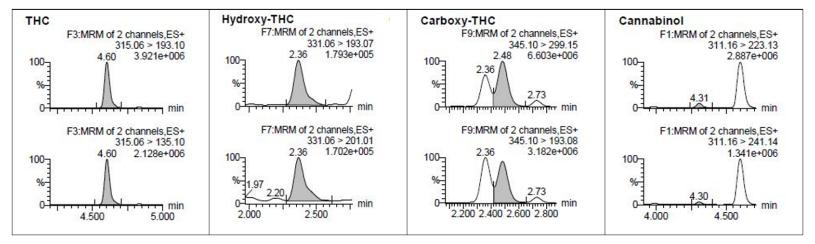


Figure 2: Chromatogram of postmortem blood sample of positive delta-8-THC contained vape pen

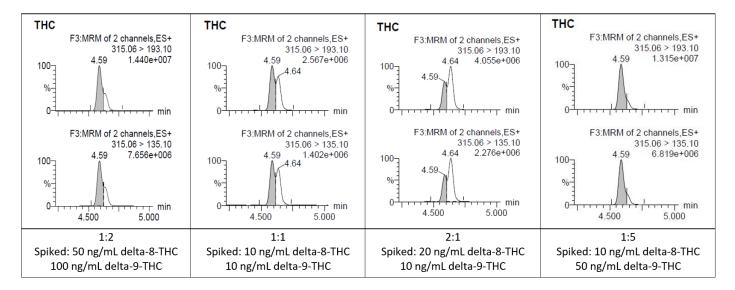


Figure 3: Various concentration ratios for delta-8-THC and delta-9-THC

Drug	Lowest concentration with positive detection (ng/mL)
delta-9-THC	200
delta-8-THC	100
delta-6a(10a)-THC	500
11-Hydroxy-delta-9-THC	25
Cannabinol	500

Table 2: Cross-reactivity in ELISA cannabinoid plate

CONTINUING EDUCATION OPPORTUNITIES

2021 ANNUAL AMERICAN ACADEMY OF FORENSIC SCIENCES SUBMITTED BY: 2021 TOXICOLOGY SECTION OFFICERS AND PROGRAM COMMITTEE

Preparations are officially in high gear for the 2021 Annual American Academy of Forensic Sciences (AAFS) Meeting February 15-19, 2021. As with many conferences, the 73rd annual meeting will be virtual. The chosen theme is "One Academy: Pursuing Justice Through Truth in Evidence". We are fortunate that one of our very own, Dr. Jeri Ropero-Miller, is the President of the American Academy of Forensic Sciences and has been working diligently with the AAFS Board of Directors and staff to ensure that the 2021 meeting will be a fantastic and educational event. Keep the following website handy for updates to the program and meeting registration!

https://aafs.org/AAFS/Meetings/2021-Meeting/2021-Annual-Meeting.aspx

We are looking forward to a vast array of quality workshops, scientific sessions, and evening events. We will also continue the traditional special sessions on Drugs and Driving and Postmortem Pediatric Toxicology! The Annual Toxicology Lectureship is being planned along with our annual Toxicol-



ogy Section business meeting. During our business meeting we will recognize the following award winners: Rebecca Jufer-Phipps (Ray Abernathy Award); Ken Ferslew (Rolla N. Harger Award); Marilyn Huestis (Alexander O. Gettler Award); Madeleine Swortwood (Irving Sunshine Award).

We extend our gratitude to all who submitted abstracts for presentations or workshops. Our program's strength is due in large part to your continued contributions. We also thank our volun-

teer abstract reviewers for their timely efforts as well as moderators and volunteers willing to support our program. Official abstract acceptance letters from AAFS will be conveyed later this year. Pre-registration begins November 30, 2020!

Please mark your calendars now and see you online in February!

The ACMT Total Tox Course is a comprehensive review of the scope of emergency toxicology and will include cutting-edge interventions and management options for poisoned patients. Prominent experts in medical toxicology and emergency medicine will lead the course.

The 3-day course (register for 1 day, 2 days, or all 3) will focus on medical toxicology topics of interest to emergency providers, including toxicological issues of current clinical and public health importance. Attendees will be presented with state-of-the-art updates on the evaluation and initial management

2021 VIRTUAL TOTAL TOX COURSE

Cutting-Edge Toxicology for Health Care Providers

February 5, 12, 19



of poisoning and exposure to medications, drugs of abuse, chemical terrorism, and environmental toxins.

Target Audience: Physicians, Pharmacists, Advanced Practice Nurses, Nurses, Physician Assistants, Medics, EMTs, SPIs, Laboratorians, Poison Center Educators, First Responders, Operational or Tactical Specialists, Residents and

Students.

SOFT Members receive the ACMT member rate when you register!

(REGISTER HERE

CONTINUING EDUCATION OPPORTUNITIES





The call for presentations for the 2021 IACP Drugs, Alcohol, and Impaired Driving (DAID) Conference is now open. The conference will be held August 14-16, 2021.

The DAID Conference is the largest training conference for drug recognition experts and provides law enforcement, physicians, toxicologists, prosecutors, and other traffic safety professionals with a forum to share best practices for reducing drug- and alcohol-impaired driving.

Prospective presenters are encouraged

to submit innovative and engaging workshops on a variety of topics. IACP is looking for topics focusing on:

Alcohol + cannabis-impaired driving and alcohol in combination with drugs

Drug-impaired driving issues, new drugs, drug trends, and drug effects

Law enforcement executives and impaired driving & traffic enforcement program management

Medical conditions that mimic drug impairment

Prosecutor topics with an impaired driving focus

Toxicology topics related to impaired driving

Traffic safety and enforcement

Submissions will be accepted through the online system through January 13, 2021. Please visit the IACP website https://www.theiacp.org/DAIDconference for more information

2020 BUSINESS MEETING MINUTES



SUBMITTED BY: ERIN A. SPARGO, PH.D., F-ABFT SOFT SECRETARY

Erin.Spargo@NMSLABS.COM

Business Meeting Agenda SOFTember (virtual) 3:30 – 5:00 pm EDT, September 29, 2020

1. Call to Order by President Rana

a. A quorum was established by Secretary Spargo

Suman Rana

2. Approval of Agenda

a. Motion to approve agenda: So moved, Second, Approved by all

Suman Rana

3. President's Report

Suman Rana

a. President Rana welcomed attendees to the first ever virtual business meeting. Rana addressed the many difficulties the country has experienced this year. She thanked the Board, Counselors, SOFT committees, SOFT friends, and SOFT staff for their support during this challenging year. This year's focus was to be on four primary initiatives: online education, mentoring, promoting a culture of inclusion and mutual respect, and documenting current processes. SOFT offered its first online continuing education opportunity this summer. Rana commented on the hard work of the SOFT Office and committee members in conceiving and implementing SOFTember in such a short time. She indicated that SOFT is well positioned to be able to provide online content in the future. The mentoring program has been met with great enthusiasm and engagement. The Culture, Values and Diversity (CVD) Committee was instrumental in creating a SOFT Meeting Attendee Code of Conduct. She stressed that SOFT must have a culture that demonstrates equity and just amongst our members, and SOFT has issued a position statement to directly address this. Finally, various documents were updated or created to reflect current practices and procedures. The Policies and Procedures manual (P and P) underwent a substantial revision; moving forward, the P and P will be updated annually. A meeting planning guide was created. Committee handbooks were updated

2020 BUSINESS MEETING MINUTES

or created; again, updates will occur annually. President Rana also addressed items related to the 50th anniversary, as well as the many firsts this year (inaugural year for the mentoring program, first virtual events, first online SOFT store, etc.). She acknowledged that many initiatives began prior to her presidency, but she was fortunate to be able to bring them to fruition. Rana also thanked members for their service on the OSAC. Finally, she thanked members for allowing her to serve as President during this historic year and looks forward to seeing everyone in person for the Nashville meeting.

4. Executive Director's Report

Beth Olson

- a. Olson thanked everyone for their participation in SOFTember. She gave a special thank you to the planning committee and meeting volunteers for their hard work. Olson reminded everyone that the SOFT online store is now open and ready for business. She looks forward to seeing everyone in Nashville.
- 5. Approval of 2019 Business Meeting Minutes

Suman Rana

- a. <u>Motion to approve 2019 business meeting minutes as published in the March 2020 ToxTalk</u>: So moved Dwain Fuller, Second Jennifer Limoges, Approved by all
- 6. Secretary's Report

Erin Spargo

a. Secretary Spargo thanked the Policies and Procedures Committee and noted that the P and P was updated this year; it is available in the Documents section of the Members Only portion of the website. Spargo also recognized the hard work of the membership committee. SOFT currently has more than 1500 members. She reminded everyone that you must be a full SOFT member to serve on the Board or to participate in certain committees, so consider promotion if eligible (see membership committee portion of the website for criteria). The report was closed out with a moment of silence to remember deceased members Dr. Donald Hoffman and Dr. Edward Barbieri.

7. Treasurer's Report

Robert Sears

- a. Treasurer Sears indicated that SOFT's financial standing is sound. Sears reviewed the budget actual and year-end projection. Due to the success of SOFTember, there is a surplus in the budget; however, until everything is resolved with the San Diego Marriott Marquis (contracted hotel for SOFT 2020) this money will be held back. The Finance Committee completed quarterly audits, updated the bank card policy, and provided budget recommendations. This year an external audit was conducted. Investment of SOFT funds will be deferred until the fourth quarter of 2020.
- 8. President-Elect's (Committee/Liaisons) Report

Amy Miles

Erin Sparao

- a. Awards
 - i. The Committee received 10 applications for awards, with the following awardees selected:
 - ERA Masters Samuel Krug from Arcadia University mentored by Dr. Karen Scott. His presentation was entitled Validation of a Method, Sample Analysis, and Determination of the Whole Blood Partition Coefficient for Brodifacoum in Forensic Toxicology Casework using Ultra-High Performance Liquid Chromatography Tandem Mass Spectrometry
 - 2. ERA PhD Ashley Gesseck from Virginia Commonwealth University mentored by Dr. Michelle Peace. Her presentation was entitled Analyzing drugs in neonates using oral fluid and urine to develop a prediction model for neonatal abstinence syndrome and assess the implications in forensic toxicology
 - Young Scientist Meeting Award Megan Farley from the San Francisco Office of the Chief Medical Examiner, recommended by her supervisor Dr. Luke Rodda. Her presentation was entitled A Single Blood and Urine Method of All Recommended and Additional Impairing Drugs in DUID Casework
 - ii. Awardees will be formally recognized at the in-person business meeting in Nashville.
- b. Publications/EDIT Award

Justin Poklis

- i. The committee works with Beth Olson to make JAT continuing education opportunities available through the website. This year there have been six opportunities, with about 200 individuals participating each time. Poklis noted that continuing education credit will not show up in your SOFT account; you will get an email from Beth Olson containing a link to go to the AACC website to obtain your credit.
- ii. This year's EDIT Award winner is Erin Strickland for her article "Endogenous GHB in Segmented Hair Part II: Intra-individual Variation for Exogenous Discrimination."
- iii. JAT Special Issue Editor Luke Rodda did an excellent job. Twenty-two articles were submitted. Thirteen articles were accepted, with eight articles having a SOFT member as first author.
 - 1. Luke Rodda thanked all those involved in the production of the special issue.
- c. Continuing Education

Robert Johnson

i. The first ever online continuing education activity was presented this summer; Johnson thanked presenters Dr. Curt Harper and Dr. Jarrad Wagner and SOFT staff Beth Olson and CC Watson. The Committee

2020 BUSINESS MEETING MINUTES

hopes to have a second online activity available by the end of the year.

d. Culture, Values and Diversity

Samantha Tolliver

i. The Committee is revising their mission, writing their committee handbook, applying for grant funds, and working on ideas for future workshop proposals.

e. Designer Drugs

Dani Mata

i. The Committee has submitted a workshop proposal for the virtual 2021 AAFS meeting and is working to update their section of the website and create a committee handbook. Additionally, they are working with the TIAFT NPS Committee and have been including designer drug articles in ToxTalk. The Committee would like to do a review article for JAT. Mata asked individuals to reach out to her if interested in joining the committee (email address on SOFT website).

f. Drug Facilitated Crimes

Madeline Montgomery

i. Lisa Reidy became Chair in February 2020. Committee has worked on a survey to send to labs regarding DFC testing practices; over 50 labs have agreed to participate. The survey should be sent out in October. The Committee is working to put more case studies into ToxTalk and are creating a DFC interview form template that would eventually be placed on the website.

g. Drugs and Driving

Curt Harper

i. The Committee has created two partners slots - for a DRE Coordinator and a Traffic Safety Resource Prosecutor. They have been active in sponsoring sessions at AAFS, SOFT, IACDT, and DRE conferences. They have an initiative to collaborate with TIAFT at future meetings to get an international perspective. The Committee hopes to team up with the Continuing Education Committee in 2020 for additional offerings. The website is kept up to date with relevant articles. NHTSA fact sheets are undergoing an update and should be available in early 2021.

h. Ethics

Jennifer Limoges

i. No new or active ethics cases.

i. History

Bruce Goldberger

i. Much of the work of the Committee has been rescheduled due to COVID. The new SOFT e-publication, with the history of SOFT and messages from leaders in the field, SOFT past presidents, and members will be sent out to members later today; Goldberger gave a special thank you to CC Watson for putting it together. The Committee is actively working on the toxicology trees and hope to have them finished later this fall.

j. Meeting Resource Committee

Beth Olson

- i. The Committee has created a Meeting Planning Guide which has been distributed to future hosts. The 2024 meeting has been planned for St. Louis, MO. A joint meeting with TIAFT will not occur until 2026 or later. It is a possibility that the 2025 meeting may occur in San Diego.
 - A video promoting the 2021 meeting in Nashville was shown (hosts Jennifer Colby and Erin Karschner).

k. Mentoring

Michelle Peace

i. Peace thanked the Board for their support of the inaugural year of the Committee. There were 74 registrants this year; 41 mentoring pairs signed a contract to commit to the partnership for the year. Mentoring resources are available to all on the website. Commencement ceremony planned for December. The Committee will be soliciting registrations for the 2021 year in upcoming weeks. They are also currently working on creating their Committee handbook.

. Nominating

Dwain Fuller

i. Slate for consideration:

1. President-Elect: Robert Sears

2. Treasurer: Tate Yeatman

3. Director: Madeline Gates

m. Oral Fluid Committee

Curt Harper

i. The Committee had a number of workshops planned for 2020 that were affected by COVID. However, they did collaborate with the Continuing Education Committee for the recent virtual oral fluid workshop and they did hold a SOFTember workshop. In 2021, the Committee hopes to revisit some of the post-poned workshops. They updated their committee handbook and pilot project guidelines. Committee has representatives on the National Safety Council's update for scope of analysis and cutoffs project; publication will be through JAT in 2021. Harper and Christine Moore were involved in the AAA project related to oral fluid; work products will be placed on the SOFT website.

n. ToxTalk

Robert Johnson

i. Johnson thanked CC Watson for her hard work on the publication. He encouraged submissions and thanked everyone who has contributed material to ToxTalk.

o. Young Forensic Toxicologists (YFT)

Kevin Shanks

i. An open forum discussion was held on September 28th, where issues such as functioning in the laboratory, testimony, and continuing education during COVID were discussed. The Professional Development Fair

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2020 BUSINESS MEETING MINUTES

was in an online format and is available on the website. Three members presented at SOFTember. YFT looks forward to more in person activities when we are in Nashville next year.

p. CFSO

Amy Miles (for Tim Rohrig)

- i. The CFSO lobbyist has been very active. There were several flash briefs sent to the President this year (can be found on the CFSO website <u>www.thecfso.org</u>). COVID did impact some of their work. Needs of the forensic community were presented to the Chair and Ranking Member of the House and Senate Appropriations Committees. There has been continuing discussion with OSAC regarding standards development.
- g. FSSB Liaison

Amy Miles (for Laurel Farrell)

i. This is Ms. Farrell's last year as the FSSB liaison. This year she will become the Chair of the FSSB. OSAC 2.0 change is in progress. Toxicology standards are well drafted, with many SOFT members on the committee. Several documents have come out for public comment. There are some changes coming to the review process – a scientific technical panel review and public comment period will occur prior to the document going to the SDO. FSSB and CFSO have worked together to further legislative activity.

9. Announcements

Suman Rana

- a. Madeleine Gates (AAFS Toxicology Section) AAFS abstract submission, workshop submission, and member promotion cutoff date has been extended until October 8th. Scientific sessions will all be held between February 17th and 19th, 2021. Workshops will be held on the Monday and Tuesday of that week. Email or call her with questions.
- 10. Unfinished Business (none)

Suman Rana

11. New Business

Suman Rana

- a. Recognition of Outgoing Officers
 - i. Sumandeep Rana (President)
 - ii. Amy Miles (President-Elect)
 - iii. Robert Sears (Treasurer)
 - iv. Tate Yeatman (Director)
 - v. Dwain Fuller (Immediate Past President)
 - vi. Joe Saady (Counselor)

12. Elections Suman Rana

- a. President-Elect: Robert Sears
 - i. So moved Marilyn Huestis, Second Dwain Fuller. Elected by acclimation.
- b. Treasurer: Tate Yeatman
 - i. So moved Marilyn Huestis, Second Dwain Fuller. Elected by acclimation.
- c. Director: Madeleine Gates
 - i. So moved Jennifer Limoges, Second Marilyn Huestis. Elected by acclimation.

13. Incoming President's Remarks

Amy Miles

- a. Miles thanked Denice Teem and Dani Mata and the entire 2020 planning committee for all of their hard work over the years in planning SOFT 2020. She also thanked Beth Olson and CC Watson for their success in pivoting to an online program in a short amount of time, as well as the Board of Directors for all they do. She is honored to serve in this role. She has benefitted so much from her involvement with this organization and looks forward to giving back. Miles named Dr. Amanda Jenkins as Counselor and Dr. Alex Krotulski as the JAT Special Issue Editor. She thanked her co-workers for their support and plans to introduce her laboratory to the SOFT membership via ToxTalk over the course of 2021. Amy believes there is an important link between forensic science, specifically forensic toxicology, and public health. She serves on APHL's Opioids Biosurveillance Task Force and also is involved with responsibility.org. Responsibility.org was responsible for garnering funding for SOFT's oral fluid workshop in Albany a few years ago. They intend to continue to help fund projects. Miles is currently working with this group on a survey for labs regarding what barriers they face in performing their work. She wants to hear from members regarding what collaborations they are involved in. Miles asked everyone to take a moment this evening and toast President Rana for all of the hard work and passion that she has put into this organization over the years. She is excited to work with everyone over the next year and wishes all great happiness and health.
- 14. Adjournment

Suman Rana

- a. Motion to adjourn: Dwain Fuller, Second Michelle Peace, Approved by all
- b. Meeting adjourned at 5:03 pm EST

2020 COMMITTEE CHAIRS

AWARDS:

ERIN A. SPARGO, PH.D., F-ABFT

COMMUNICATIONS:

MATTHEW P. JUHASCIK, PH.D., F-ABFT

CULTURE, VALUES AND DIVERSITY:

SAMANTHA TOLLIVER, PH.D.

GAIL COOPER, PH.D.

CONTINUING EDUCATION:

ROBERT D. JOHNSON, PH.D., F-ABFT

DESIGNER DRUGS:

DANI MATA, D-ABFT-FT, M.S.F.S.

DRUGS & DRIVING:

CURT E. HARPER, PH.D., F-ABFT

DRUG FACILITATED CRIMES:

DAYONG LEE, PH.D., F-ABFT

LISA REIDY, PH.D.

ETHICS:

JENNIFER LIMOGES, M.S., DABC

FINANCE:

ROBERT SEARS, M.S., F-ABFT

HISTORY:

BRUCE GOLDBERGER, PH.D., F-ABFT

JAT SPECIAL ISSUE:

LUKE RODDA, PH.D.

MEMBERSHIP

ERIN SPARGO, PH.D., F-ABFT

MENTORING:

MICHELLE PEACE, PH.D.

MEETING RESOURCE:

MARC A. LEBEAU, PH.D., F-ABFT

NOMINATING

DWAIN C. FULLER, B.S.CHEM, F-ABFT, TC-NRCC

ORAL FLUID

CHRISTINE MOORE, PH.D., DABCC

POLICY & PROCEDURES:

ERIN SPARGO, PH.D., F-ABFT

PUBLICATIONS:

JUSTIN POKLIS, B.S., D-ABFT-FT

TOXICOLOGY RESOURCE COMMITTEE:

AMY MILES, B.S.

YFT:

KEVIN SHANKS, M.S., D-ABFT-FT

FUTURE SOFT MEETINGS

2021

GAYLORD OPRYLAND, NASHVILLE, TN SEPTEMBER 26-OCTOBER 1, 2021 JENNIFER COLBY AND ERIN KARSCHNER

2022

HUNTINGTON CONVENTION CENTER, CLEVELAND, OH OCTOBER 30-NOVEMBER 4, 2022 DOUG ROHDE AND MICHELE MERVES CROSBY

2023

GAYLORD ROCKIES, DENVER, CO OCTOBER 29-NOVEMBER 3, 2023 DAN ANDERSON AND JARRAD WAGNER

2024

UNION STATION, ST. LOUIS, MO OCT 27-NOV 2 TBD

TOXTALK

TOXTALK® is the official publication of the Society of Forensic Toxicologists and is published quarterly. To submit articles please email CC Watson at cc@soft-tox.org For advertsing opportunites please email Beth Olson at beth@soft-tox.org

Deadlines for Contributions:

February 1 for March Issue

May 1 for June Issue

August 1 for September Issue

November 1 for December Issue

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